**WY2004 Highlights**

- Record warmth in October
- Freezing drizzle storm for Halloween, cloudy
- Good early snows over SW Colorado
- Cold and snowcovered on the Western Slope midwinter
- Fairly dry and dull midwinter elsewhere
- A cold February
- Very warm and dry March
- Wet April -- Hurray!
- Oops, warm and dry again in May
- Cool and damp summer east of mountains
- Hot and dry to the west
- Moisture onslaught into Western Colorado in September
Water Year 2004 temperature departures from 1971-2000 average

![Graph showing temperature departures for Water Year 2004 for different regions.](image-url)
Summer 2004 (May–Sep) precipitation as a percent of the 1971-2000 average
Water Year 2004 precipitation as a percent of the 1971-2000 average

The map illustrates the distribution of precipitation for Water Year 2004, expressed as a percent of the 1971-2000 average. Different colors are used to indicate various precipitation percentages:

- **Green** (> 130%)
- **Greenish-Gold** (110-130%)
- **Light Green** (90-110%)
- **Yellow** (70-90%)
- **White** (< 70%)

The map also highlights elevations above 9,000 feet with a dotted line.
Summary

- A mild winter again
- Another year with below average snowmelt runoff
- Generous growing season precipitation east of the mountains
- Coolest summer in a looong time
- Improvements in soil moisture
- Reservoirs hung in there
- Significant runoff from rains
Selected Global Significant Events

October 2004

Click On A Shaded Area For More Information

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, November 18, 2004

Authors: Richard Heim/Candace Tankersley, NCDC/NESDIS/NOAA
Colorado Statewide Z Index*
January 1998 - October 2004

*Palmer Z Index
Short-Term Drought

National Climatic Data Center / NESDIS / NOAA

http://www.ncdc.noaa.gov/oai/climate/research/prelim/drought/st005dv00pcp.html
Colorado Statewide Precipitation
October, 1895 - 2004

Year
National Climatic Data Center / NESDIS / NOAA

http://www.ncdc.noaa.gov oa/climate/research/prelim/drought/st005dv00pcp.html
## Statewide Precipitation Ranks for Colorado, 2003-2004

<table>
<thead>
<tr>
<th>Period</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct</td>
<td><strong>46th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(65th driest)</td>
</tr>
<tr>
<td>Sep-Oct</td>
<td><strong>32nd wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(78th driest)</td>
</tr>
<tr>
<td>Aug-Oct</td>
<td><strong>40th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(71st driest)</td>
</tr>
<tr>
<td>Jul-Oct</td>
<td><strong>38th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(73rd driest)</td>
</tr>
<tr>
<td>Jun-Oct</td>
<td><strong>29th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(81st driest)</td>
</tr>
<tr>
<td>May-Oct</td>
<td><strong>54th driest</strong></td>
</tr>
<tr>
<td>Apr-Oct</td>
<td><strong>30th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(81st driest)</td>
</tr>
<tr>
<td>Mar-Oct</td>
<td><strong>43rd wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(68th driest)</td>
</tr>
<tr>
<td>Feb-Oct</td>
<td><strong>41st wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(70th driest)</td>
</tr>
<tr>
<td>Jan-Oct</td>
<td><strong>43rd wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(68th driest)</td>
</tr>
<tr>
<td>Dec-Oct</td>
<td><strong>45th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(65th driest)</td>
</tr>
<tr>
<td>Nov-Oct</td>
<td><strong>46th wettest</strong></td>
</tr>
<tr>
<td></td>
<td>(64th driest)</td>
</tr>
</tbody>
</table>

[http://www.ncdc.noaa.gov oa/climate/research/prelim/drought/st005dv00pcp.html](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
Grand Lake 1 NW
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1984
- Min Year - 2002
- Period of Record Average - 1941 - 2002
- 2005 Water Year Accumulated
Taylor Park
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1999
- Min Year - 1974
- Period of Record Average - 1942 - 2002
- 2005 Water Year Accumulated
- 2002 Water Year Accumulated
Grand Junction WSFO
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1929
- Min Year - 1956
- Period of Record Average - 1893-2002
- 2005 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)

<table>
<thead>
<tr>
<th>Period</th>
<th>Accumulated Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 Water Year</td>
<td></td>
</tr>
<tr>
<td>2005 Water Year</td>
<td>16.0</td>
</tr>
<tr>
<td>Period of Record Average</td>
<td>8.0</td>
</tr>
</tbody>
</table>
Collbran 2SW
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1997
- Min Year - 1974
- Period of Record Average - 1893 - 2002
- 2005 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)
Montrose #2
2005 Water Year
(Oct '04)

30 Year Averages-1971-2000
Max Year - 1941
Min Year - 1958
Period of Record Average - 1893-2002
2005 Water Year Accumulated
2002 Water Year Accumulated
Division 3 – Cochetopa Creek

Cochetopa Creek
2005 Water Year
(Oct '04)

30 Year Averages-1971-2000
Max Year - 1957
Min Year - 2002
Period of Record Average - 1949 - 2002
2005 Water Year
2nd Min Year - 1950
Mesa Verde NP
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1941
- Min Year - 1977
- Period of Record Average - 1893-2002
- 2005 Water Year Accumulated
- 2002 Water Year
Division 4 – Del Norte

Del Norte
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1985
- Min Year - 1951
- Period of Record Average - 1921-2002
- 2005 Accumulated
- 2002 Accumulated Water Year

Accumulated Precipitation (Inches)

Months

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

Pueblo WSO
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1942
- Min Year - 2002
- Period of Record Average - 1874-2000
- 2005 Water Year Accumulated

Accumulated Precipitation (Inches)

Months

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
Division 5 – Buena Vista

Buena Vista
2005 Water Year
(Oct '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1965
- Min Year - 1902
- 2005 Water Year Accumulated
- Period of Record Average - 1901 - 2002
- 2002 Water Year Accumulated

Months

Accumulated Precipitation (Inches)
0 2 4 6 8 10 12 14 16 18
OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP
Canon City
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1957
- Min Year - 1962
- Period of Record Average - 1906 - 2002
- 2005 Water Year Accumulated
- 2002 Water Year Accumulated
Division 6 – Rocky Ford

Rocky Ford
2005 Water Year
(Oct '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1999
- Min Year - 2002
- Period of Record Average - 1889-2002
- 2005 Water Year Accumulated
Division 7 – Akron

Akron 4E
2005 Water Year
(Oct '04)

30 Year Averages-1971-2000
Max Year - 1915
Min Year - 2002
Period of Record Average - 1906 - 2002
2005 Water Year Accumulated

Accumulated Precipitation (Inches)

Months

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
Division 7 - Leroy

Leroy 5SW
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1995
- Min Year - 1894
- Period of Record Average - 1890-2002
- 200 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)

Months

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
Division 8 – Boulder

Boulder
2005 Water Year
(Oct '04)

- 2005 Water Year
- 30 Year Averages-1971-2000
- Max Year - 1995
- Min Year - 1966
- Period of Record Average - 1894-2002
- 2002 Water Year

Accumulated Precipitation (inches)

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

Months
Cheesman
2005 Water Year
(Oct '04)

- 30 Year Averages-1971-2000
- Max Year - 1970
- Min Year - 2002
- Period of Record Average - 1904 - 2002
- 2005 Water Year
# Division 8 – Kassler

## Kassler

### 2005 Water Year

(Oct '04)

<table>
<thead>
<tr>
<th>30 Year Averages-1971-2000</th>
<th>Max Year - 1915</th>
<th>Min Year - 1956</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period of Record Average - 1899 - 2002</td>
<td>2005 Water Year Accumulated</td>
<td>2002 Water Year Accumulated</td>
</tr>
</tbody>
</table>

### Chart Details

- **Accumulated Precipitation (Inches)**
- **Months**: OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP
- **Accumulated Precipitation**: 0, 5, 10, 15, 20, 25, 30

- **2005 Water Year**: Accumulated
- **2002 Water Year**: Accumulated

- **Max Year**: 1915
- **Min Year**: 1956

- **Period of Record Average**: 1899 - 2002
Division 8 – Fort Collins

Fort Collins
2005 Water Year
(Oct '04)

30 Year Averages-1971-2000
Max Year - 1961
Min Year - 1966
Period of Record Average - 1890 - 2002
2005 Water Year
2002 WY

Accumulated Precipitation (inches)

Month

OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
30-Year Average October Maximum Temperatures
October 2004 average maximum temperature departures from the 1971-2000 averages.
30-Year Average October Minimum Temperatures
October 2004 average minimum temperature departures from the 1971-2000 averages.
October 2004 average temperature departures from the 1971-2000 average.
October 2004 precipitation as a percent of the 1971-2000 average.
Precipitation: October 2004

Precipitation (in.)

- 0
- 0.0-0.8
- 0.8-1.2
- 1.2-1.6
- 1.6-2.0
- 2.0-2.4
- 2.4-2.8
- 2.8-3.2
- 3.2-4.0
- 4-5
- 5-6
- 6-8
- 8-12
- 12-16
- 16-20
- 20+

Courtesy of Oregon Climate Service, http://www.ocs.orst.edu/prism
1-month Percent of Average Precipitation – October 2004

Courtesy of Oregon Climate Service, http://www.ocs.orst.edu/prism
Fraction of Colorado in Drought

Based on 48 month SPI
(1890 - Oct 2004)

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

Colorado
10/2004 12 mon. SPI – Projected 6 mon. at P=0.20

Produced by: Colorado Climate Center
Fort Collins, CO
Projected Conditions at 0.5 Probability Level
12 Month SPI at 6 months

Colorado
10/2004 12 mon. SPI – Projected 6 mon. at P=0.50

Produced by Colorado Climate Center
Fort Collins, CO
Projected Conditions at 0.8 Probability Level
12 Month SPI at 6 months

10/2004 12 mon. SPI – Projected 6 mon. at P=0.80
Projected Conditions at 0.2 Probability Level
48 Month SPI at 12 months

Colorado

10/2004  48 mon. SPI – Projected 12 mon. at P=0.20

Produced by: Colorado Climate Center
Fort Collins, CO
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

Colorado

10/2004 48 mon. SPI – Projected 12 mon. at P=0.80

Produced by Colorado Climate Center
Fort Collins, CO
How About CoCoRaHS?
Colorado Overview Precipitation
11/11/04 for the 24-hour ending at 7 am

Map key:
- trace
- 0.00—0.18
- 0.18—0.36
- 0.36—0.54
- 0.54—0.72
- 0.72—0.89
- 0.89—1.07

Mean: 0.159
Standard deviation: 0.157
Skewness (unitless): 1.362
Colorado Overview New Snowfall Map
11/20/2004 ending at 7:00 am
For more information visit the CoCoRaHS Web site

http://www.cocorahs.org

Support for this project provided by Informal Science Education Program, National Science Foundation and many local charter sponsors.
Data and Power Point Presentations available for downloading

http://ccc.atmos.colostate.edu

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