Fraction of Colorado in Drought Based on 3-month SPI Through 1999
Fraction of Colorado in Drought Based on 48-month SPI

Through 1999
Fort Collins Total Water Year Precipitation (Oct-Sep)
Water Year 2002
Precipitation Percent of Average for 1961-1990 Averages
Reservoir Storage

Statewide Reservoir Levels for Colorado

Provisional Data Provided by NRCS
Colorado Statewide Annual Temperatures through 2002

From NOAA, National Climatic Data Center
Wyoming Statewide Annual Temperatures through 2002

Wyoming Average Annual Temperature (1895 - 2002)

From NOAA, National Climatic Data Center
Summer Temperatures
Fort Collins, 1889-2002

Fort Collins Summer Average Temperature
(June - August), 1889-2002

Temperature (Deg. F)

Years


58 60 62 64 66 68 70 72 74

Summer Total 7 year running mean
Where do we stand now?
Temperature - Water Year 2003

Departure from average, degree F

- Eastern Plains
- Foothills
- Mountains
- Western Valleys
Water Year 2003 – Colorado

UPPER SAN JUAN SNOTEL

UPPER SAN JUAN SNOTEL for Water Year 2003

*** Provisional Data, Subject to Change ***

![Graph showing precipitation and snow water equivalent over the year for Water Year 2003](image-url)

- Red line: Precip WY2003
- Blue line: SWE WY2003
- Orange line: Precip Avg 71-00
- Green line: SWE Avg 71-00

Date (mm/dd):

- 10/1
- 10/31
- 11/30
- 12/30
- 1/29
- 2/28
- 3/30
- 4/29
- 5/29
- 6/28
- 7/28
- 8/27
- 9/26

Inches:

- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40
- 45
- 50
- 55
- 60
Water Year 2003 – Colorado

JOE WRIGHT SNOTEL

JOE WRIGHT SNOTEL for Water Year 2003

*** Provisional Data, Subject to Change ***

![Graph showing precipitation and snow water equivalent over time for Water Year 2003.](image-url)
POWDER RIVER PASS SNOTEL for Water Year 2003

*** Provisional Data, Subject to Change ***
Mountain Snowpack as of February 1, 2003

Legend

Percent of Average

- > 150
- 130 - 150
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- < 50

Data from USDA/NRCS
U.S. Drought Monitor

February 18, 2003
Valid 7 a.m. EST

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, February 20, 2003
Author: Mark Svoboda and Mike Hayes, NDMC
What May Be Ahead in 2003
Monthly Average Precipitation for Selected Sites in the South Platte Basin

- Hoosier Pass
- Denver Stapleton
- Sterling
Monthly Average Precipitation for 1971-2000

- Lamar
- Cheyenne Wells
- Walsh
- Center
- Fruita
Precipitation

- A few storms contribute a large fraction of annual precipitation while many small events contribute a small fraction.
Greeley Daily Accumulated Precipitation

Precipitation (inches)

Accumulated Daily 1999 2000 2001 2002

Day

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
What Happens Next

- We have never experienced 2 consecutive extreme statewide drought years.
- Past multi-year drought, characterized by one extreme year preceded and followed by other dry year.
- Entire Region rarely all recovers quickly and at the same time.

Hope for the best, plan for the worst!!
Positive Indicators

- Late winter snows
- Cool spring
- Multi-day precipitation
- Wet Snow
- Low intensity rainfall
- Light winds
- High humidity
- Abundant cloud cover
Negative Indicators

- Little late winter snow
- Missed opportunities
- Warm spring
- Brief, sporadic precipitation
- High intensity rainfall
- Frequent, strong winds
- Low humidity
- Abundant sunshine
Current Indicators

- El Niño still present
- Unfavorable Pacific decadal oscillation
- Missed opportunities
- February better – but not a good indicator
- Wet often follows dry
- Most extreme dry periods last one year (Exceptions: SE CO)
Temperature
March-May 2003

From the Colorado Prediction Center
Temperature
June-Aug 2003

From the Colorado Prediction Center
Precipitation
June-Aug 2003

From the Colorado Prediction Center
Breaking This Drought Will Be Tough

- A wet spring is essential to begin that process.
COAGMET
Weather Data for Agriculture

- Automated weather stations with daily and hourly readings of:
  - Temperature
  - Humidity
  - Wind
  - Precipitation
  - Solar energy
  - Evapotranspiration

http://www.COAGMET.com
Colorado Climate Magazine

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YOU CAN HELP!
http://www.cocorahs.com
Colorado Climate Center
Colorado State University

- Data and Power Point Presentations available for downloading

- [http://climate.atmos.colostate.edu](http://climate.atmos.colostate.edu)
  click on “Drought”
  then click on “Presentations”