

The Colorful and Incredibly Crazy Climate of Colorado

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Colorado Climate Center**

Presented at ***Second Conference on SCADA and Related
Technologies for Irrigation System Modernization, A USCID Water
Management Conference, June 7, 2007, Denver, Colorado***



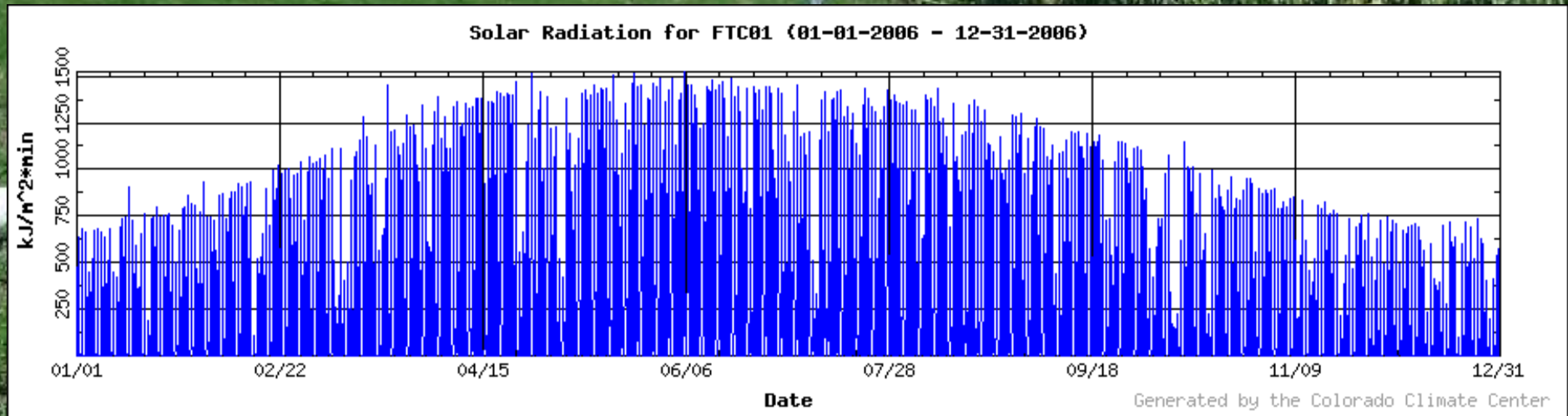
What's so Crazy about Colorado?

- High elevation (highest state in the Union – by far)
- Mid-Latitude location (lively seasonal changes)
- Interior Continental Location far from atmospheric moisture sources
- Complex Mountain topography

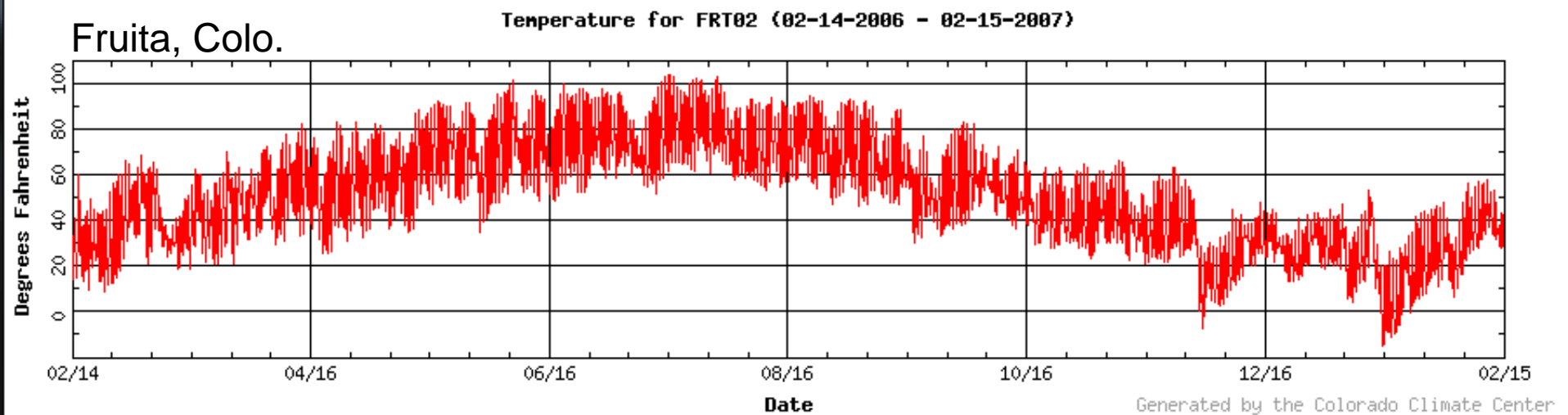
The Result?



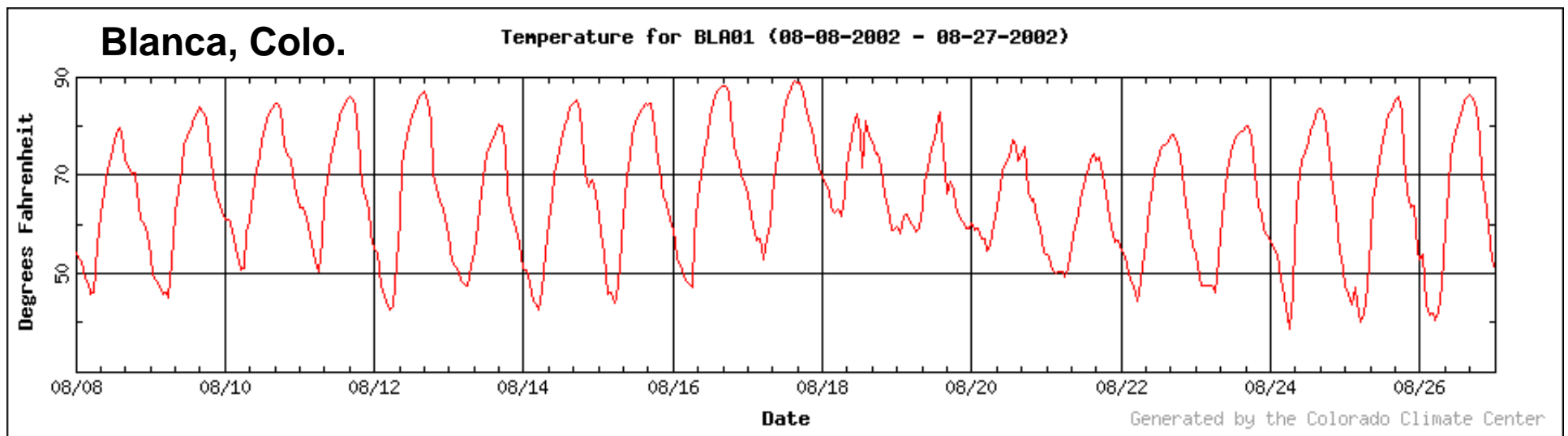
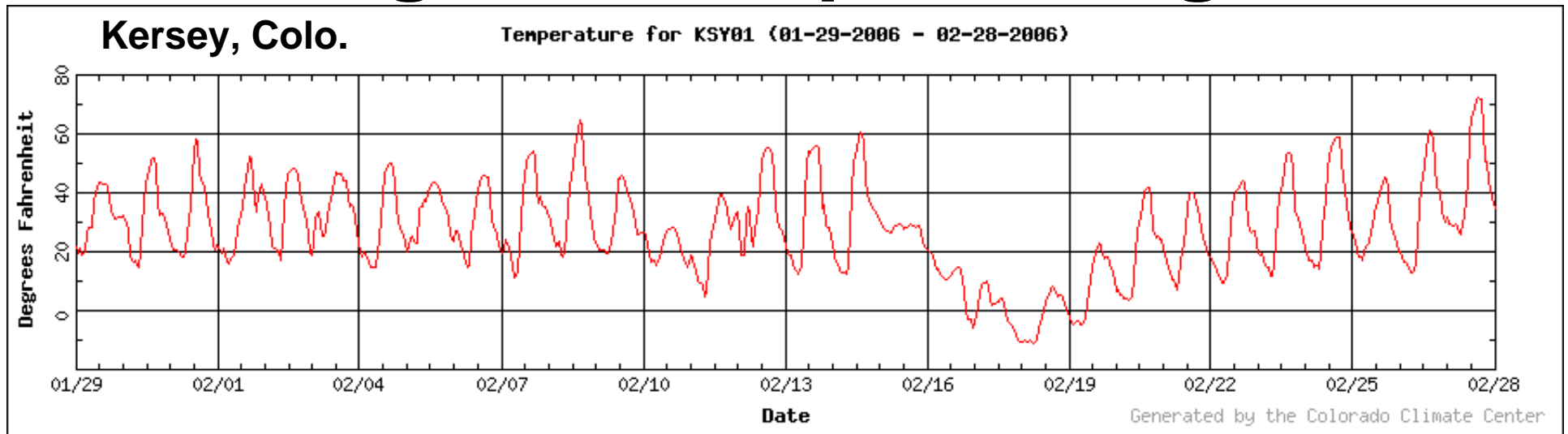
Generous sunshine and low humidity, i.e. people like it here



Large Seasonal Temperature Variations



Large diurnal temperature ranges and rapid changes



**Frequent but highly variable
precipitation
(for every “upslope,”
there’s a “downslope”)**

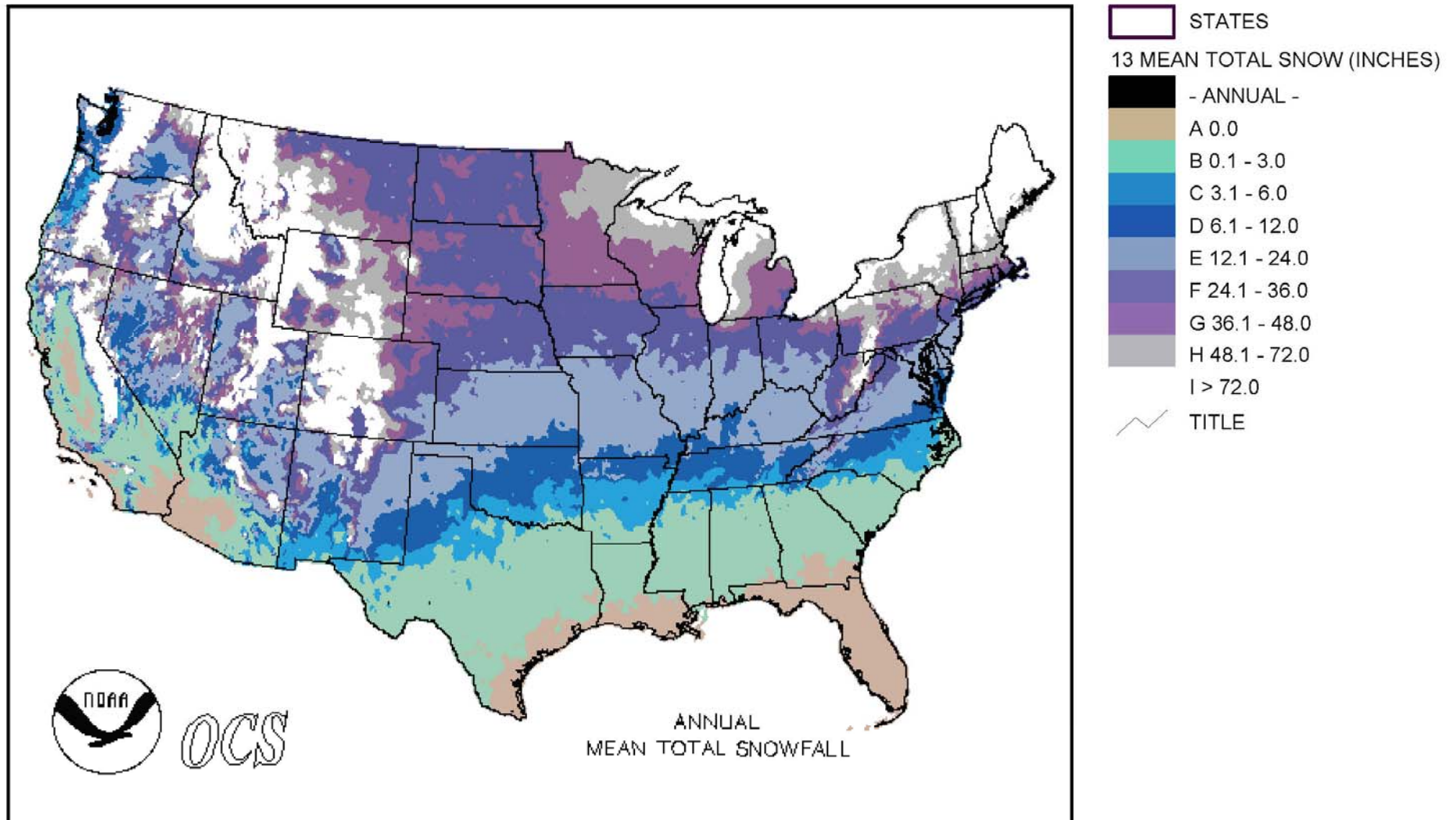


Photo by Wendy Ryan

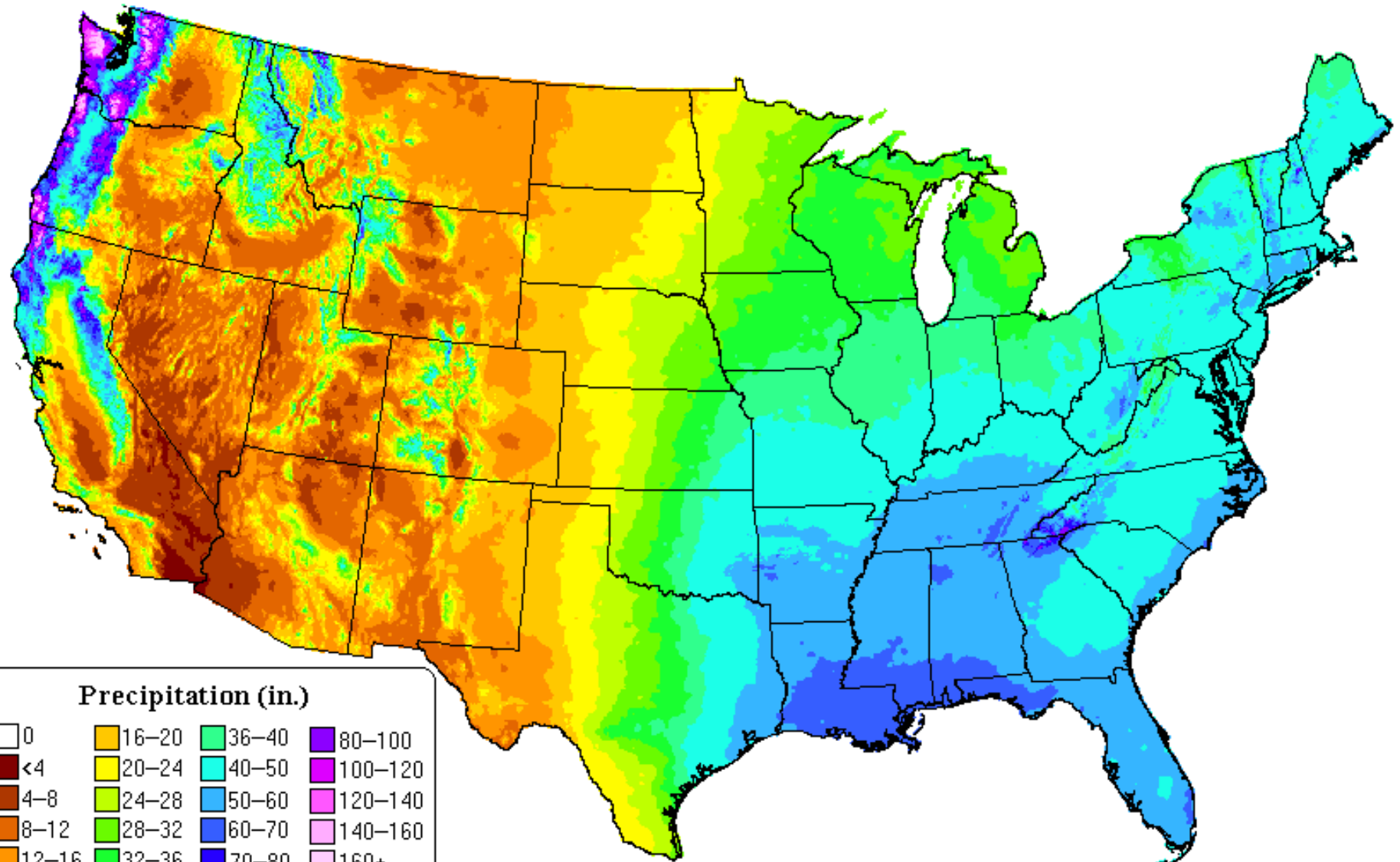
Lots of Snow



National Annual Average Snowfall



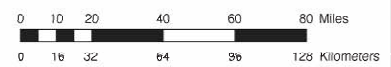
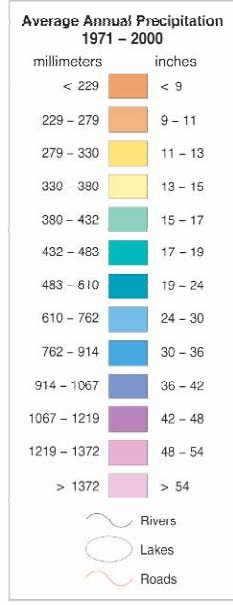
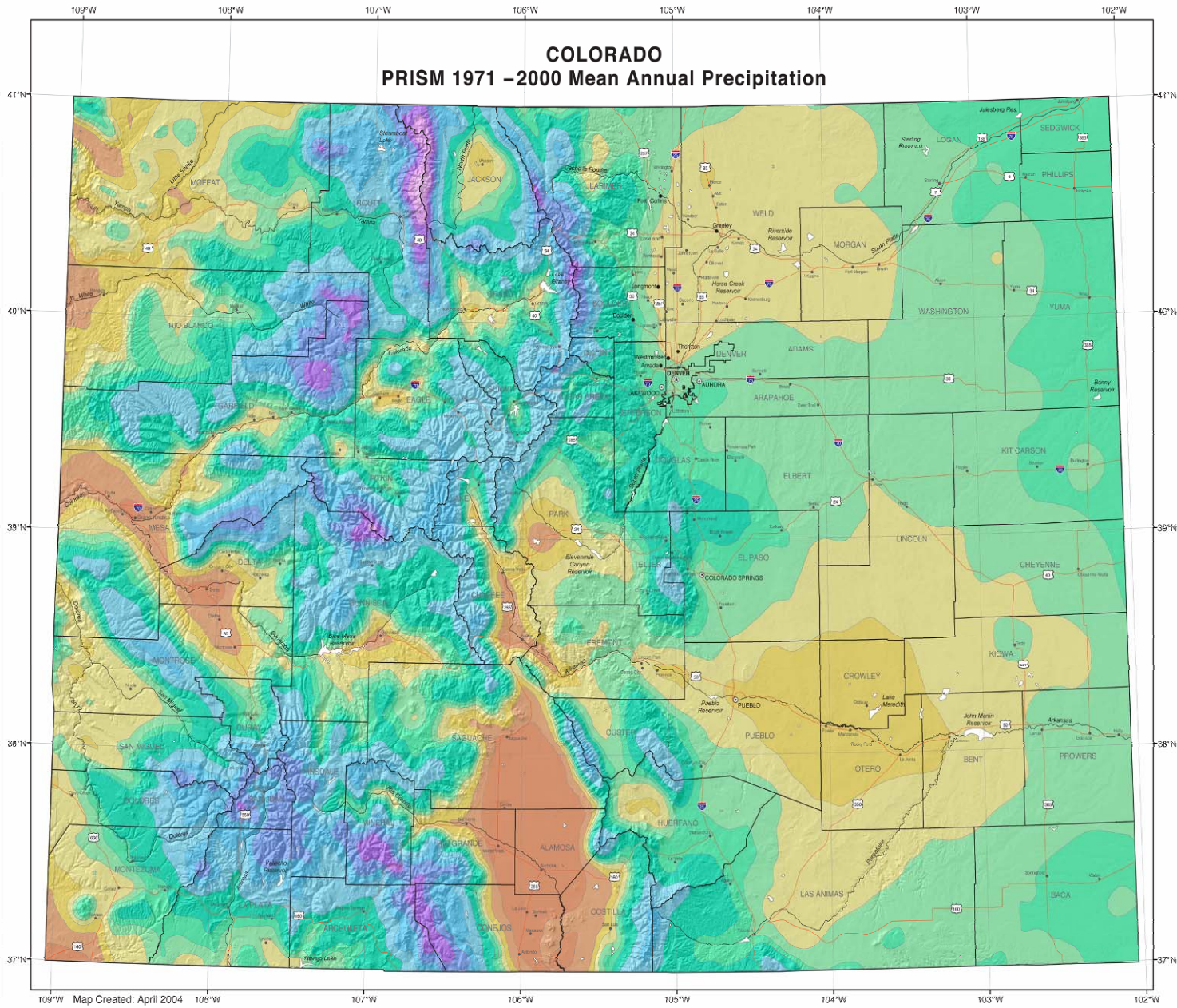
Precipitation: Annual Climatology (1971–2000)



Copyright (c) 2006, PRISM Group, Oregon State University
<http://www.prismclimate.org> - Map created Jun 16 2006

COLORADO

PRISM 1971 – 2000 Mean Annual Precipitation

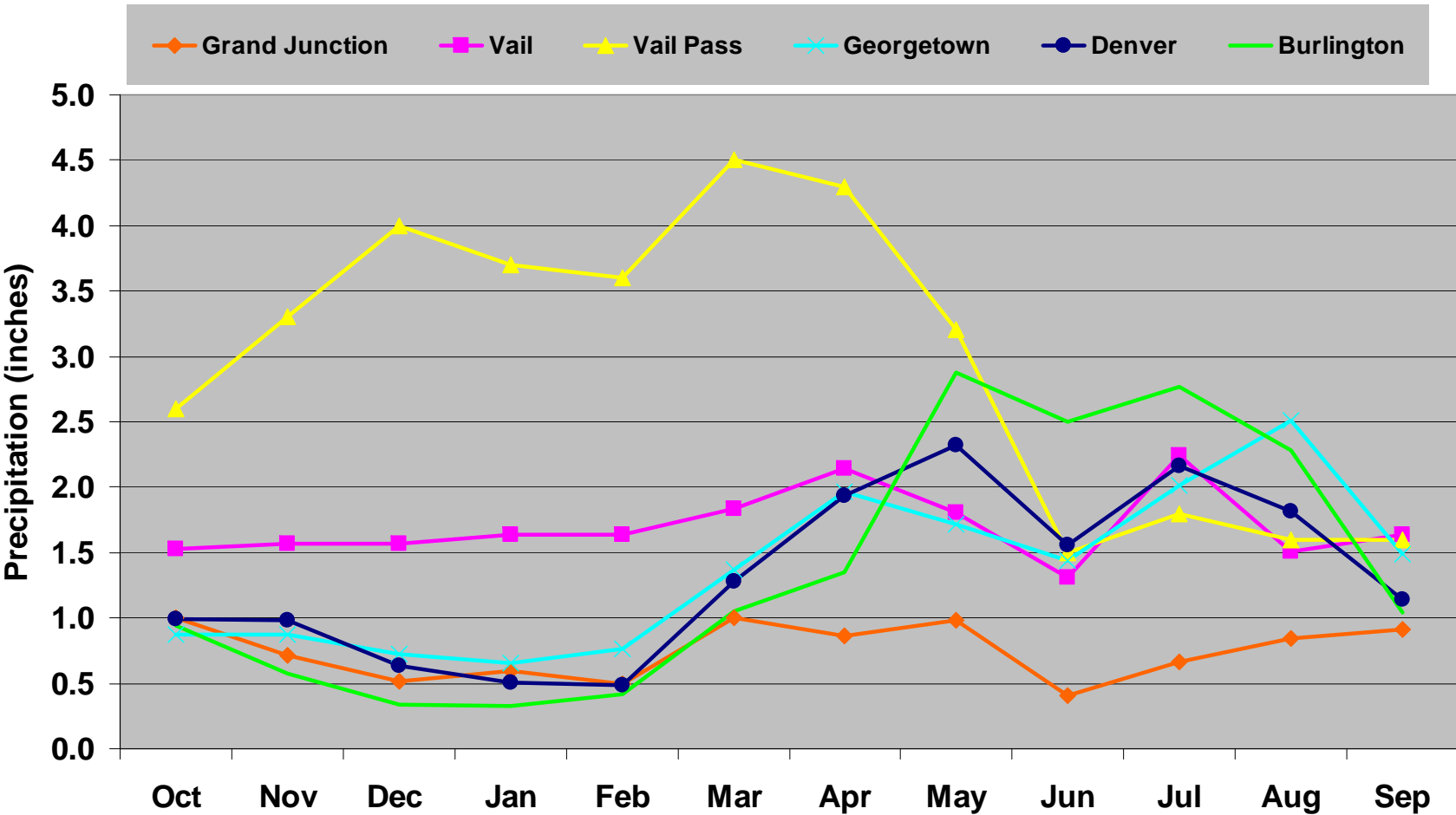


Map prepared with the PRISM climate modeling system by the Spatial Climate Analysis Service, Oregon State University. <http://www.ocs.orst.edu/prism> Copyright (c) 2004, OSU SCAS



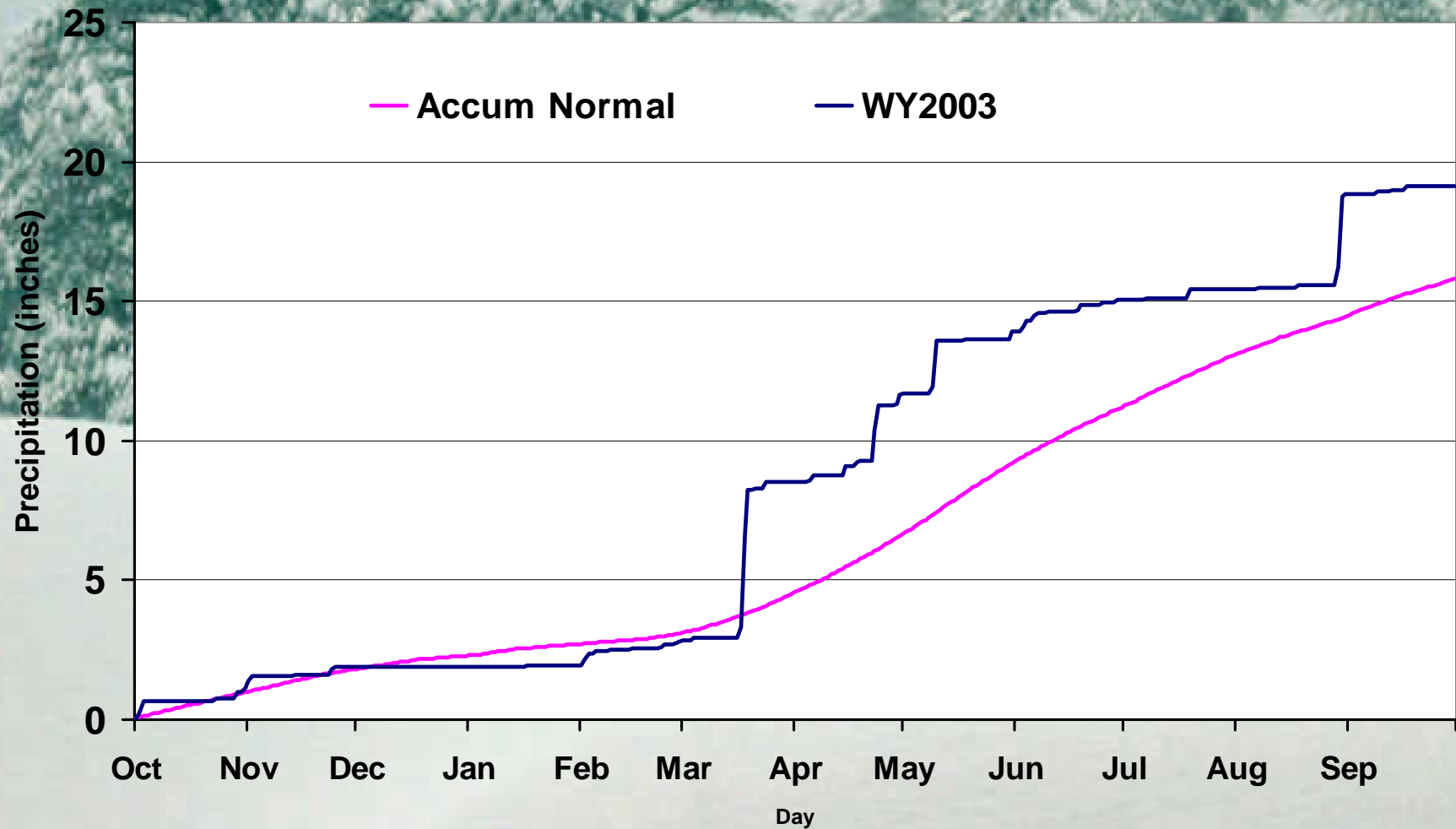
Highly seasonal precipitation patterns with considerable geographic diversity in “seasonality”

Water Year Average Precipitation for Selected Stations



A few storms contribute a large fraction of the annual precipitation in many years

Fort Collins Daily Accumulated Precipitation

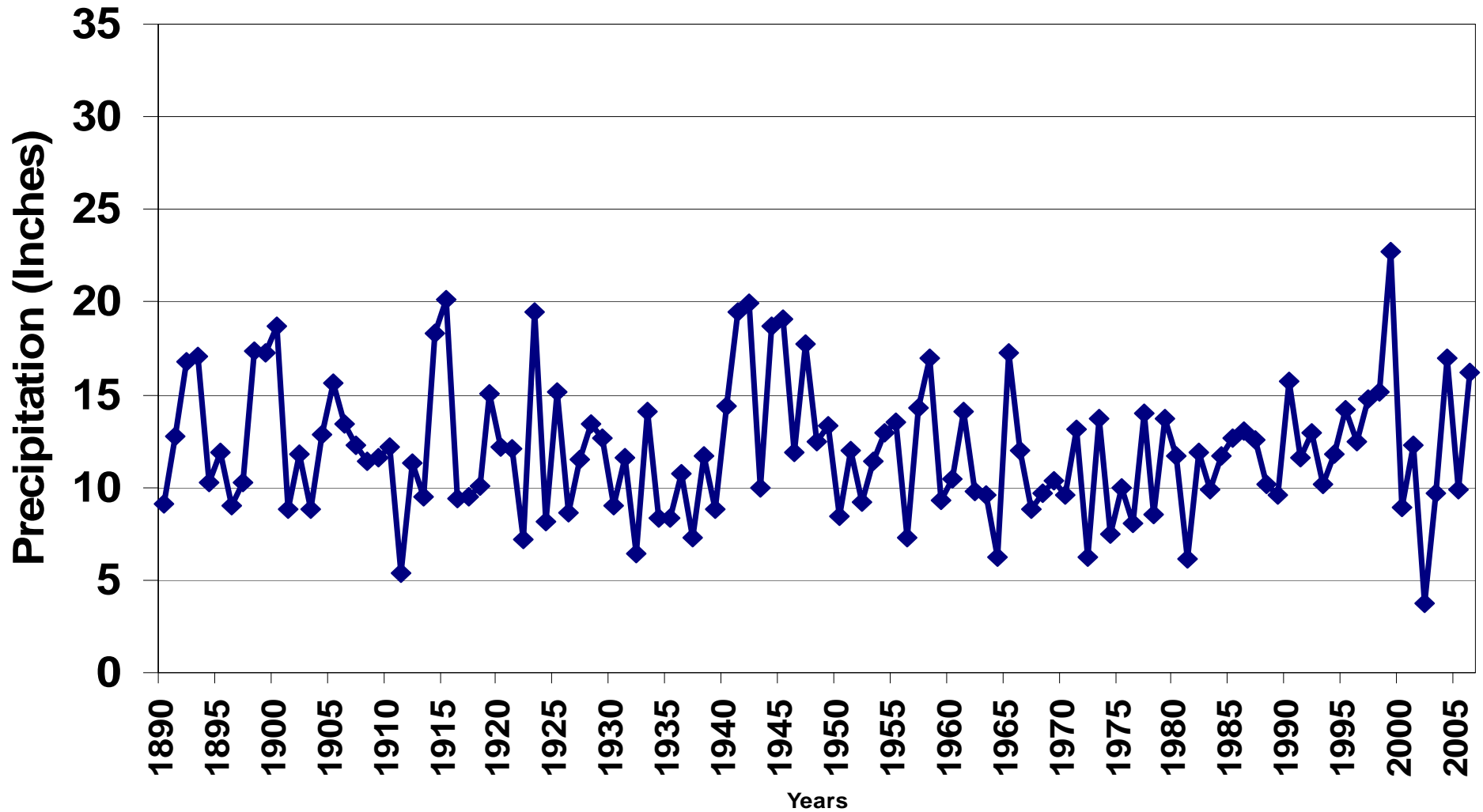


Large Year-to-Year Variations in Precipitation



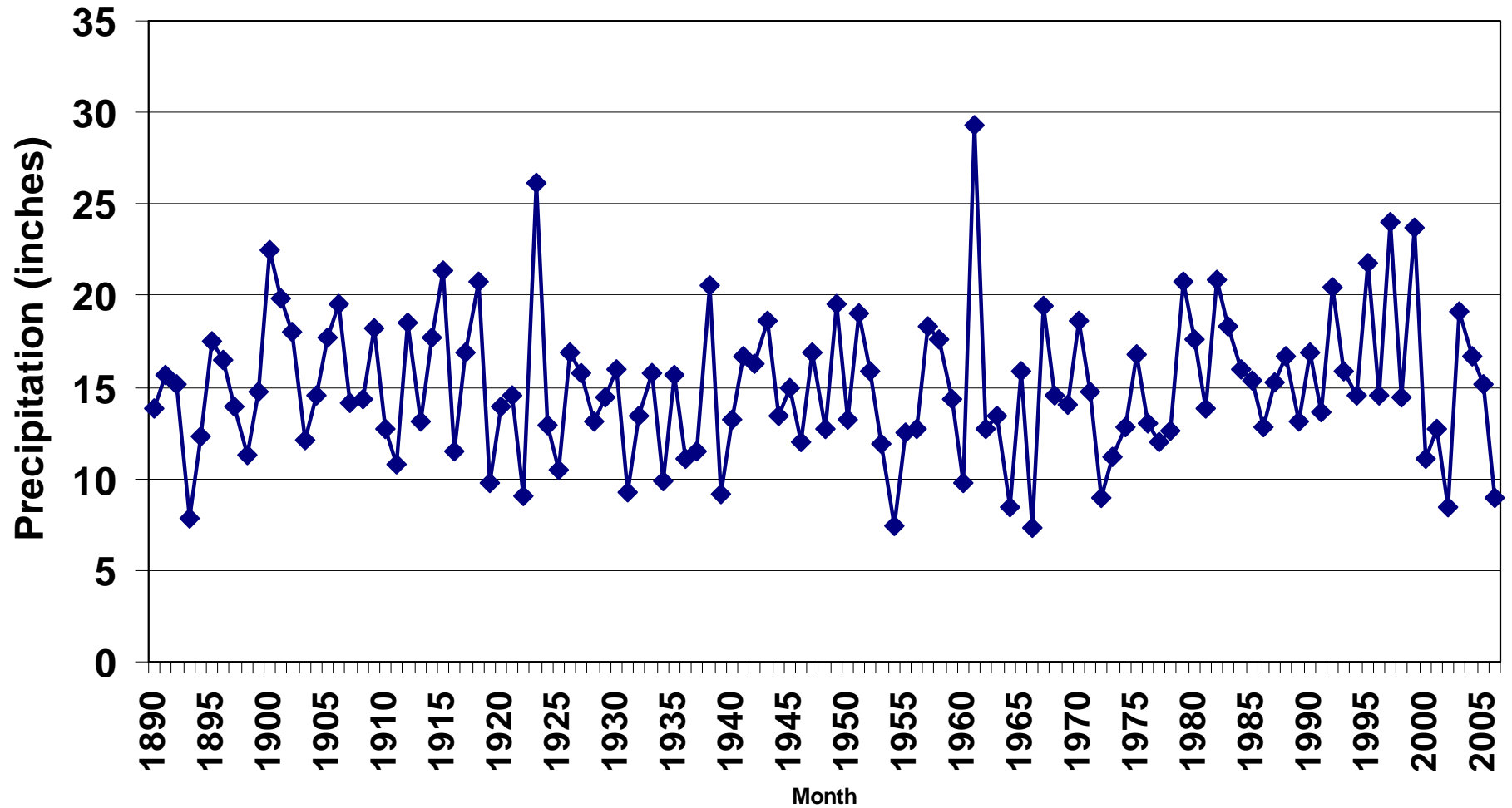
Rocky Ford Precipitation

Rocky Ford Water Year (Oct-Sep) Precipitation
from 1890-2006



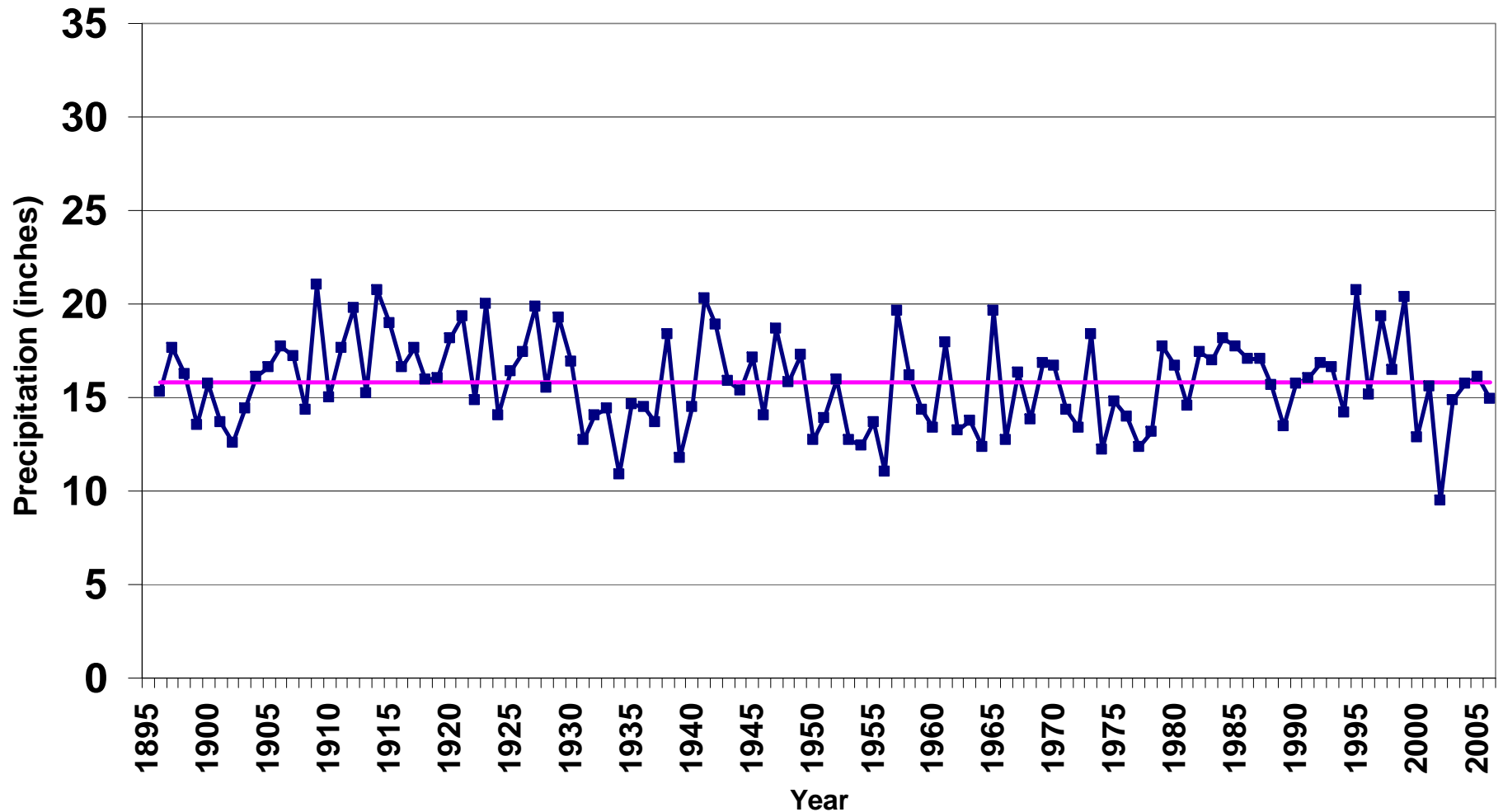
Fort Collins Precipitation

Fort Collins Total Water Year (Oct-Sep) Precipitation
(1890 through 2006)



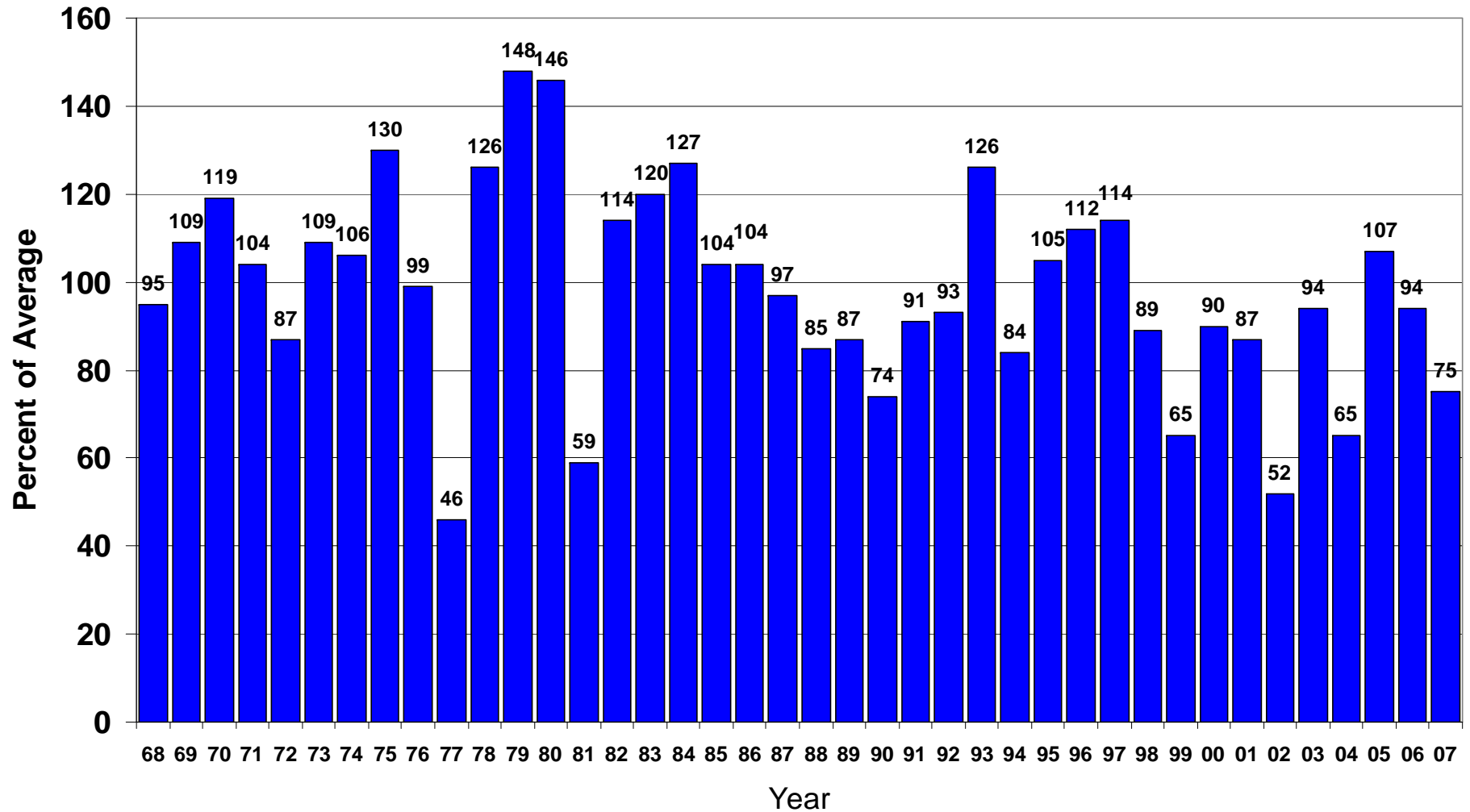
Colorado Statewide

Colorado Statewide Water Year (Oct-Sep) Precipitation from 1896 - 2006



April 1 Snowpack

APRIL 1 SNOWPACK
COLORADO STATEWIDE



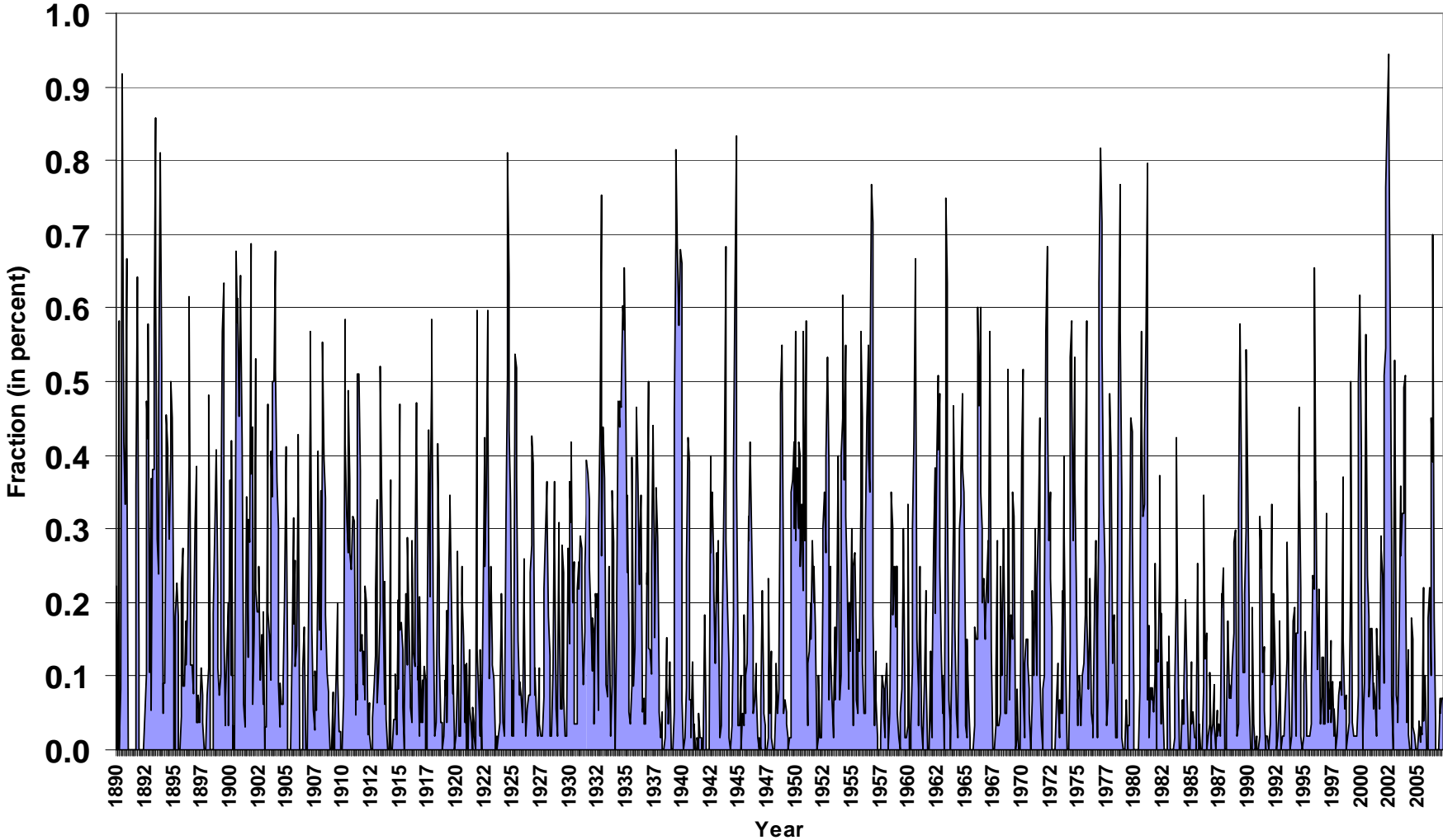
Drought – A Regular Visitor



3-Month SPI

Fraction of Colorado in Drought Based on 3 month SPI

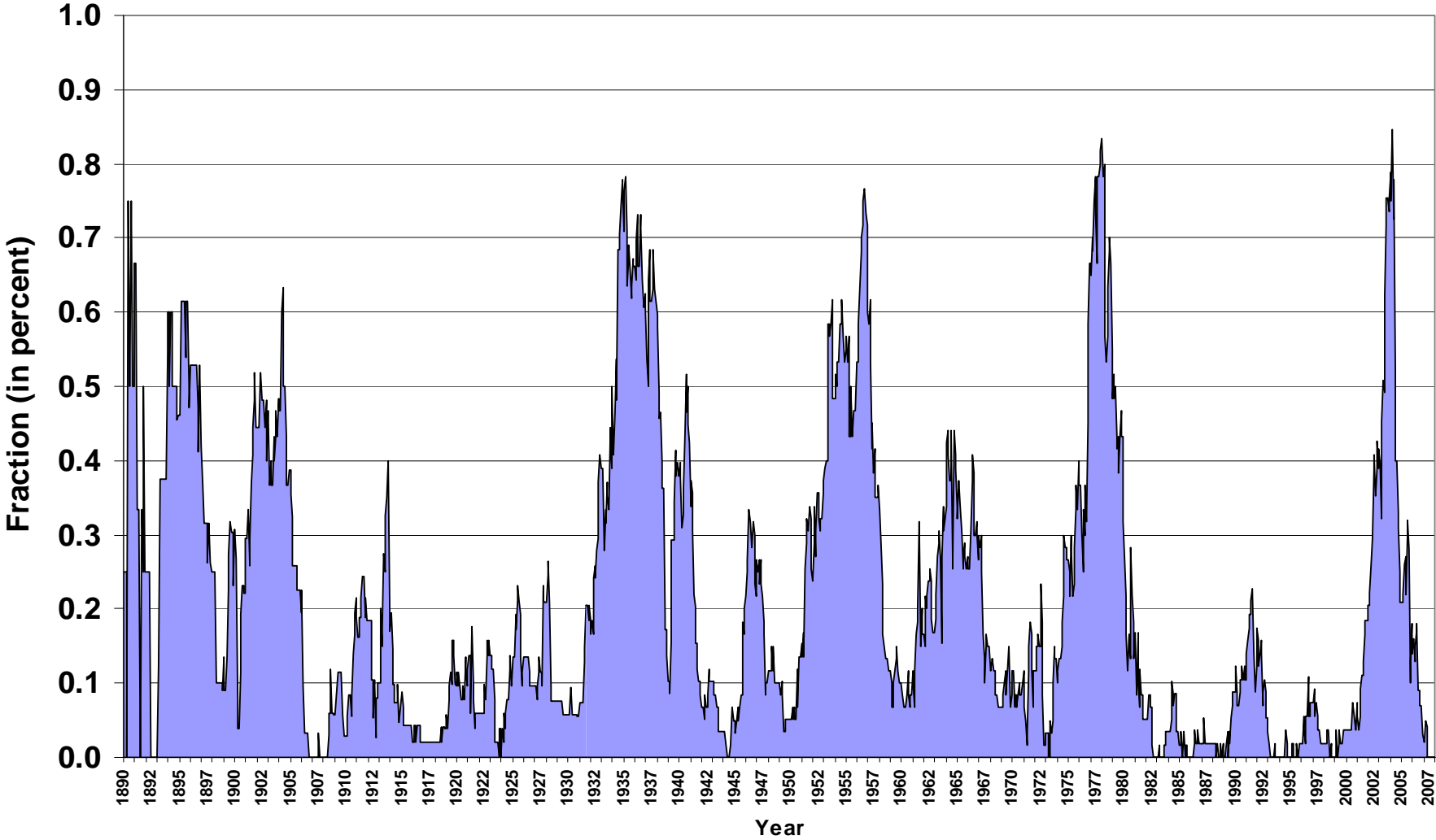
(1890 - Apr 2007)



48-month SPI

Fraction of Colorado in Drought Based on 48 month SPI

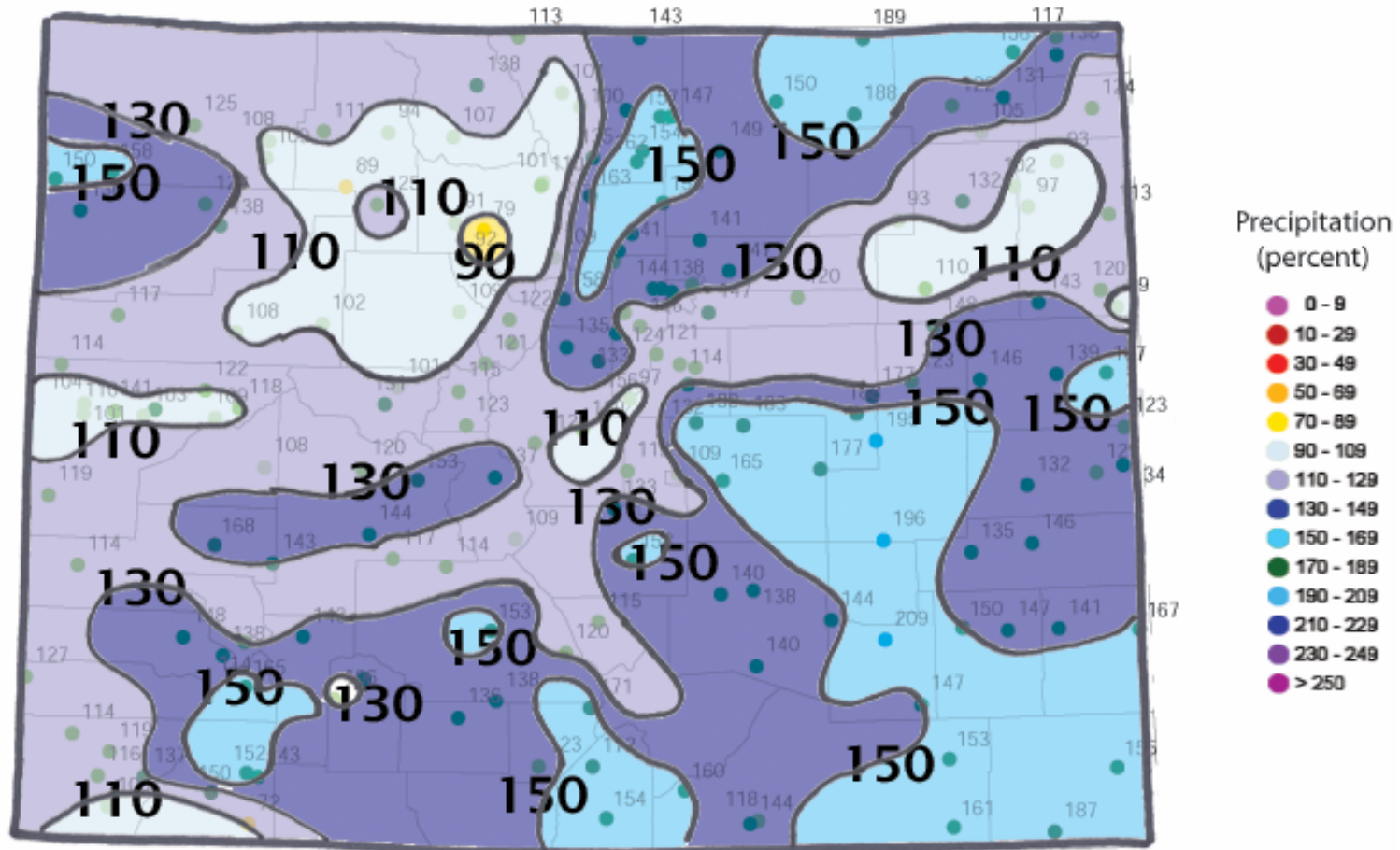
(1890 - Apr 2007)



1999 Water Year Precipitation

Water Year 1999
(Oct. 1998-Sept. 1999)

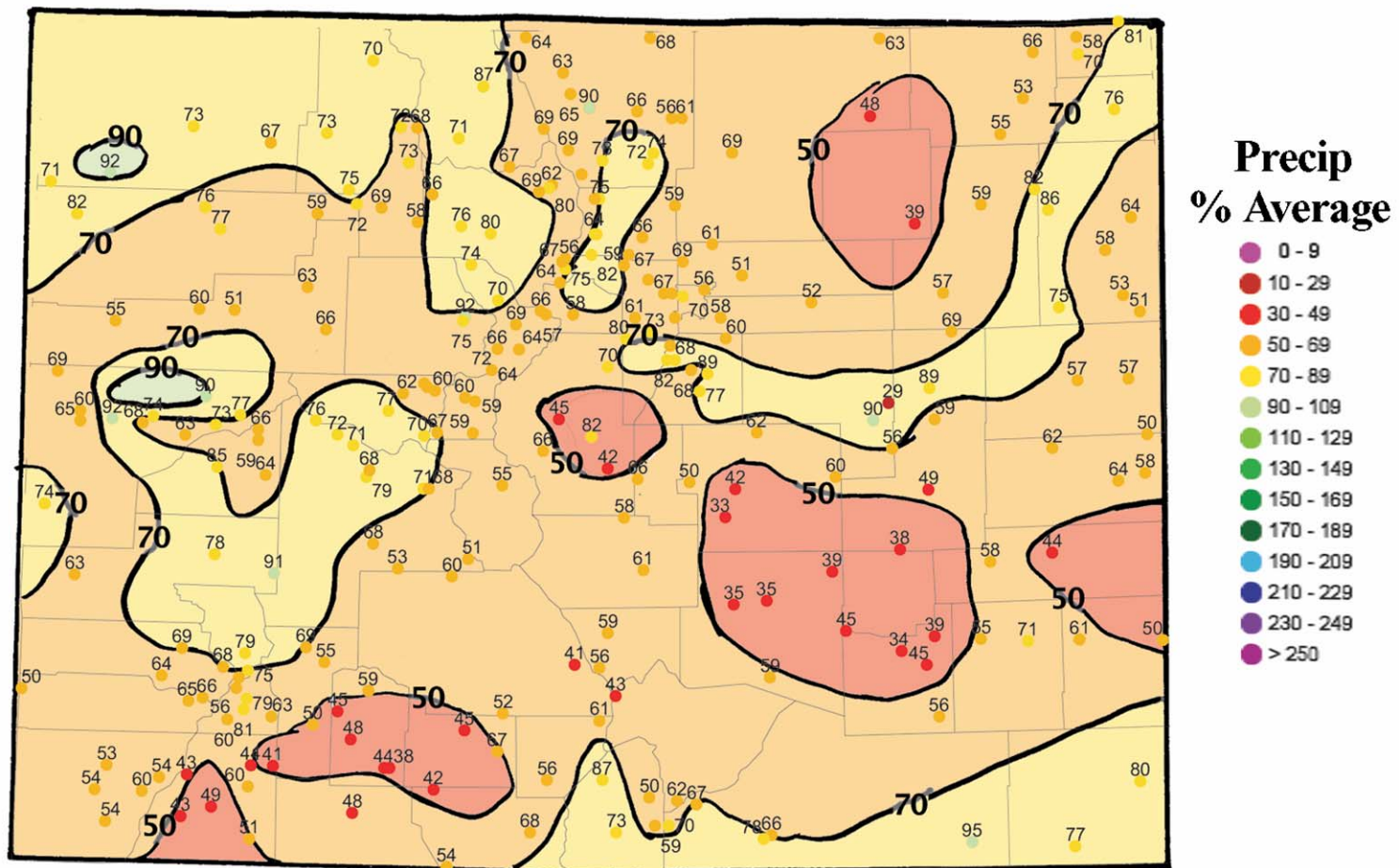
Precipitation Percent of Average for 1961-1990 Averages



2002 Water Year Precipitation

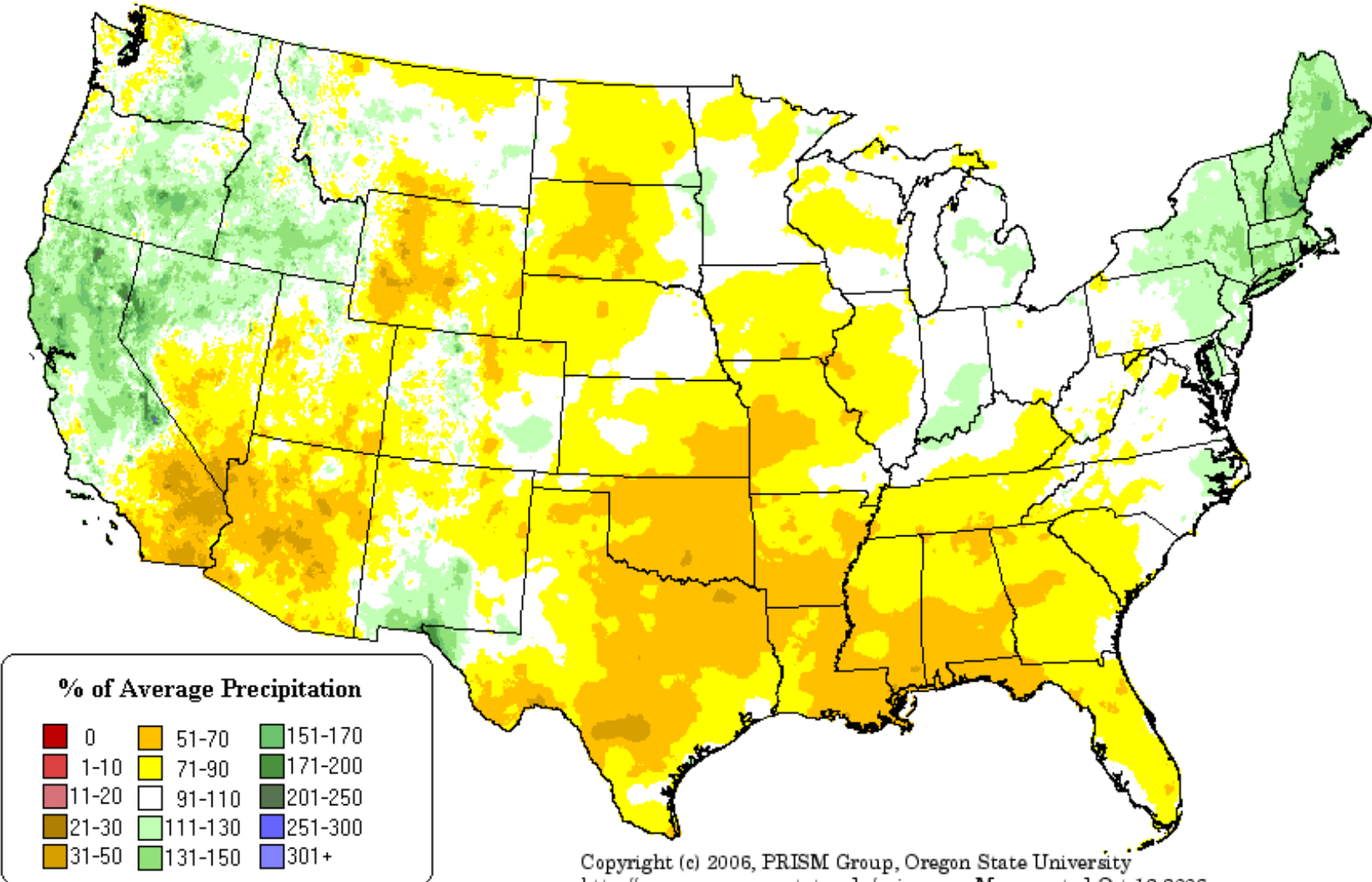
Water Year 2002
(Oct. 2001 - Sept. 2002)

Precipitation Percent of Average for 1961-1990 Averages



Water Year 2006 precipitation as a percent of average

12-month Percent of Average Precipitation: Sep 2006
Provisional Data

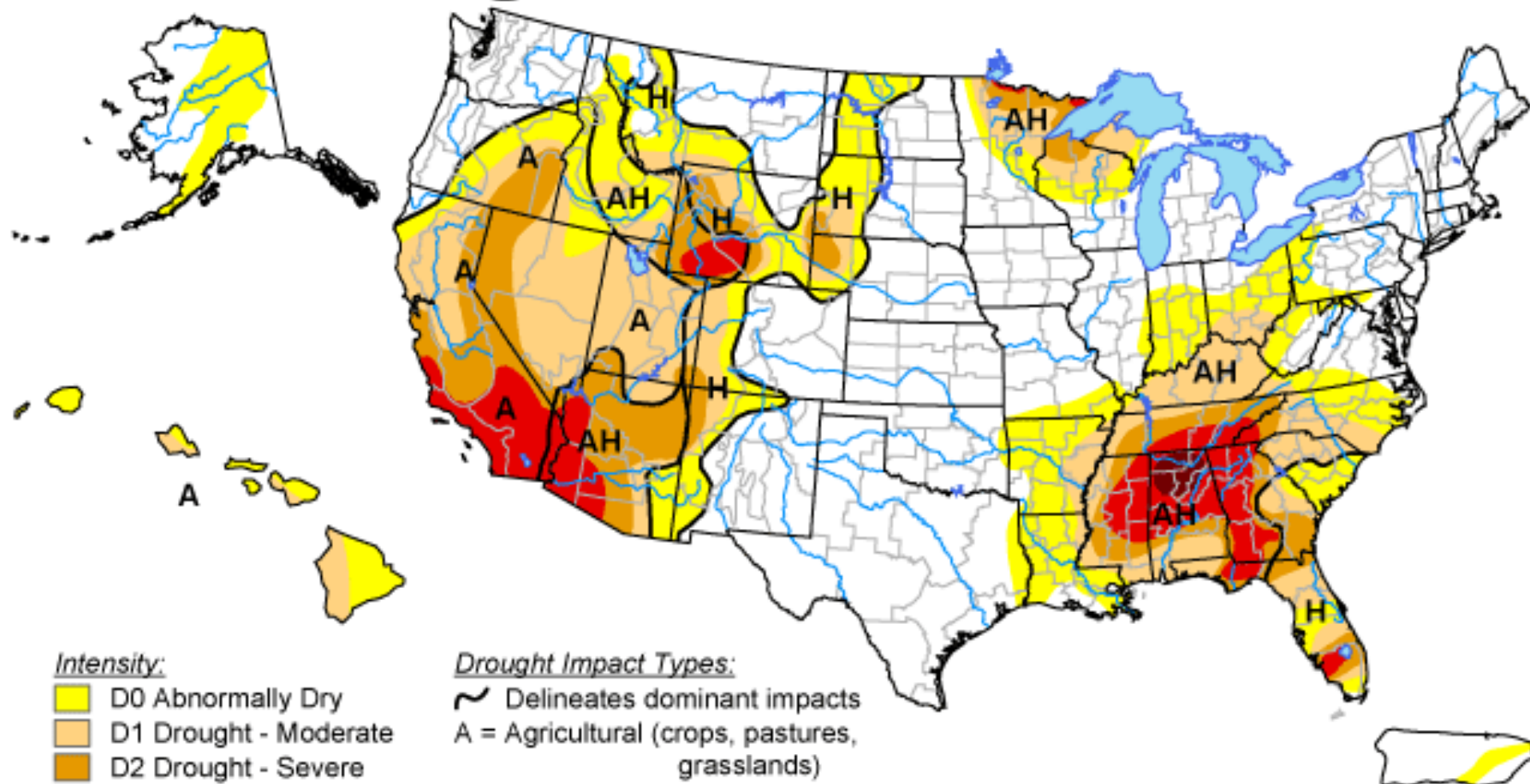


Copyright (c) 2006, PRISM Group, Oregon State University
<http://www.ocs.oregonstate.edu/prism> - Map created Oct 12 2006






U.S. Drought Monitor

June 5, 2007


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)

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

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

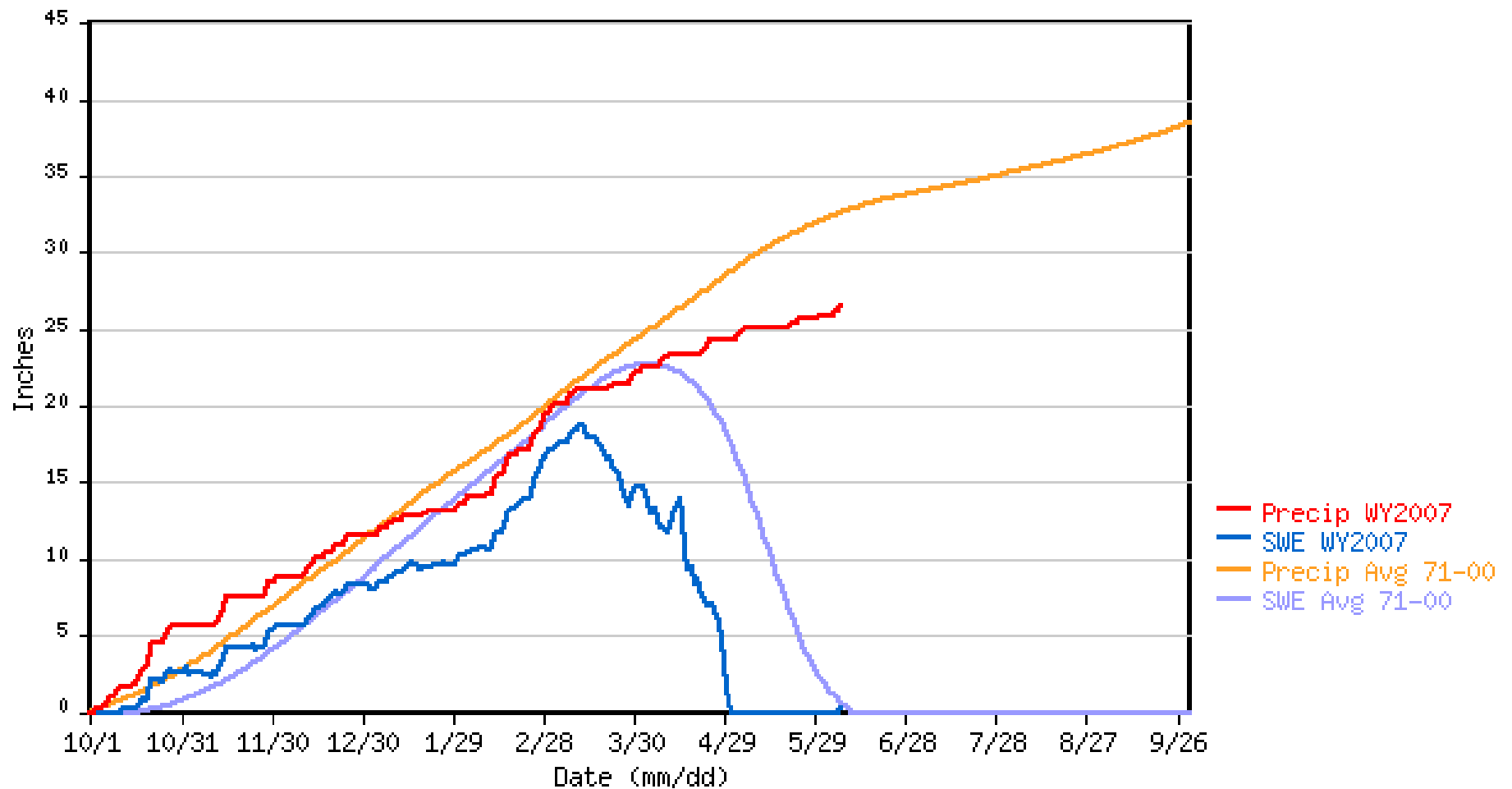


Released Thursday, June 7, 2007
Author: Scott Stephens, NOAA/NESDIS/NCDC

Dry Lake Snotel

DRY LAKE SNOTEL for Water Year 2007

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

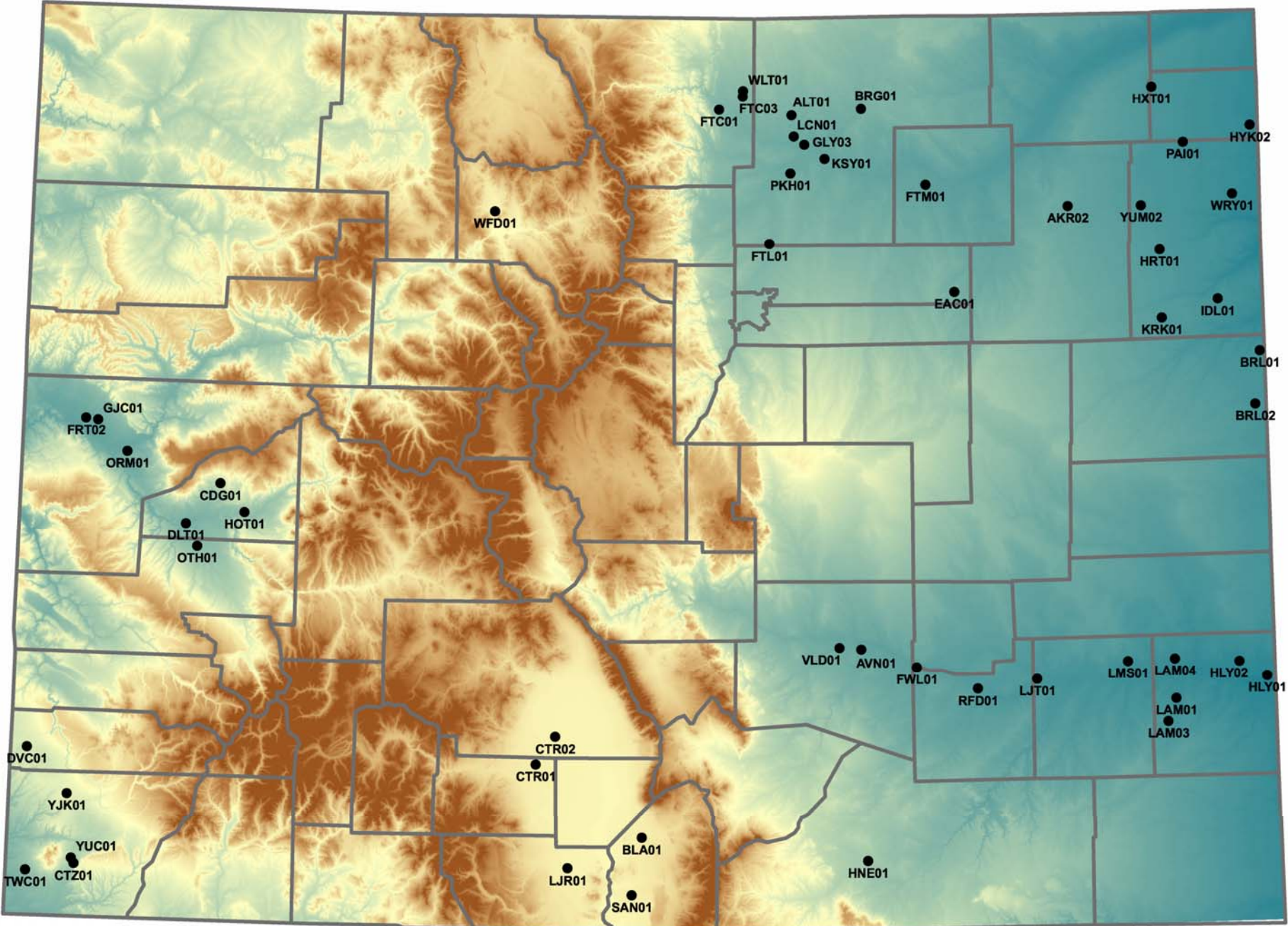


Colorado Agricultural Meteorological (COAGMET) Network

Cortez site, photo by Harold Duke

<http://www.coagmet.com>

CoAgMet Statewide Station Map

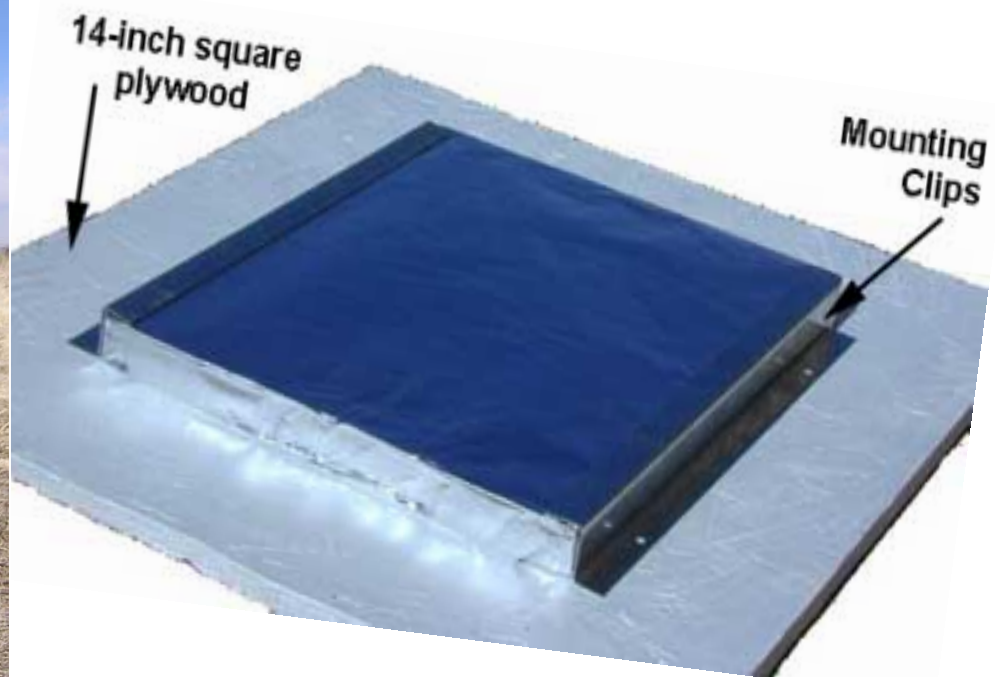




CoCoRaHS

Community Collaborative Rain, Hail, and Snow Network

<http://www.cocorahs.org>



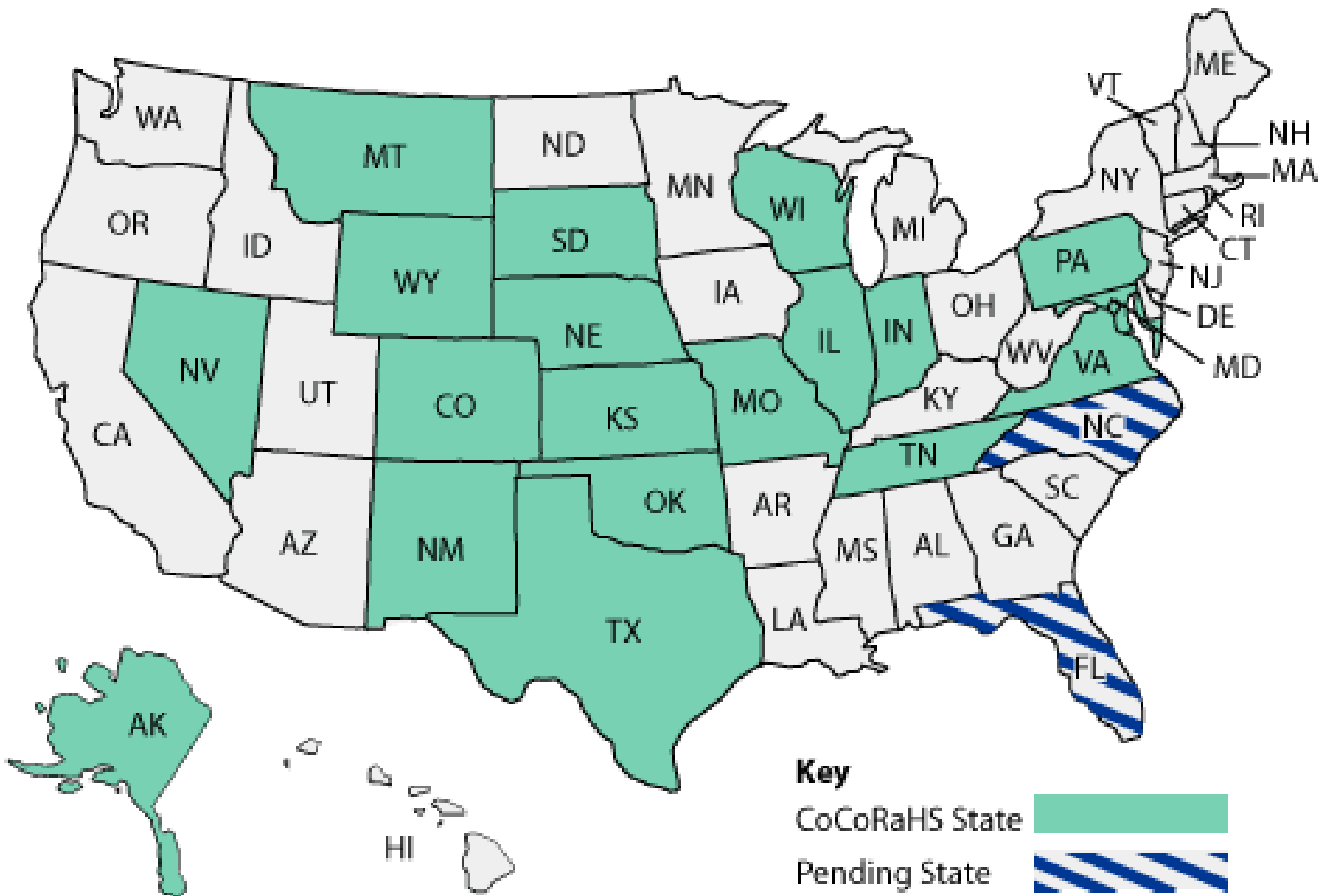
Support for this project provided by NOAA Office of Education and many local charter sponsors.

Join CoCoRaHS!



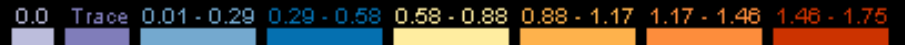
<http://www.cocorahs.org>

CoCoRaHS Current Activity



Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

Denver Metro, Colorado 5/30/2007



Denver area
CoCoRaHS
Rainfall,
May 30, 2007

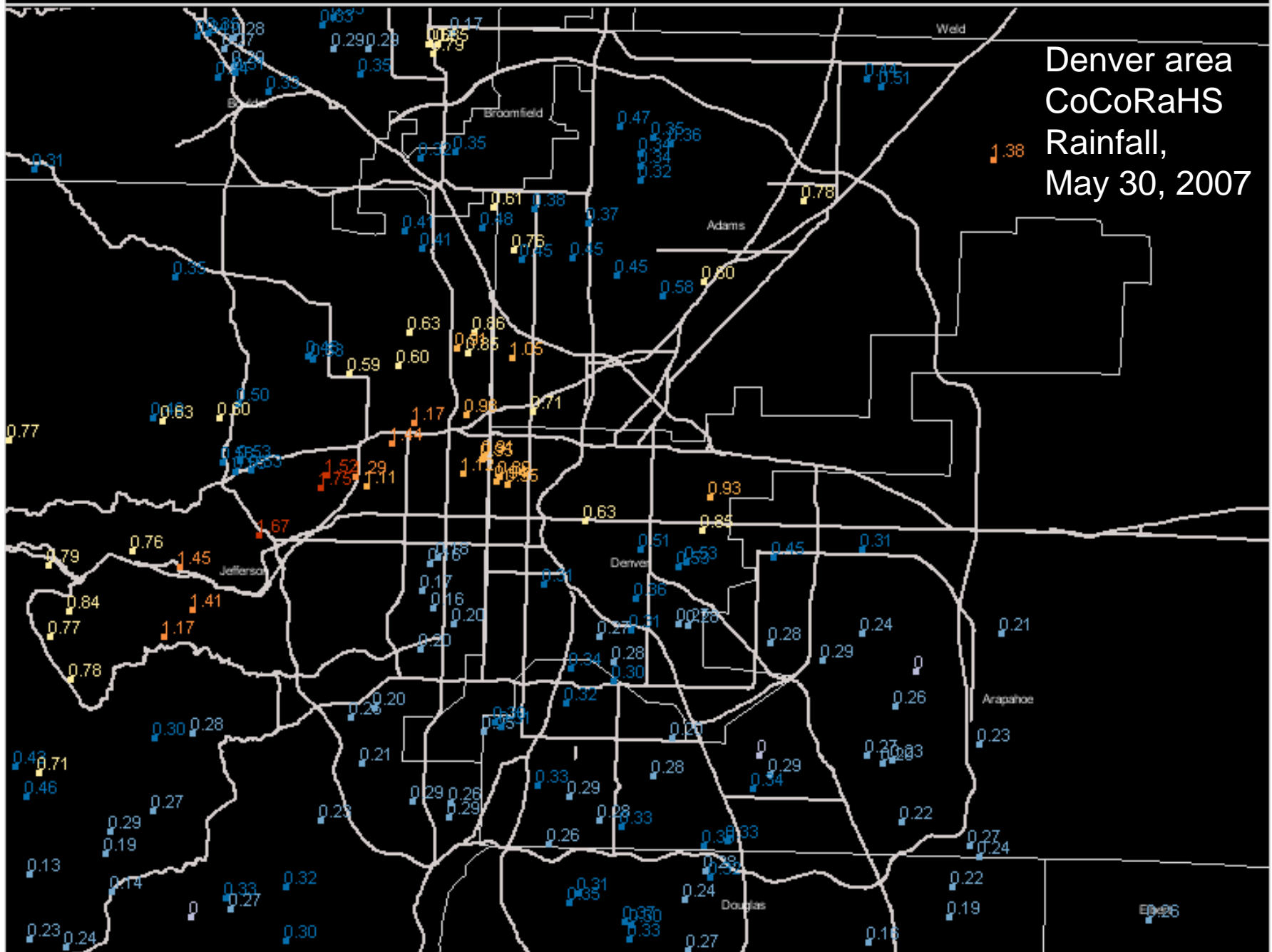




Photo by Lynn Kral, Loveland, January 2006

Colorado Climate Center

Data and Power Point Presentations available for downloading

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

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

