Winter 2010

Weekly Climate, Water & Drought Assessment

Today's Agenda

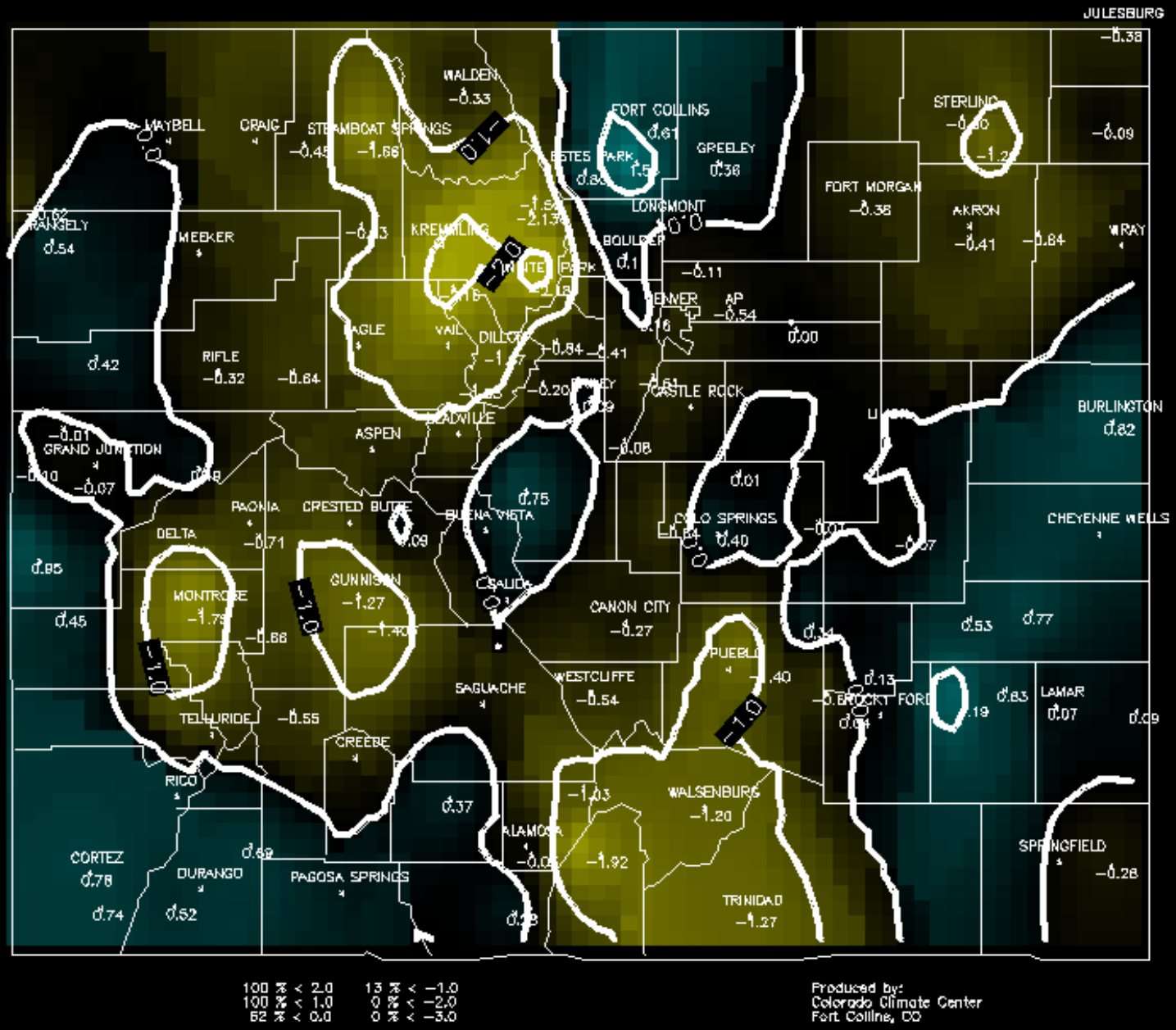
- Assessment of current water conditions

- Precipitation Forecast

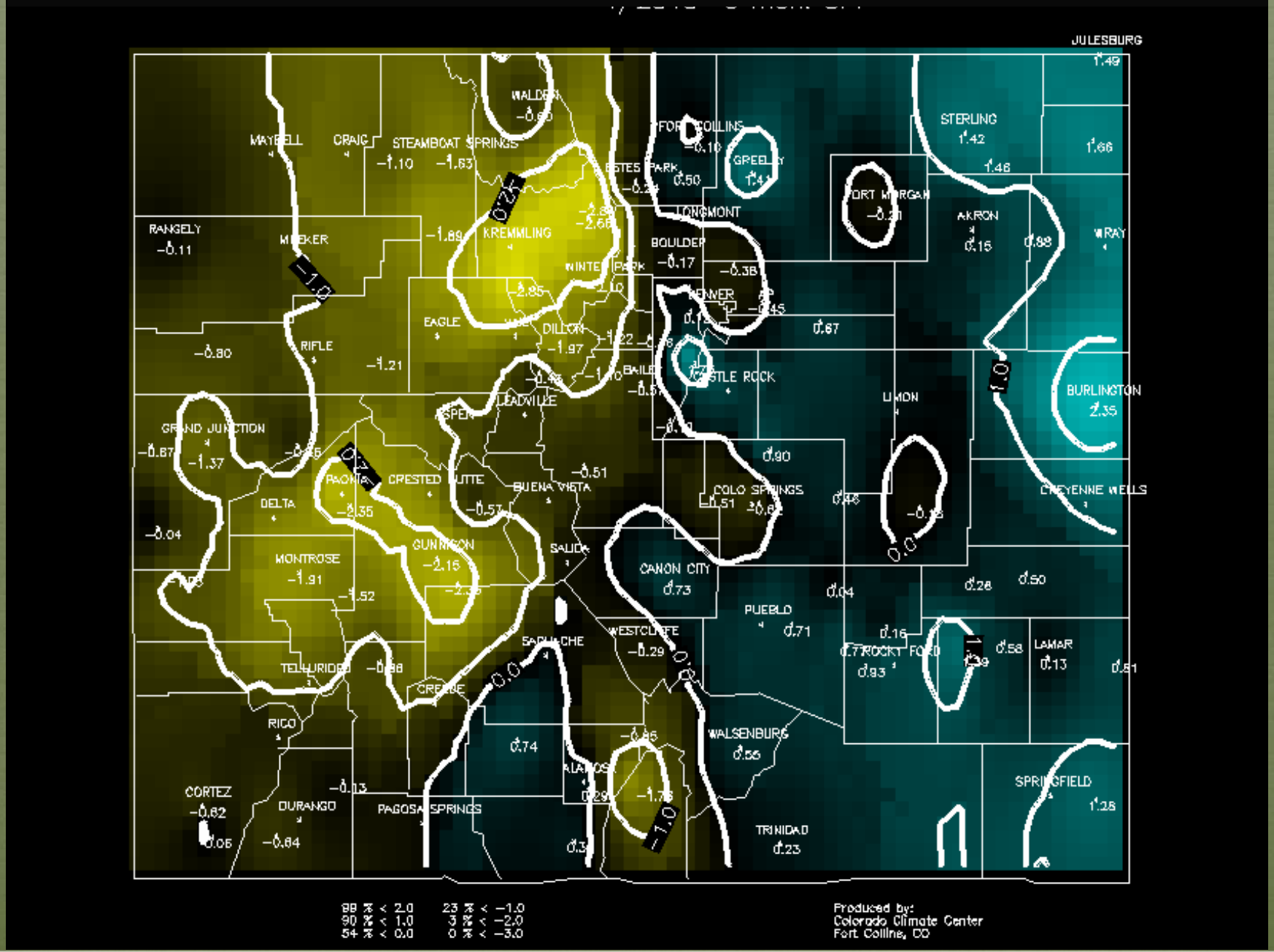
- Recommendations for Drought Monitor

Precipitation/Snowpack Update

3-month SPI

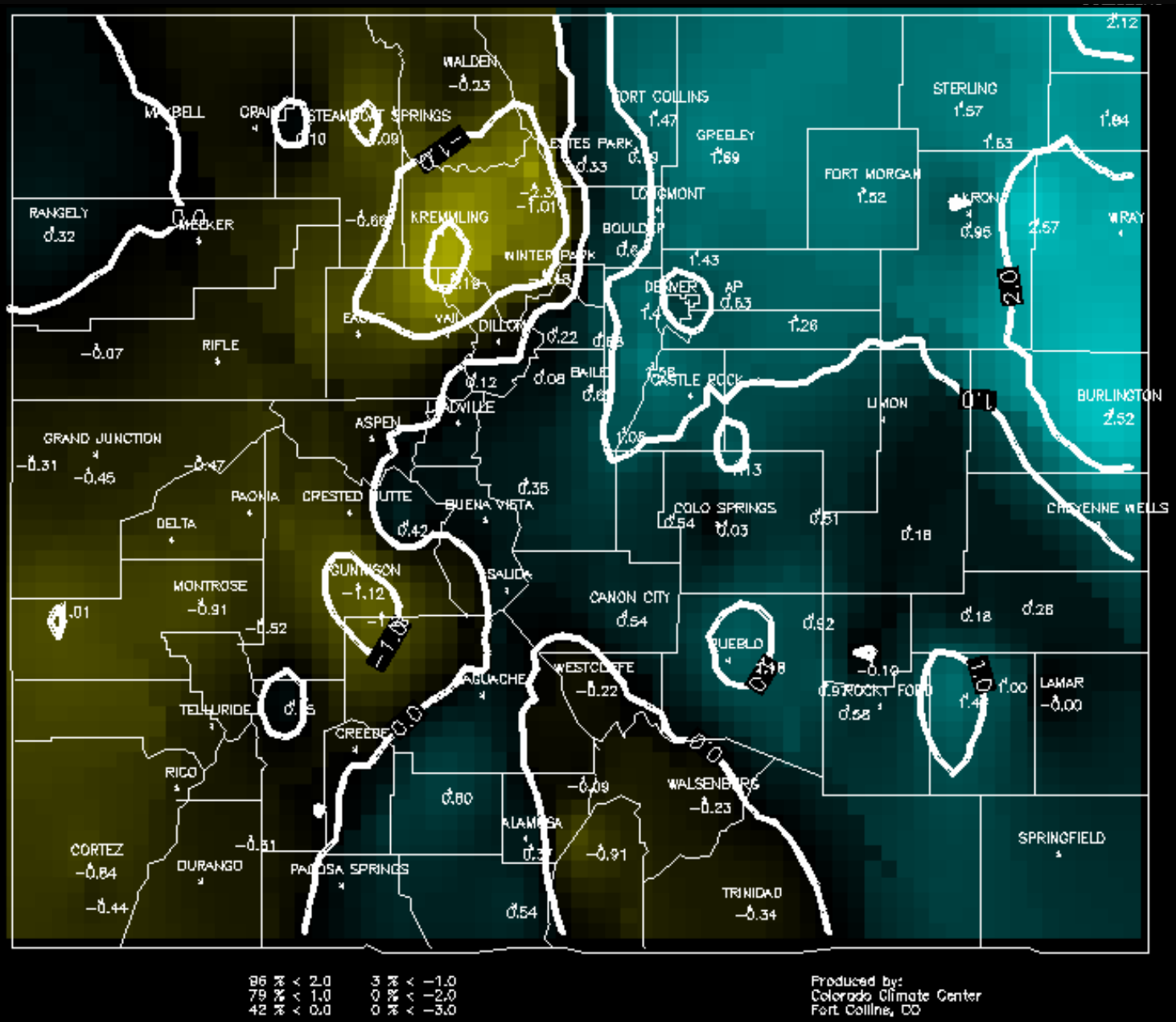

JULESBURG
WALDEN
FORT COLLINS
STERLING
MAYBELL
CRAIG
STEAMBOAT SPRINGS
GREELEY
FORT MORGAN
LONGMONT
AKRON
WRAY
MEEKER
KREMMLING
BOULDER
DENVER
AP
EAGLE
VAIL
DILLON
RIFLE
CASTLE ROCK
BURLINGTON
GRAND JUNCTION
ASPEN
PAONIA
CRESTED BUTTE
BUENA VISTA
COLO SPRINGS
CHEYENNE WELLS
DELTA
GUNNISON
SALIDA
MONTROSE
CANON CITY
PUEBLO
WESTCLIFFE
SAGUACHE
BROCKT FORD
LAMAR
TELLURIDE
CREEDE
RICO
WALSENBURG
ALAMOSA
SPRINGFIELD
CORTEZ
DURANGO
PAGOSA SPRINGS
TRINIDAD
100 % < 2.0
100 % < 1.0
62 % < 0.0
13 % < −1.0
0 % < −2.0
0 % < −3.0
Produced by:
Colorado Climate Center
Fort Collins, CO

6-month SPI



JULESBURG
STERLING
WALDEN
MAYBELL
CRAIG
STEAMBOAT SPRINGS
FORT COLLINS
GREELEY
ESTES PARK
FORT MORGAN
AKRON
WRAY
RANGELY
MEEKER
KREMMLING
LONGMONT
BOULDER
WINTER PARK
DENVER
EAGLE
DILLON
RIFLE
BAILEY
CASTLE ROCK
LIMON
BURLINGTON
LEADVILLE
ASPEN
GRAND JUNCTION
PAONIA
CRESTED BUTTE
BUENA VISTA
COLO SPRINGS
CHEYENNE WELLS
DELTA
GUNNISON
SALIDA
MONTROSE
CANON CITY
PUEBLO
WESTCLIFFE
SAGUACHE
ROCKY FORD
LAMAR
TELLURIDE
CREEDE
RICO
WALSENBURG
ALAMOSA
SPRINGFIELD
CORTEZ
DURANGO
PAGOSA SPRINGS
TRINIDAD
98 % < 2.0
90 % < 1.0
54 % < 0.0
23 % < −1.0
3 % < −2.0
0 % < −3.0
Produced by:
Colorado Climate Center
Fort Collins, CO

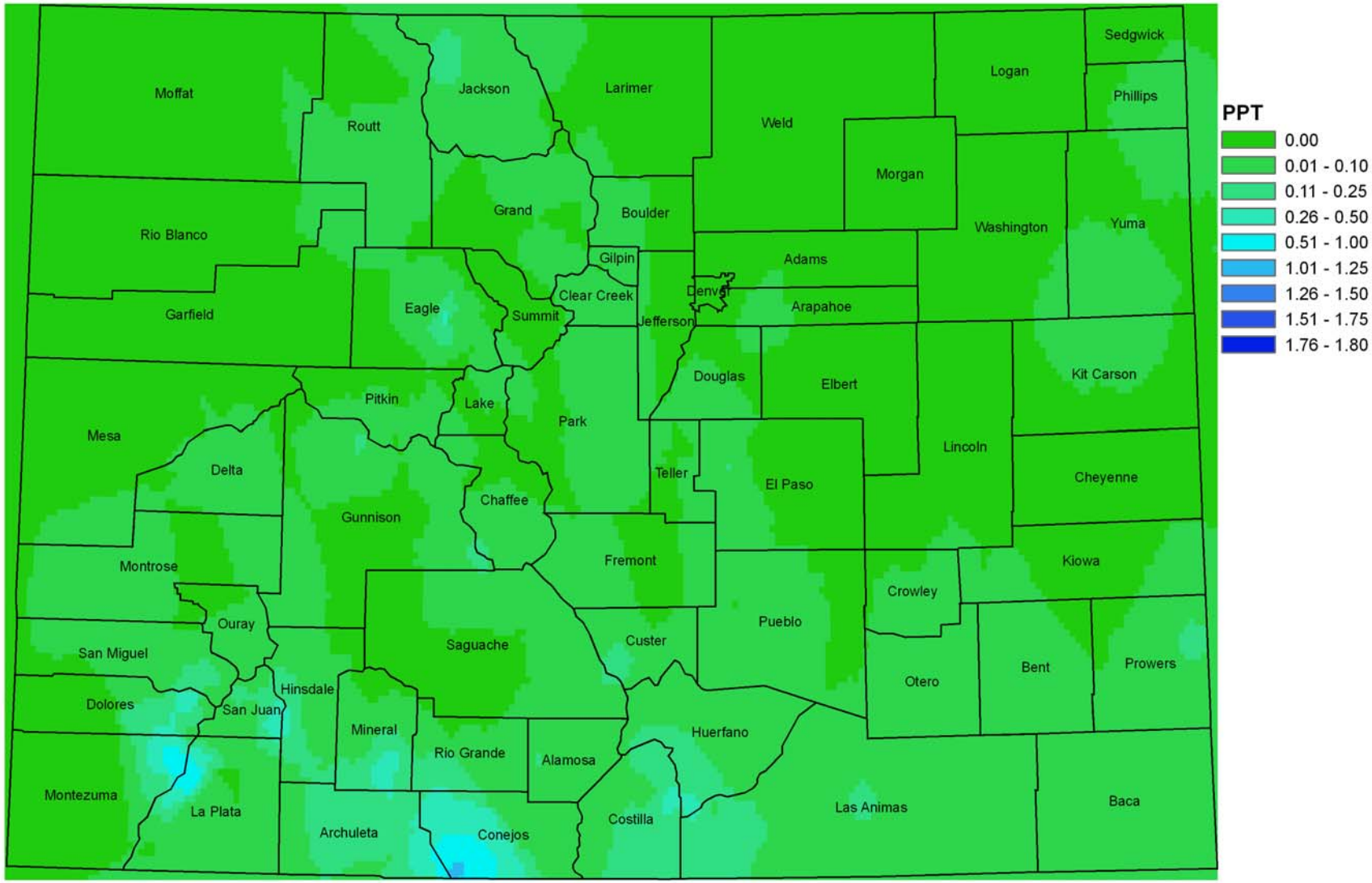
12-month SPI



WALDEN
-0.23
MAYBELL
CRAIG
STEAMBOAT SPRINGS
FORT COLLINS
1.47
GREELEY
1.69
STERLING
1.57
1.84
1.63
FORT MORGAN
1.52
ESTES PARK
0.33
LONGMONT
BOULDER
KRONE
0.95
2.57
WRAY
RANGELY
0.32
MEEKER
KREMMLING
WINTER PARK
1.43
DENVER
AP
0.63
1.26
EAGLE
VAIL
DILLON
0.22
RIFLE
-0.07
0.12
0.08
BAILEY
CASTLE ROCK
LIMON
BURLINGTON
2.52
LEADVILLE
ASPEN
GRAND JUNCTION
-0.31
-0.45
-0.47
PAONIA
CRESTED BUTTE
BUENA VISTA
0.35
COLO SPRINGS
0.54
0.03
0.51
0.18
CHEYENNE WELLS
DELTA
0.42
GUNNISON
-1.12
SALIDA
MONTROSE
-0.91
-0.52
CANON CITY
0.54
0.92
0.18
0.26
PUEBLO
WESTCLIFFE
-0.22
LAGUACHE
ROCKY FORD
0.58
1.00
LAMAR
-0.00
TELLURIDE
CREEDE
RICO
0.80
-0.09
WALSENBURG
-0.23
ALAMOSA
SPRINGFIELD
CORTEZ
-0.84
-0.31
DURANGO
PAGOSA SPRINGS
-0.91
TRINIDAD
-0.34
-0.44
0.54
86 % < 2.0
79 % < 1.0
42 % < 0.0
3 % < -1.0
0 % < -2.0
0 % < -3.0
Produced by:
Colorado Climate Center
Fort Collins, CO

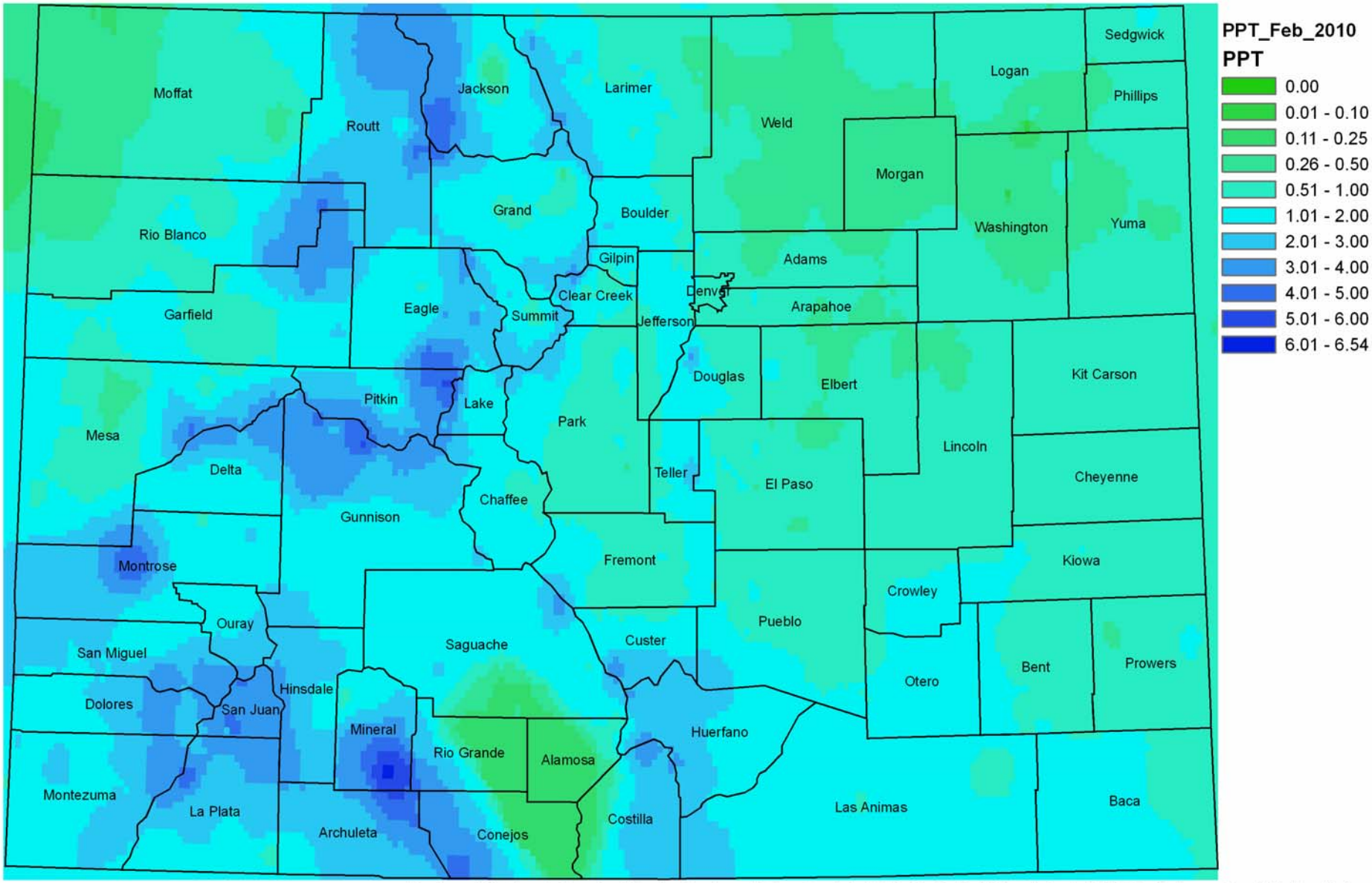
7 Day Precipitation Animation 22-28 February 2010

Colorado Precipitation (in) 22 February 2010



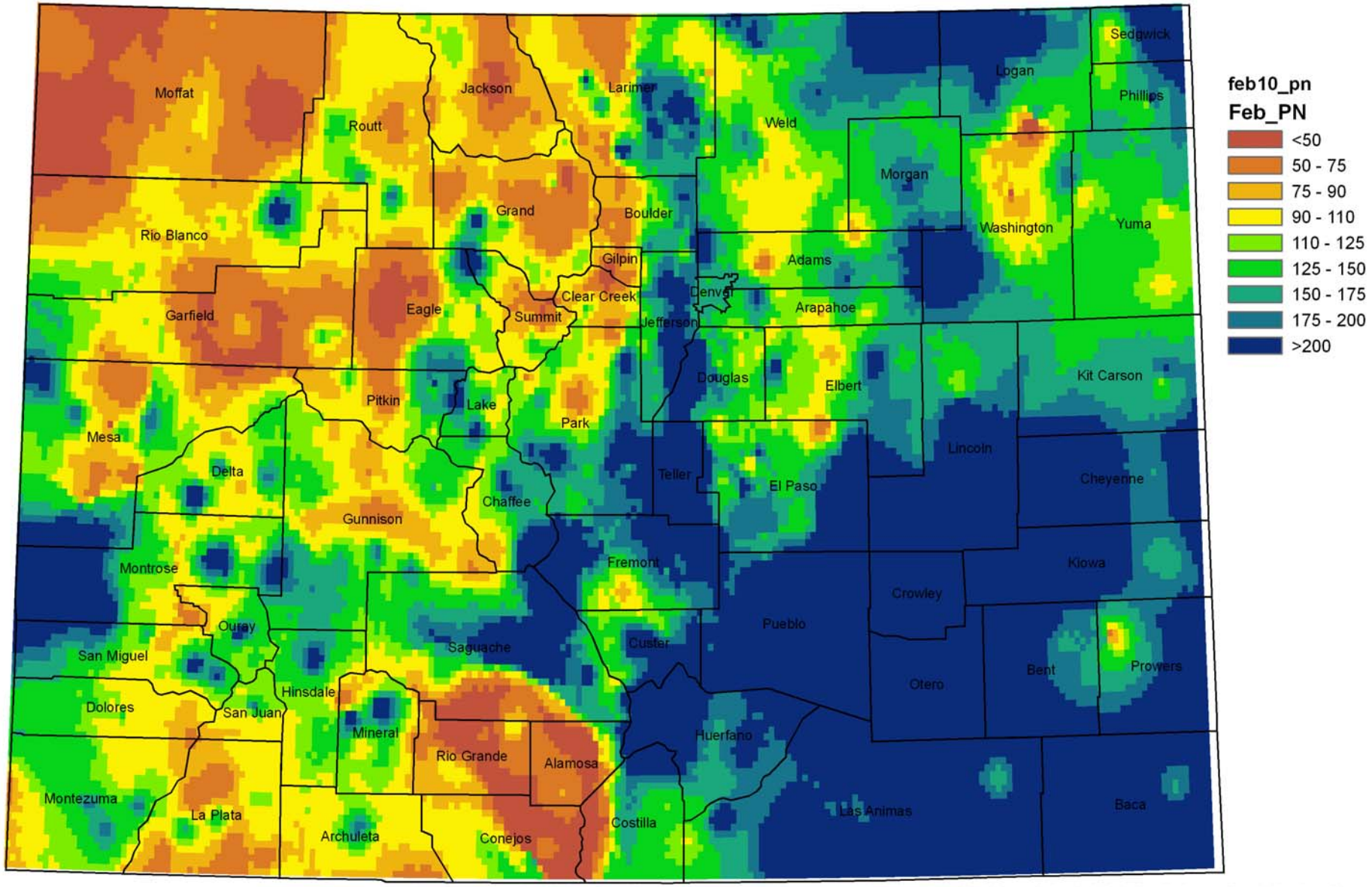
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

Colorado Precipitation (in) February 2010



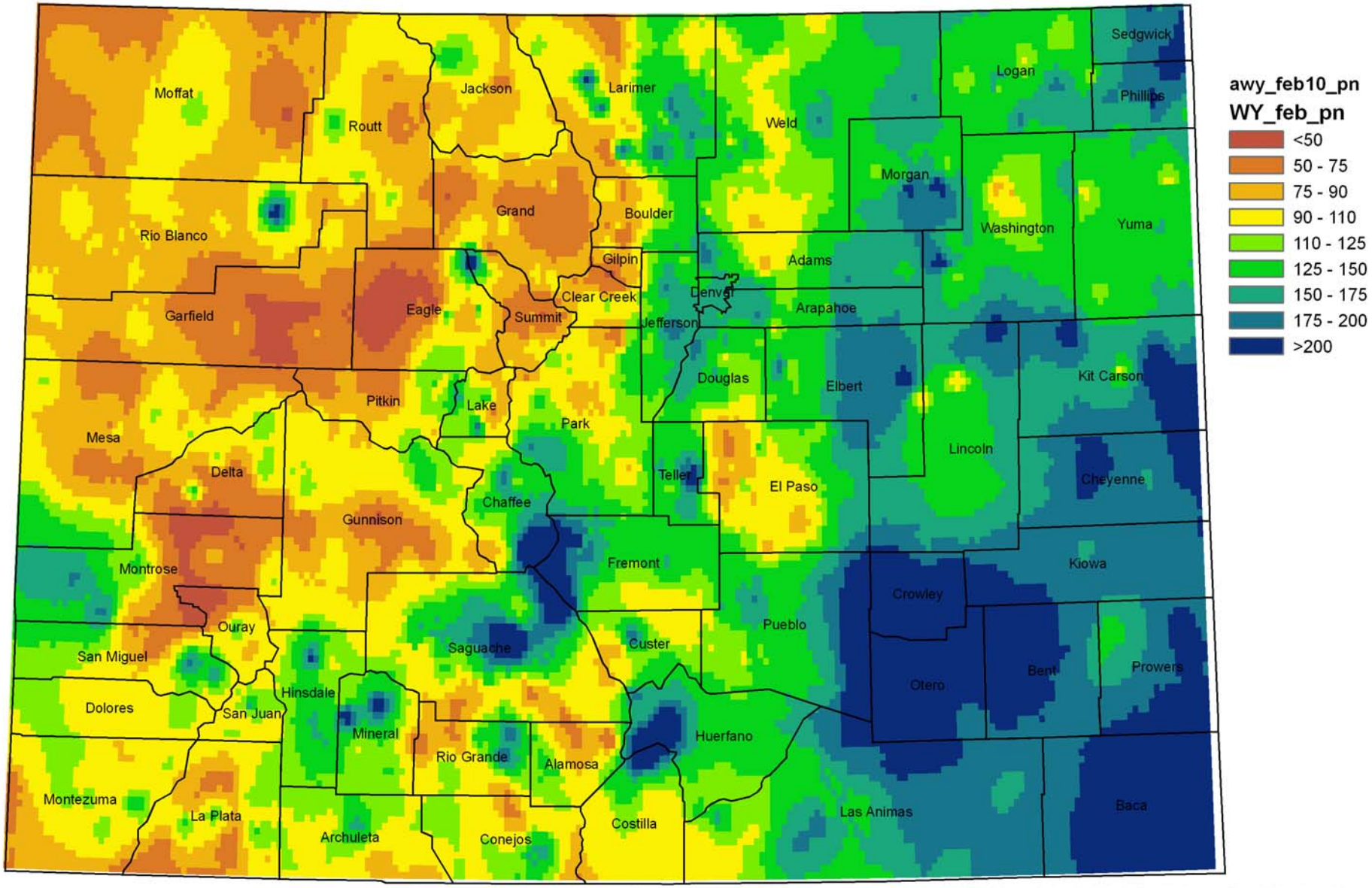
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

February 2010 Precipitation as Percent of Normal



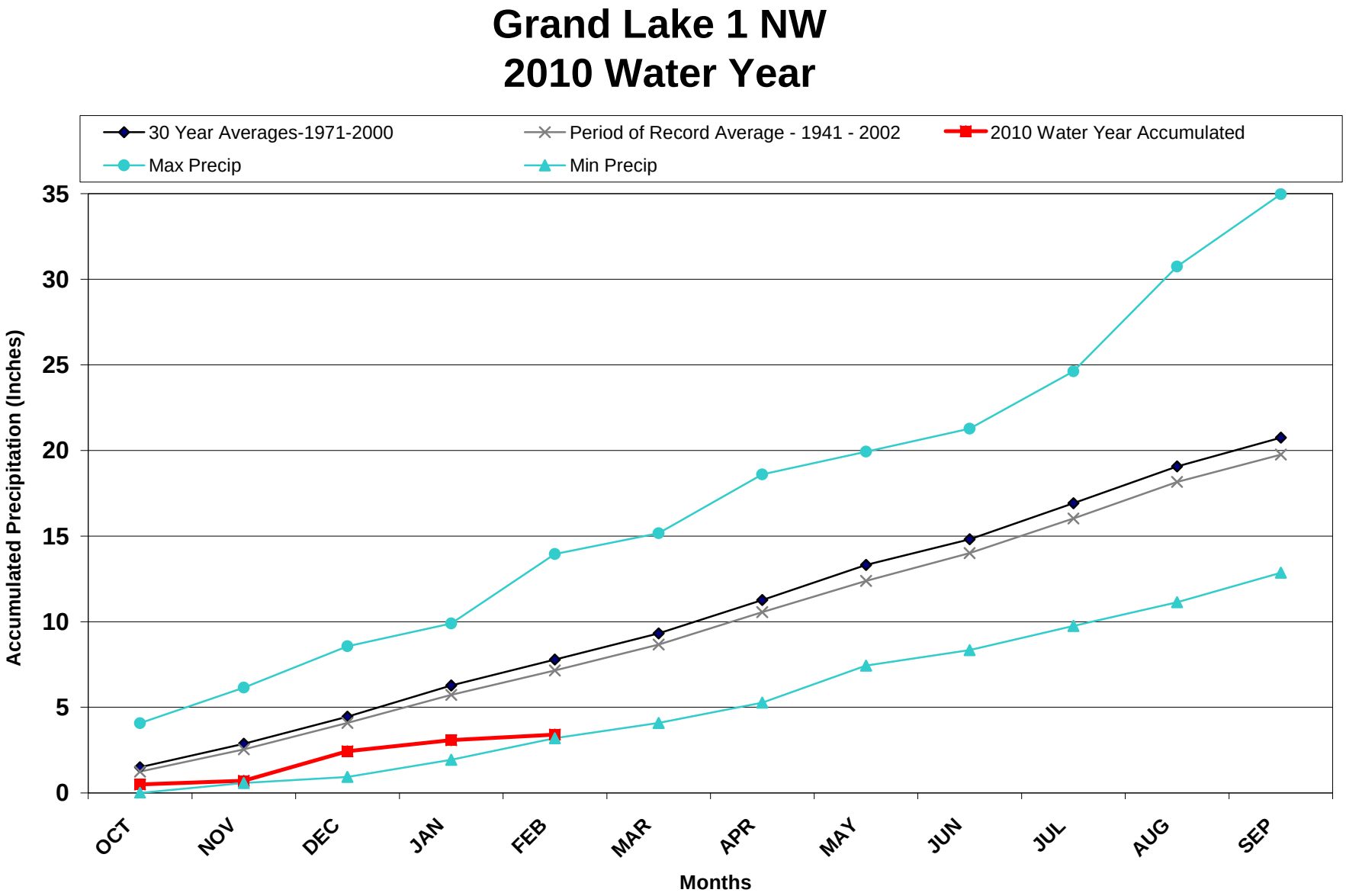
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

Colorado Water Year 2010 Precipitation as Percent of Normal
Oct 2009 - Feb 2010

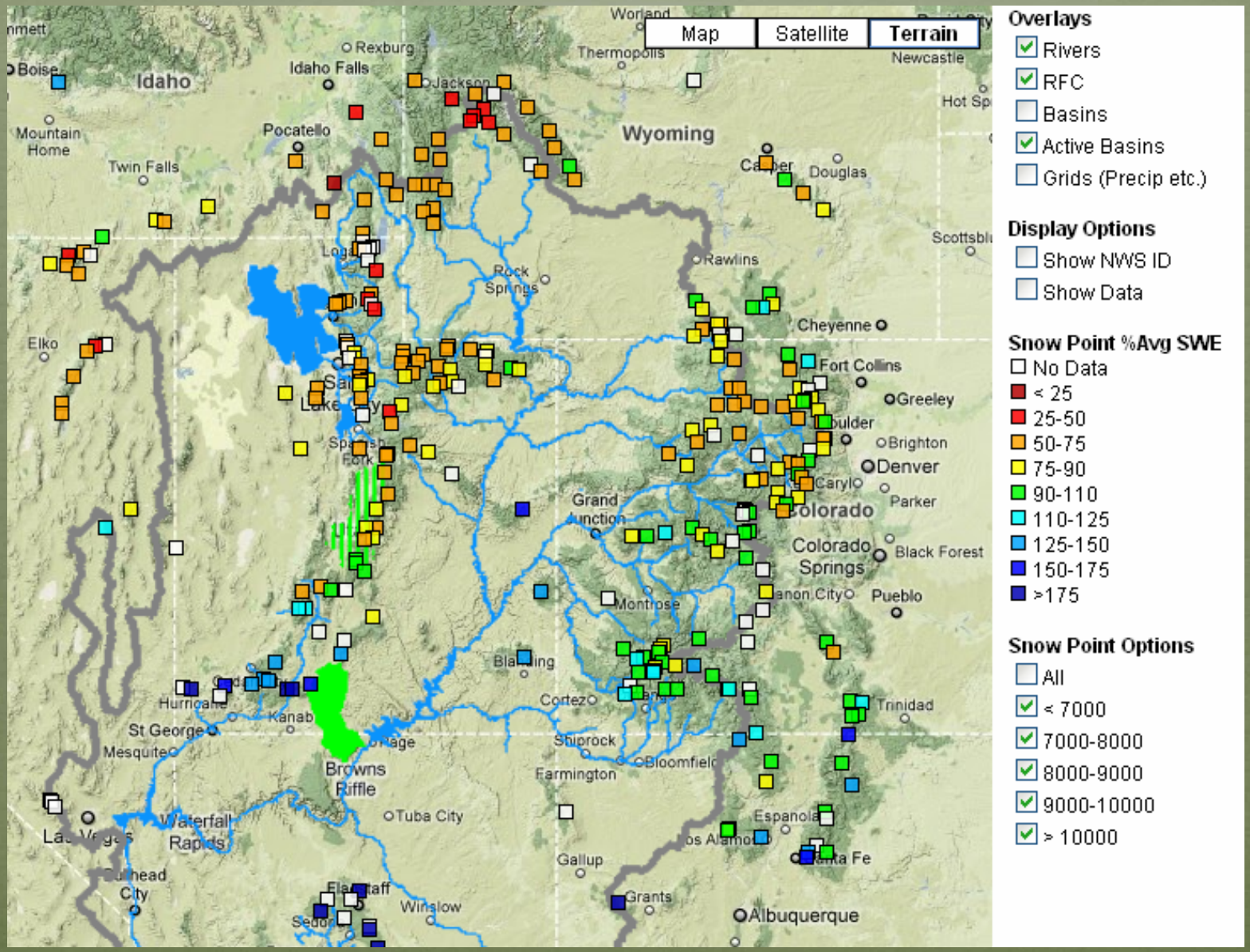


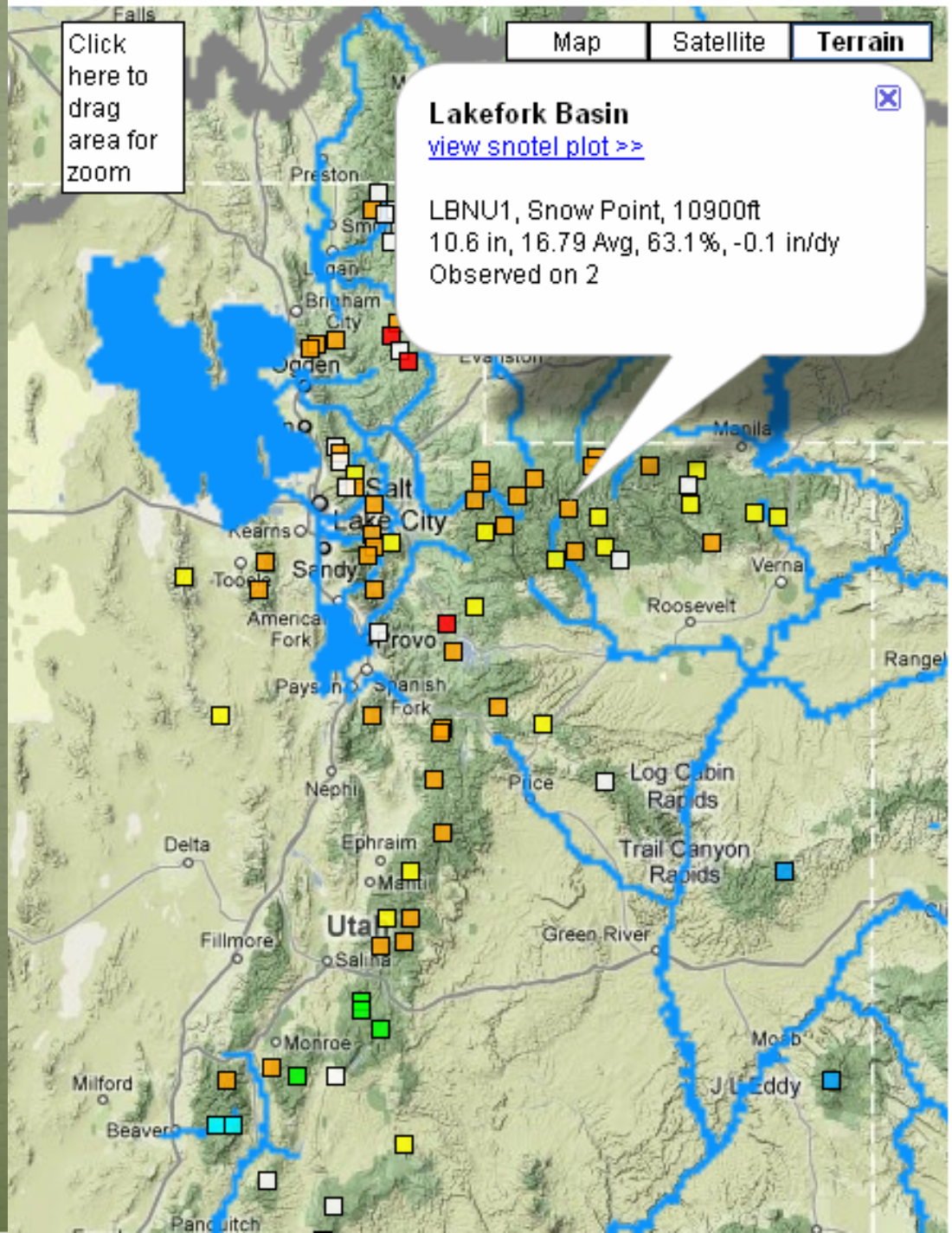
Produced by the Colorado Climate Center utilizing Snotel, NWS, CoCoRaHS and CoAgMet* Preliminary Precipitation Data
Analysis: Inverse Distance Weighting
*Summer only

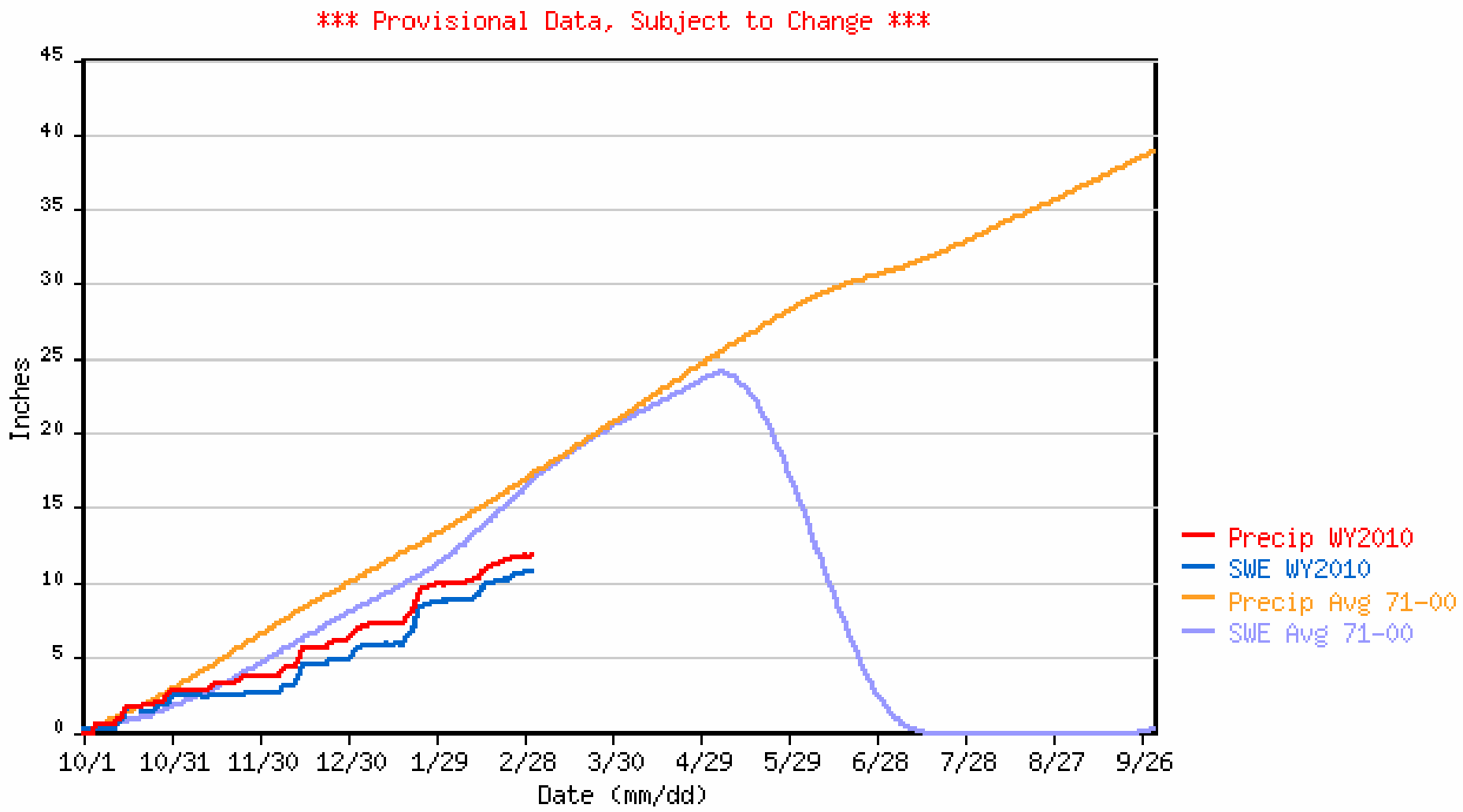
Grand Lake 1NW



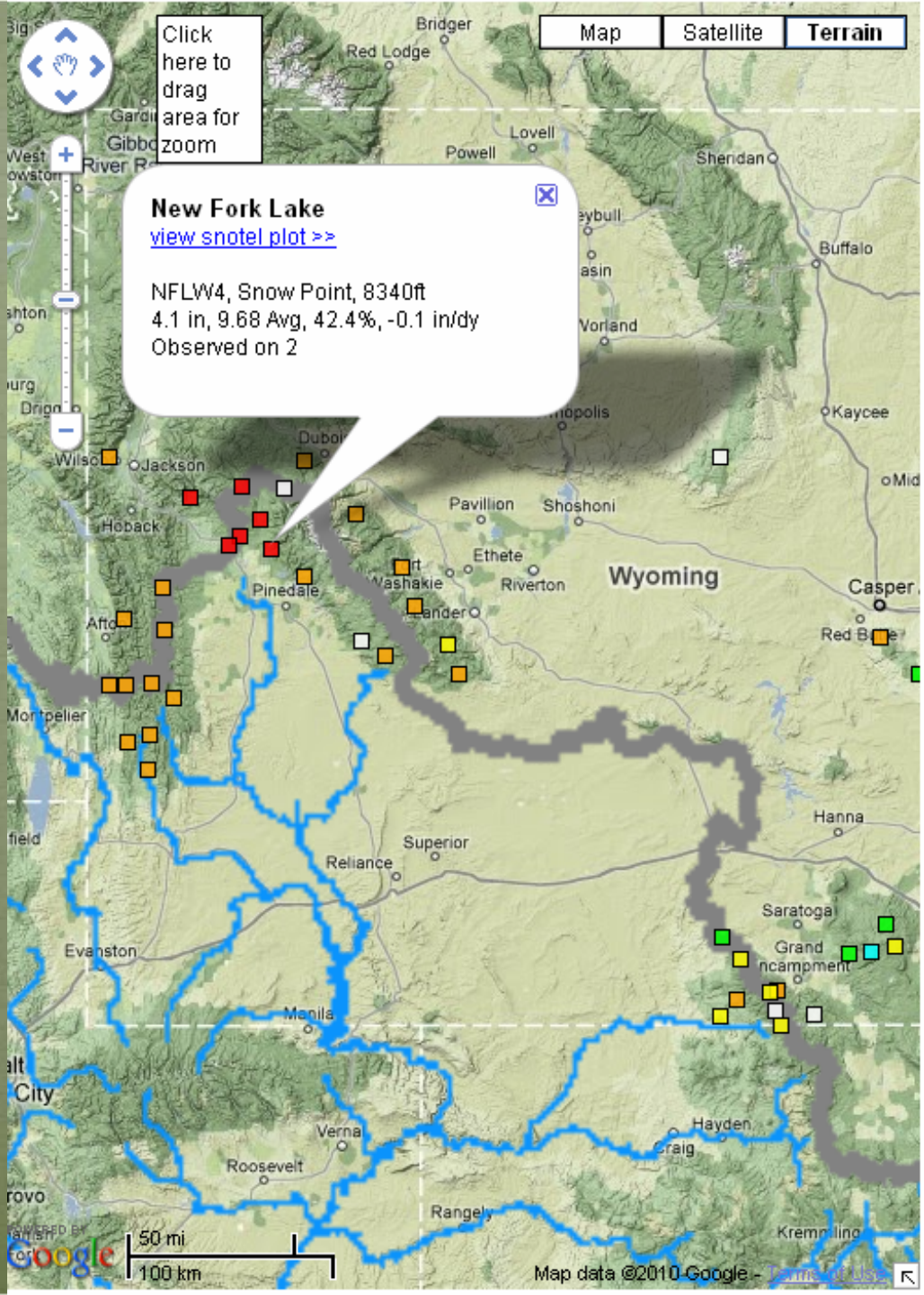
Upper Colorado River Basin

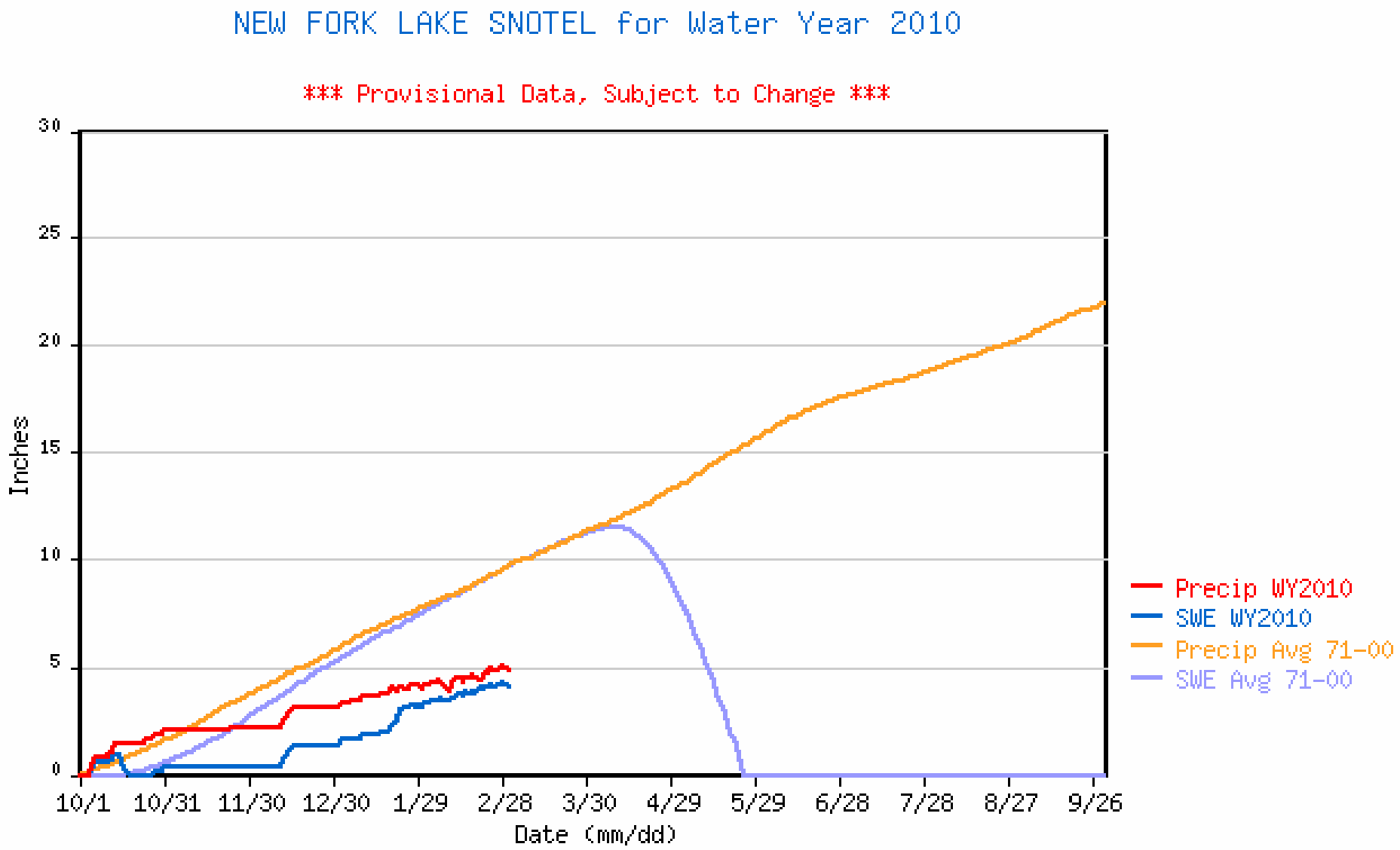



Click here to drag area for zoom
Map
Satellite
Terrain
Lakefork Basin
view snotel plot >>
LBNU1, Snow Point, 10900ft
10.6 in, 16.79 Avg, 63.1%, -0.1 in/dy
Observed on 2
Preston
Brigham City
Ogden
Salt Lake City
Kearns
Sandy
Tooele
American Fork
Provo
Payson
Spanish Fork
Nephi
Delta
Ephraim
Manti
Utah
Fillmore
Salina
Monroe
Milford
Beaver
Panguitch
Price
Log Cabin Rapids
Trail Canyon Rapids
Green River
Moab
J L Eddy
Manila
Verna
Roosevelt
Rangel



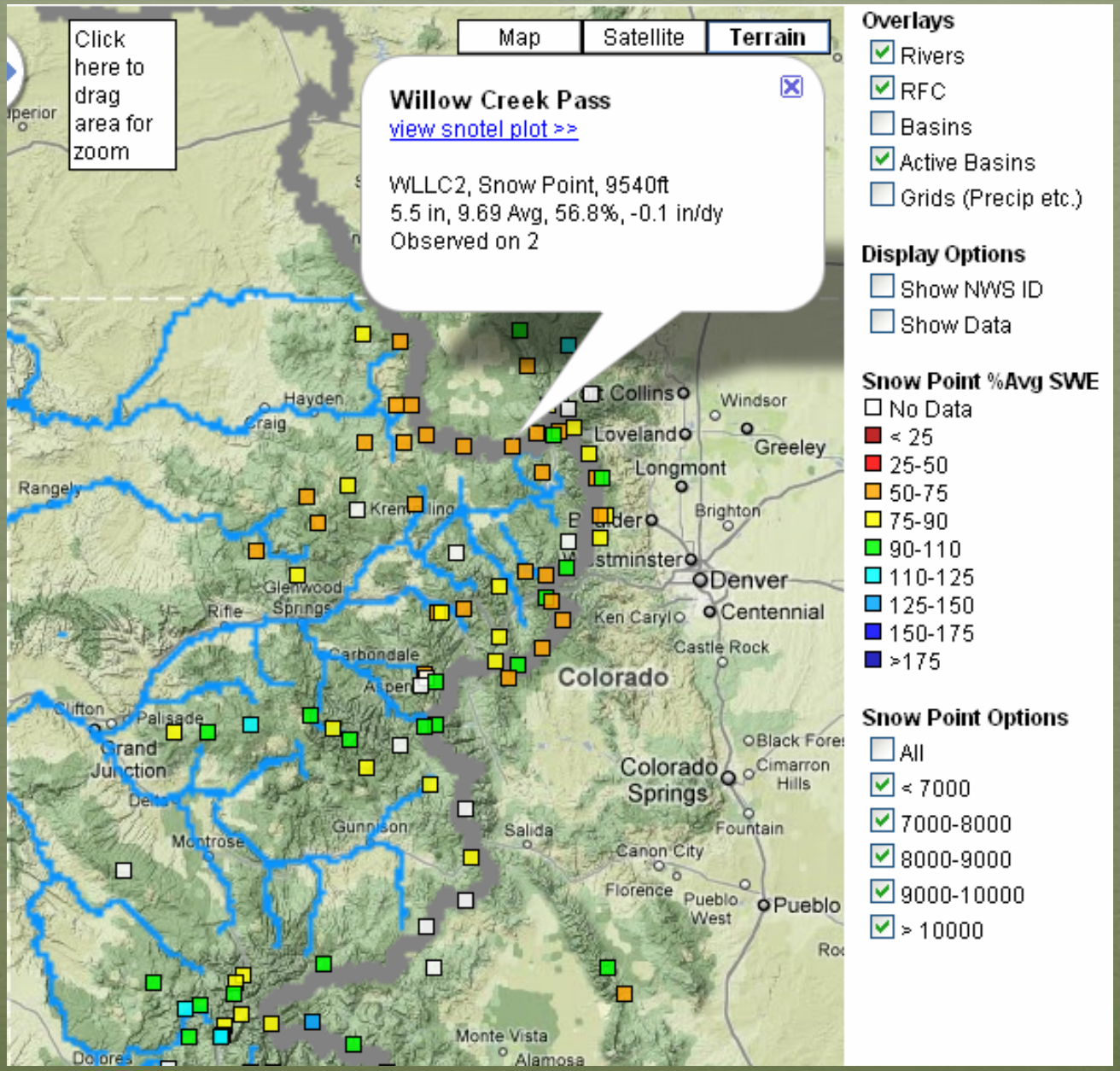
Snowpack: 63%
Elevation: 10,900 ft

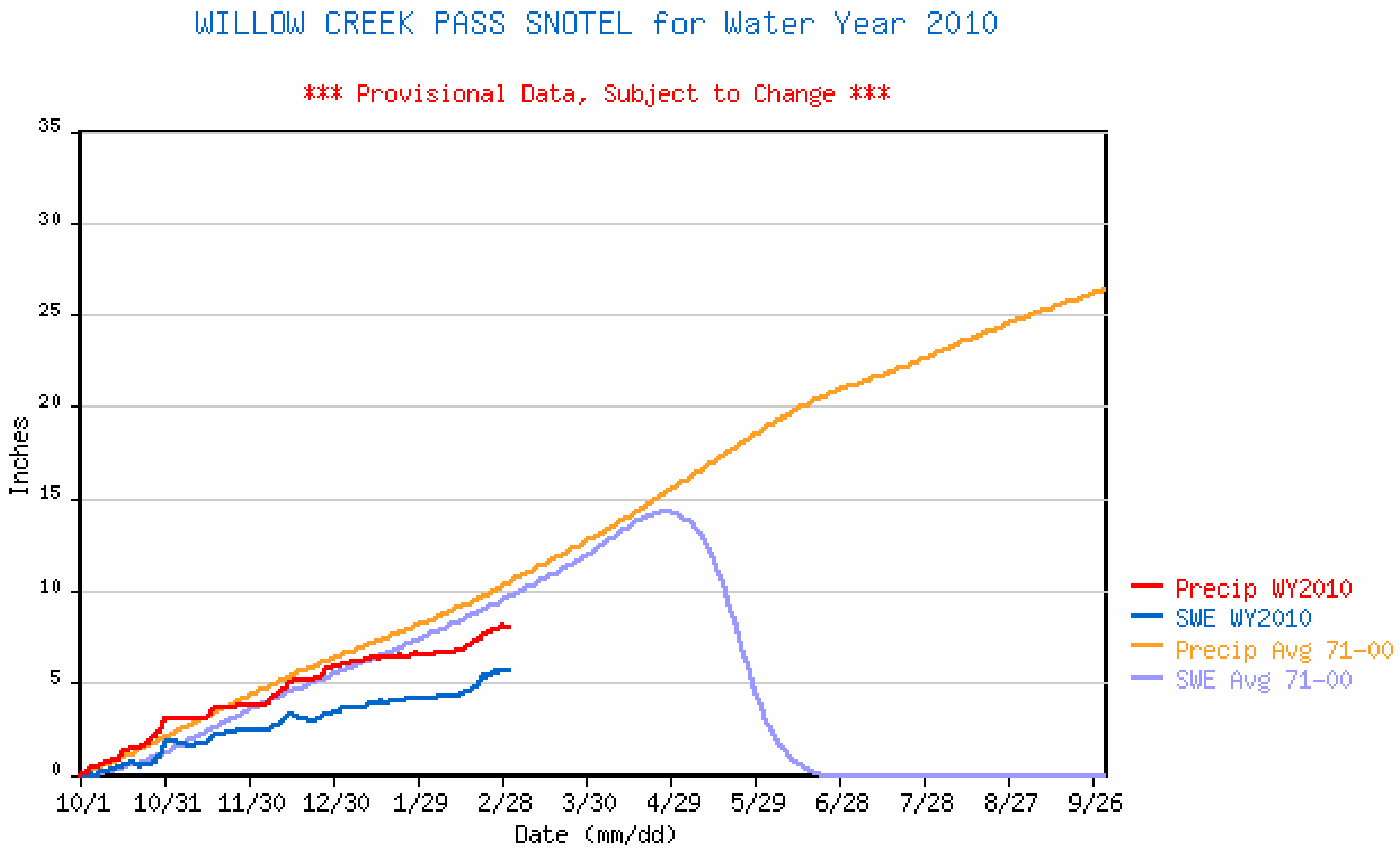

Click here to drag area for zoom
Map
Satellite
Terrain
New Fork Lake
view snotel plot >>
NFLW4, Snow Point, 8340ft
4.1 in, 9.68 Avg, 42.4%, -0.1 in/dy
Observed on 2
Bridger
Red Lodge
Lovell
Powell
Sheridan
Buffalo
Kaycee
Jackson
Hoback
Pavillion
Shoshoni
Ethete
Riverton
Wyoming
Casper
Pinedale
Lander
Hanna
Superior
Reliance
Saratoga
Grand
Evanston
Manila
Hayden
Verna
Roosevelt
Rangely
50 mi
100 km
Map data ©2010 Google - Terms of Use



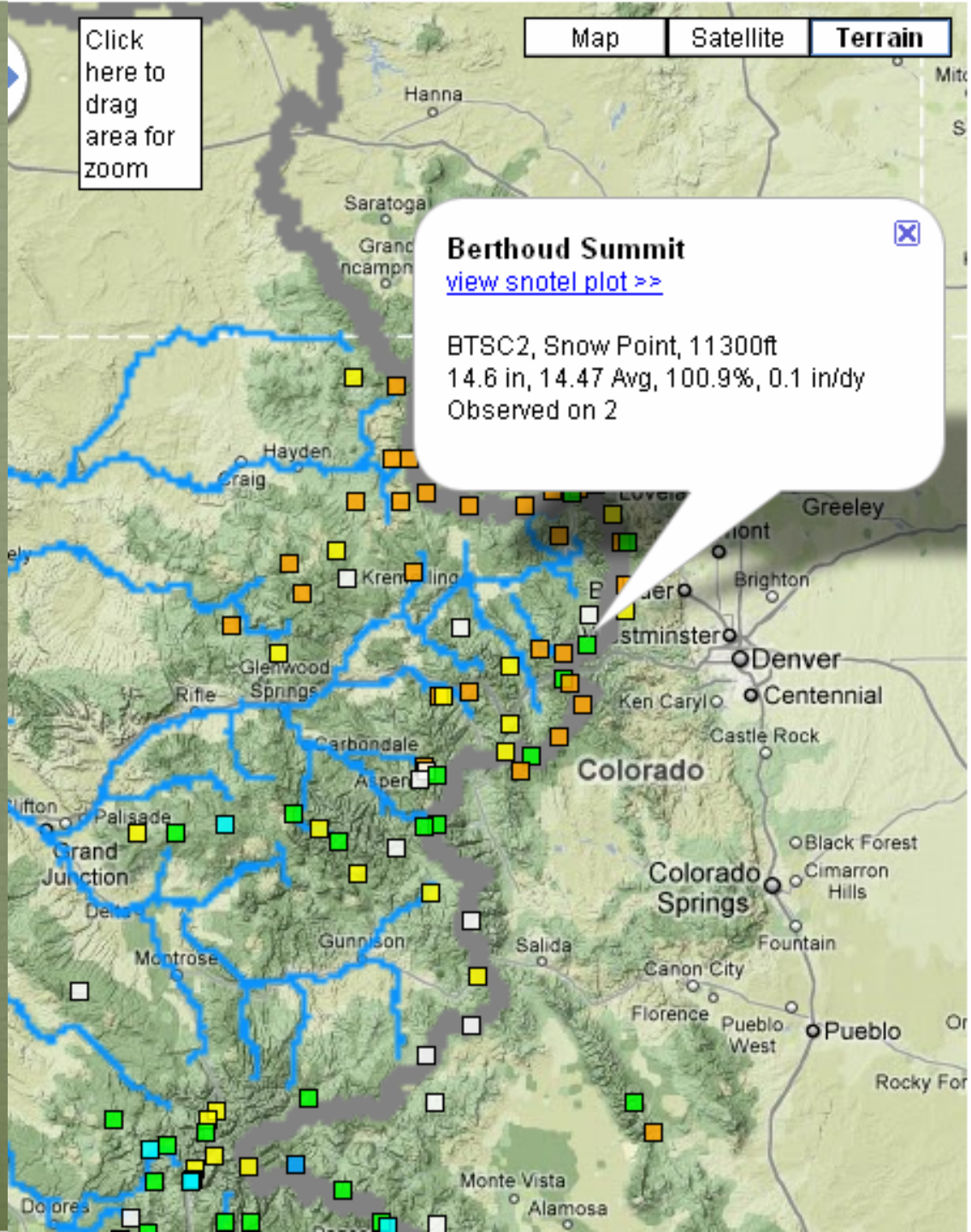
Snowpack: 42%
Elevation: 8,340 ft

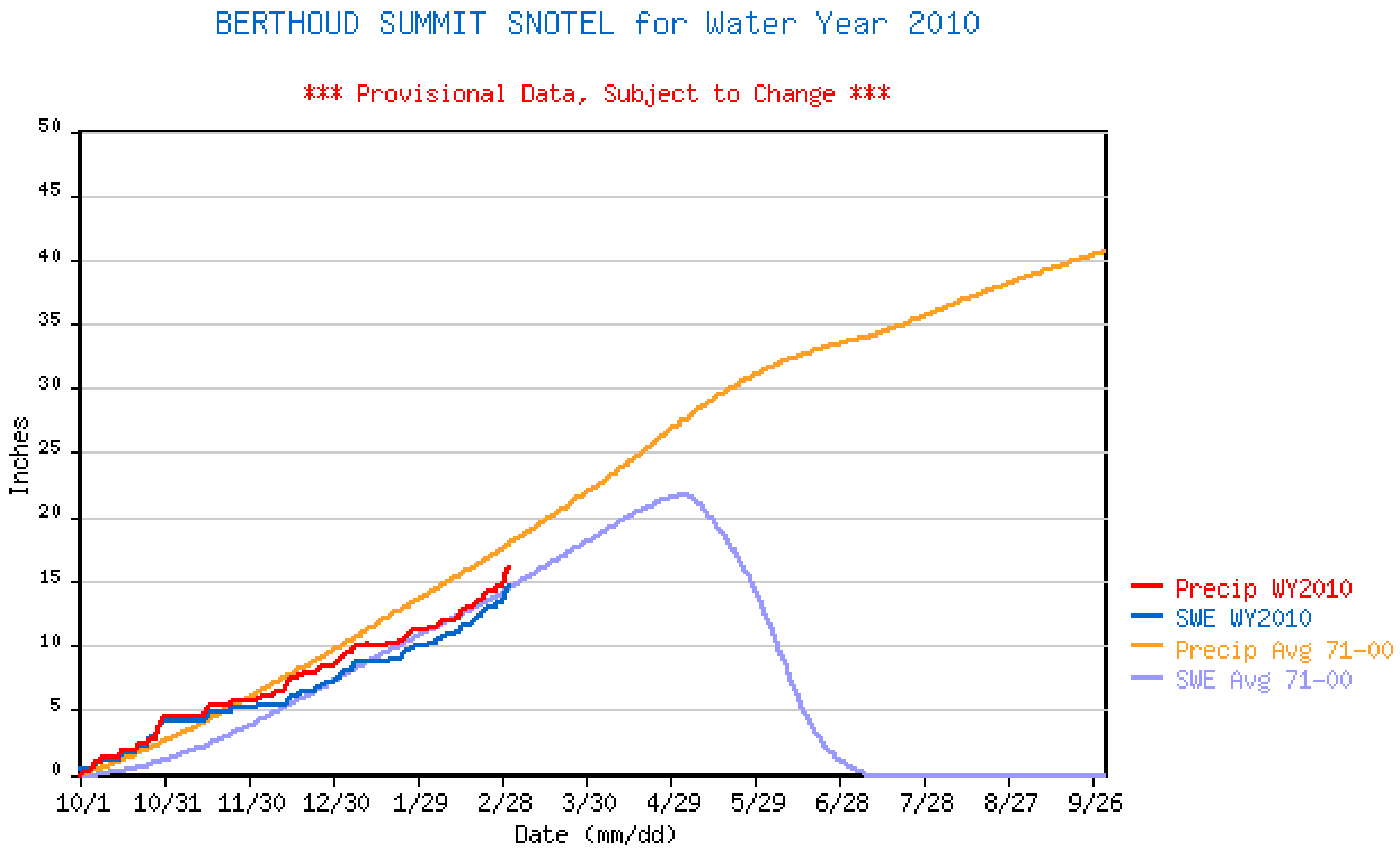
Colorado SNOTEL



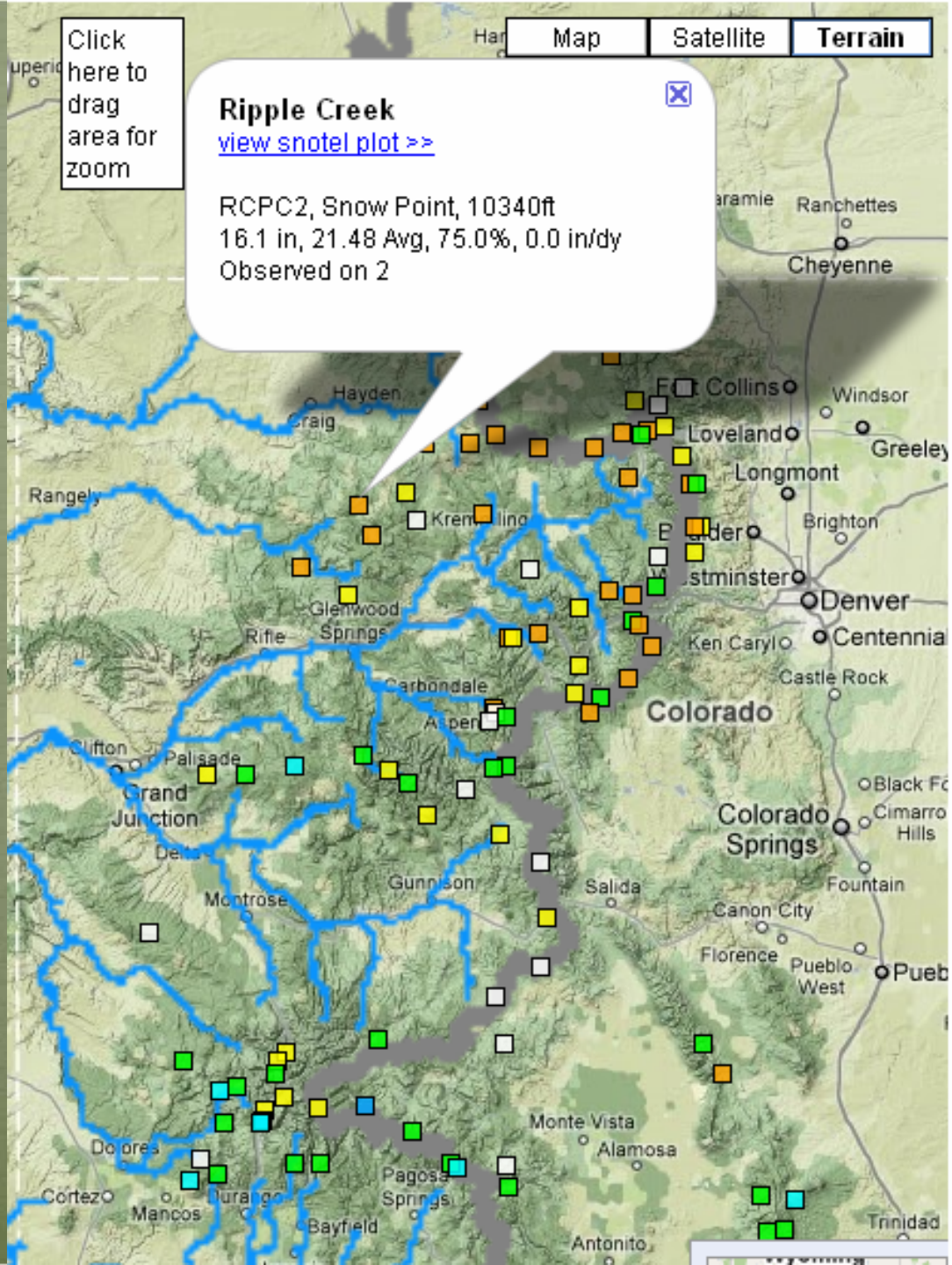


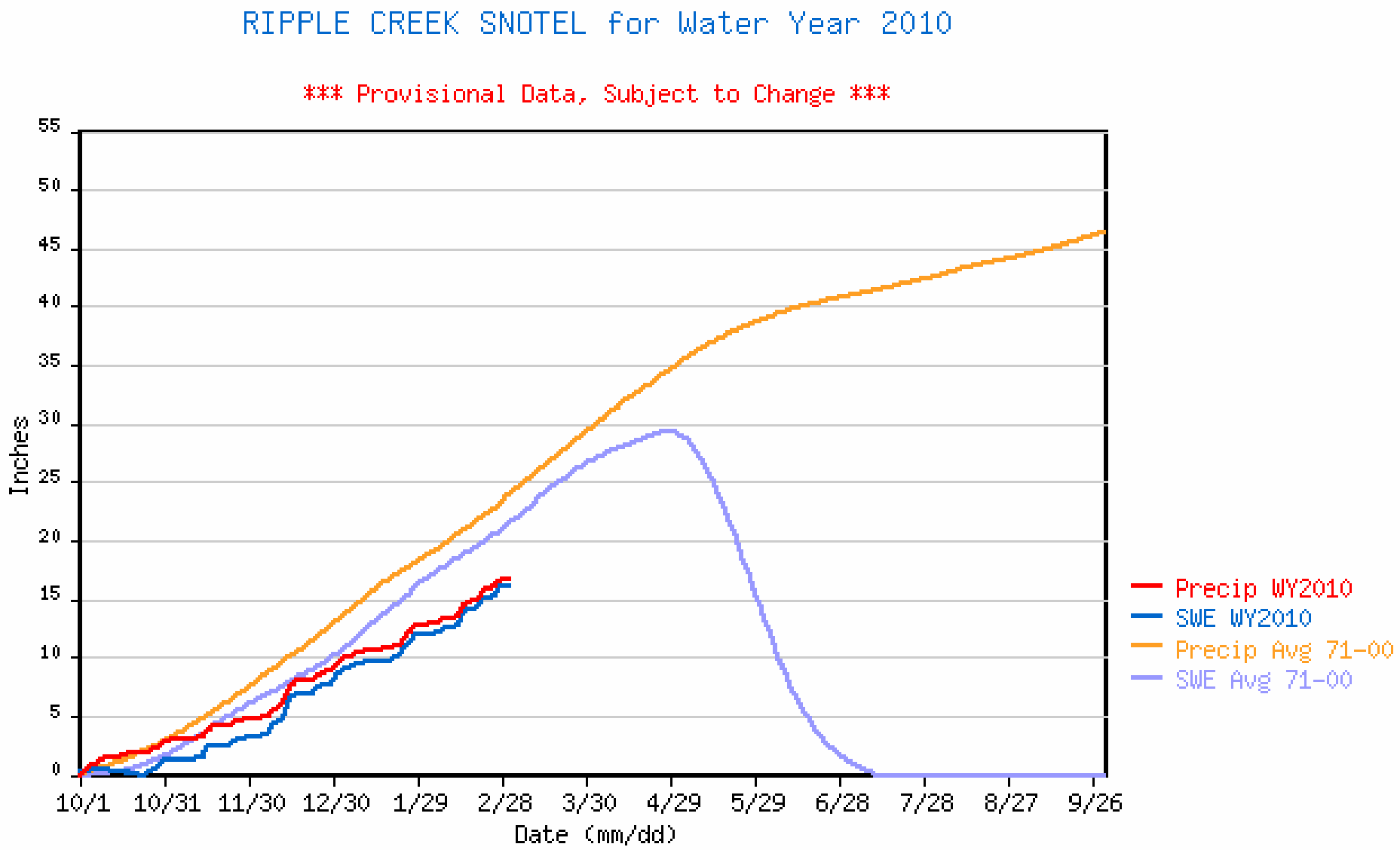
Snowpack: 57%
Elevation: 9,540 ft


Click here to drag area for zoom
Map
Satellite
Terrain
Berthoud Summit
view snotel plot >>
BTSC2, Snow Point, 11300ft
14.6 in, 14.47 Avg, 100.9%, 0.1 in/dy
Observed on 2
Hanna
Saratoga
Hayden
Craig
Greeley
Brighton
Denver
Centennial
Ken Caryl
Castle Rock
Colorado
Glenwood Springs
Rifle
Carbondale
Aspen
Palisade
Grand Junction
Black Forest
Cimarron Hills
Colorado Springs
Fountain
Gunnison
Salida
Montrose
Canon City
Florence
Pueblo West
Pueblo
Monte Vista
Alamosa

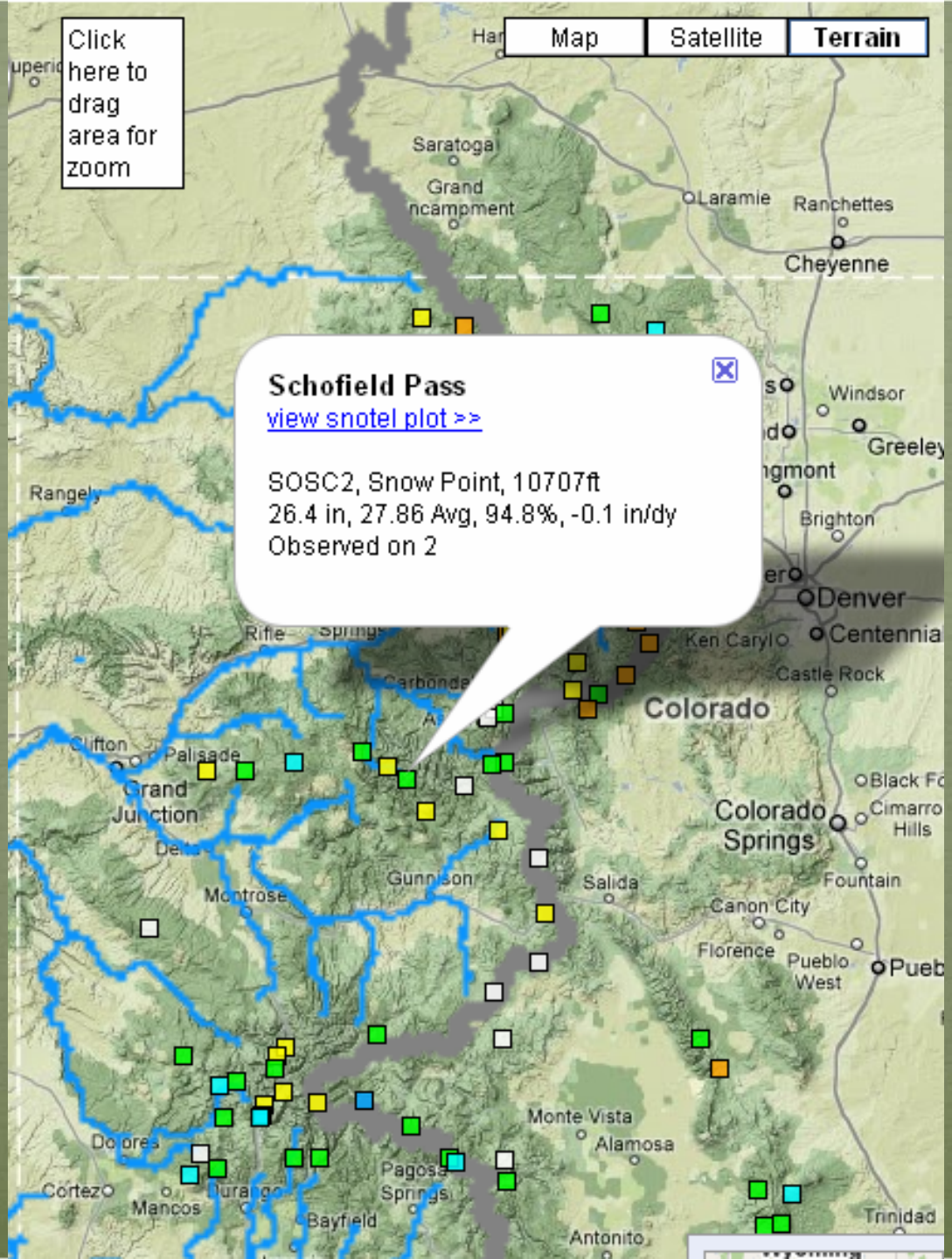


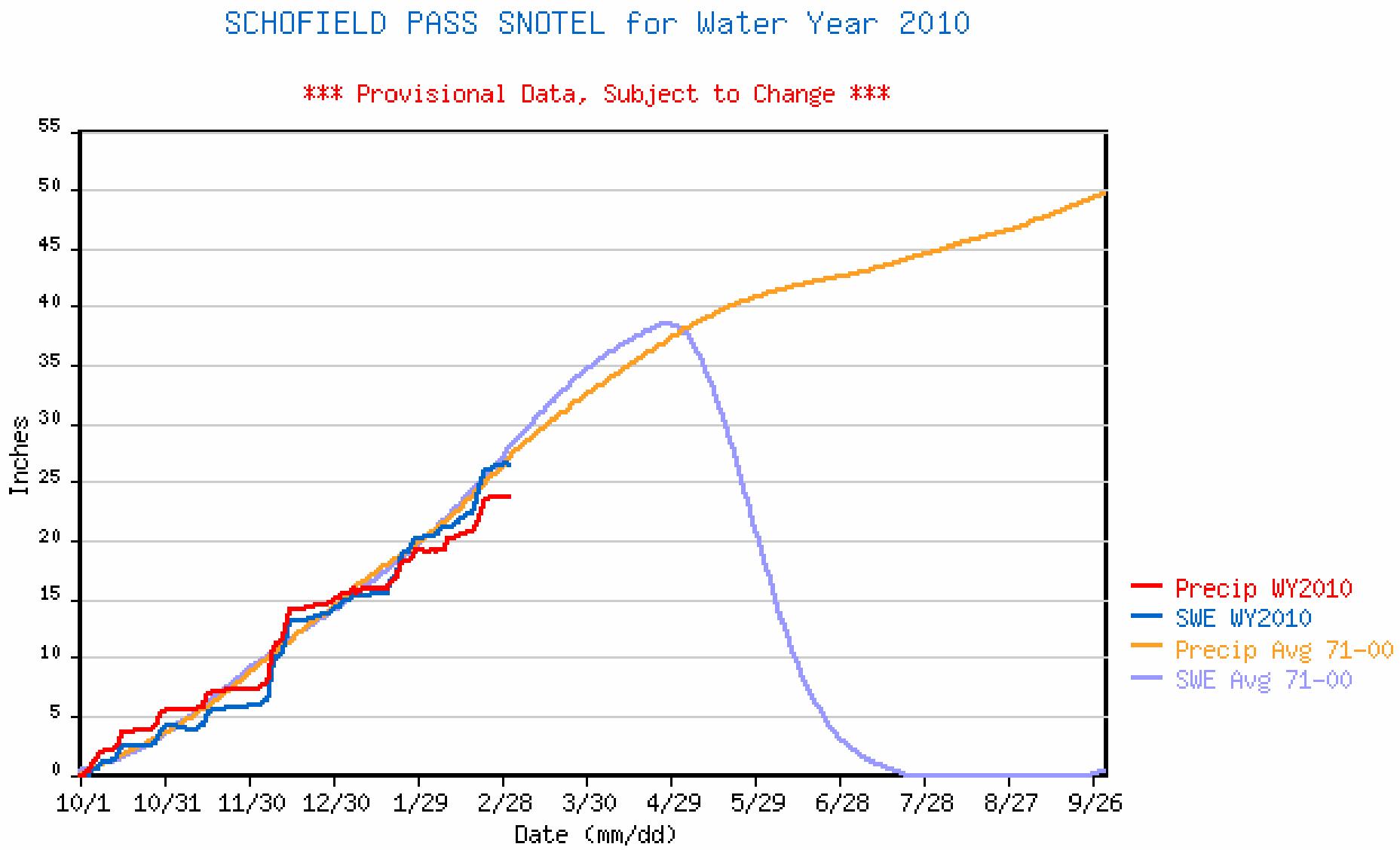
Snowpack: 101%
Elevation: 11,300 ft


Click here to drag area for zoom
Map
Satellite
Terrain
Ripple Creek
view snotel plot >>
RCPC2, Snow Point, 10340ft
16.1 in, 21.48 Avg, 75.0%, 0.0 in/dy
Observed on 2
Ranchettes
Cheyenne
Hayden
Craig
Fort Collins
Windsor
Loveland
Greeley
Longmont
Rangely
Brighton
Denver
Centennial
Glenwood Springs
Rifle
Ken Caryl
Castle Rock
Carbondale
Aspen
Colorado
Clifton
Palisade
Grand Junction
Black Fo
Colorado Springs
Cimarron Hills
Gunnison
Salida
Fountain
Montrose
Canon City
Florence
Pueblo West
Monte Vista
Alamosa
Dolores
Pagosa Springs
Cortez
Durango
Mancos
Bayfield
Antonito
Trinidad

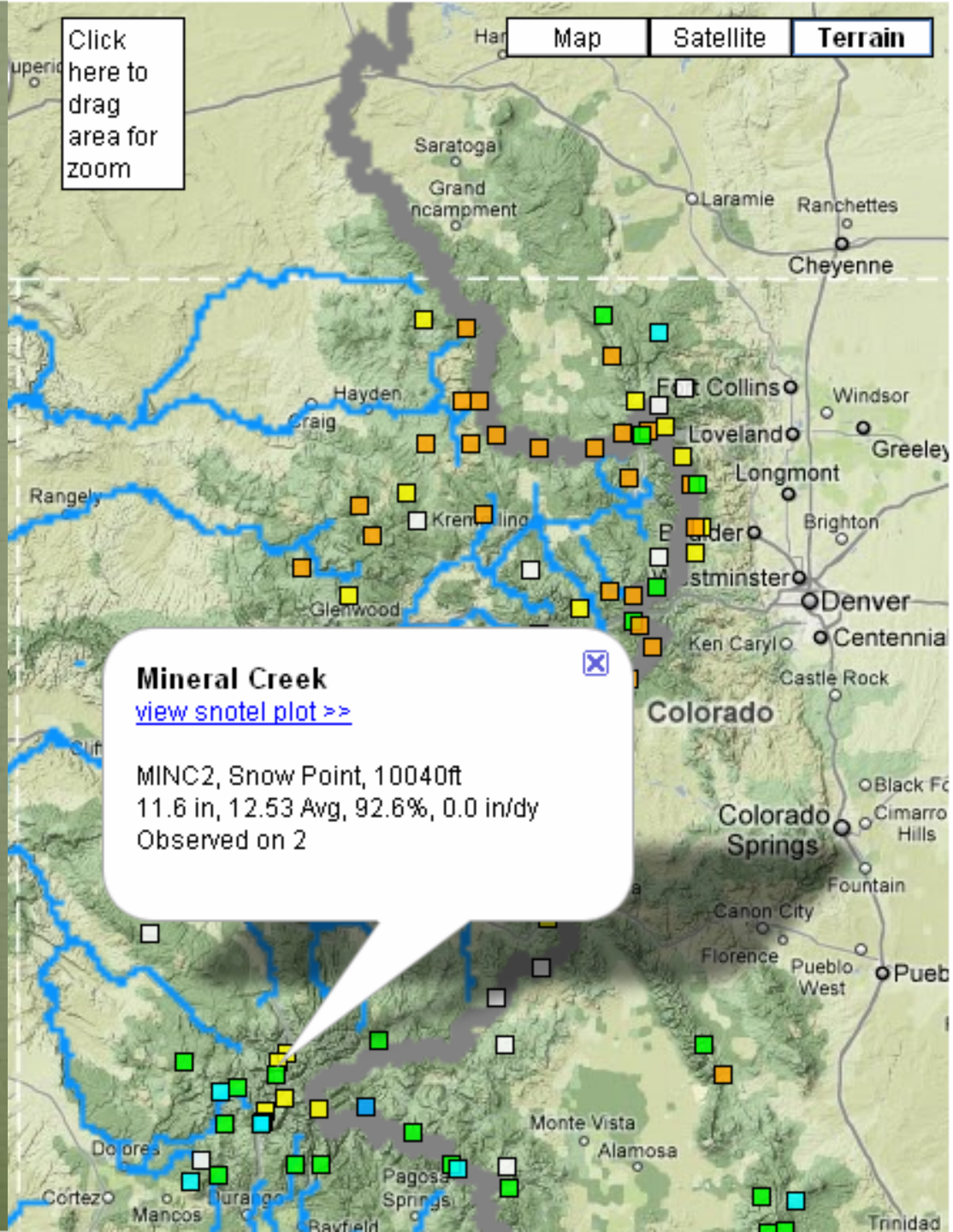


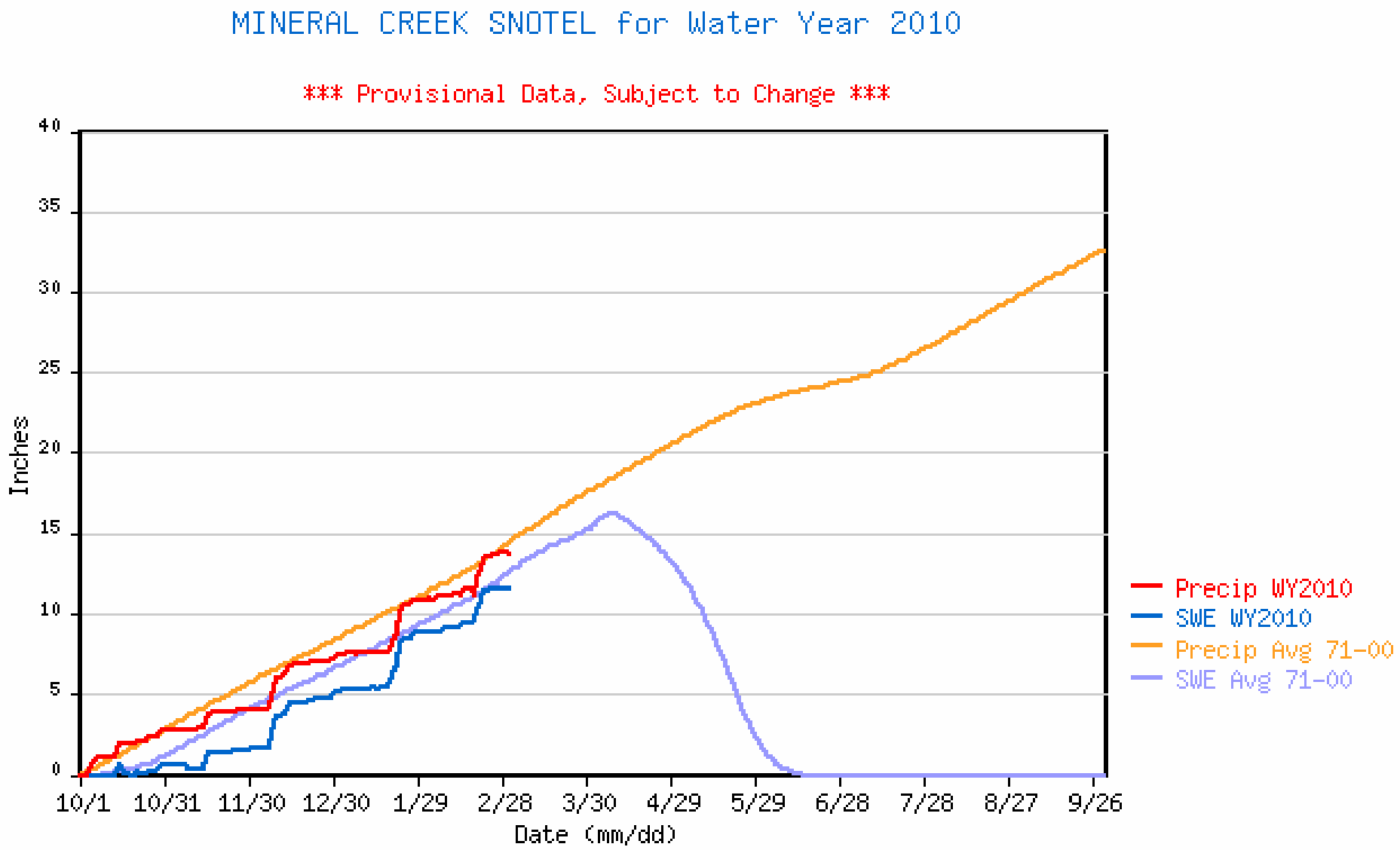
Snowpack: 75%
Elevation: 10,340 ft


Click here to drag area for zoom
Map
Satellite
Terrain
Schofield Pass
view snotel plot >>
SOSC2, Snow Point, 10707ft
26.4 in, 27.86 Avg, 94.8%, -0.1 in/dy
Observed on 2
Saratoga
Grand
Laramie
Ranchettes
Cheyenne
Windsor
Greeley
Brighton
Denver
Centennial
Castle Rock
Colorado
Colorado Springs
Fountain
Canon City
Florence
Pueblo West
Salida
Gunnison
Montrose
Grand Junction
Palisade
Clifton
Rifle
Rangely
Monte Vista
Alamosa
Pagosa Springs
Bayfield
Durango
Cortez
Mancos
Dolores
Antonito
Trinidad



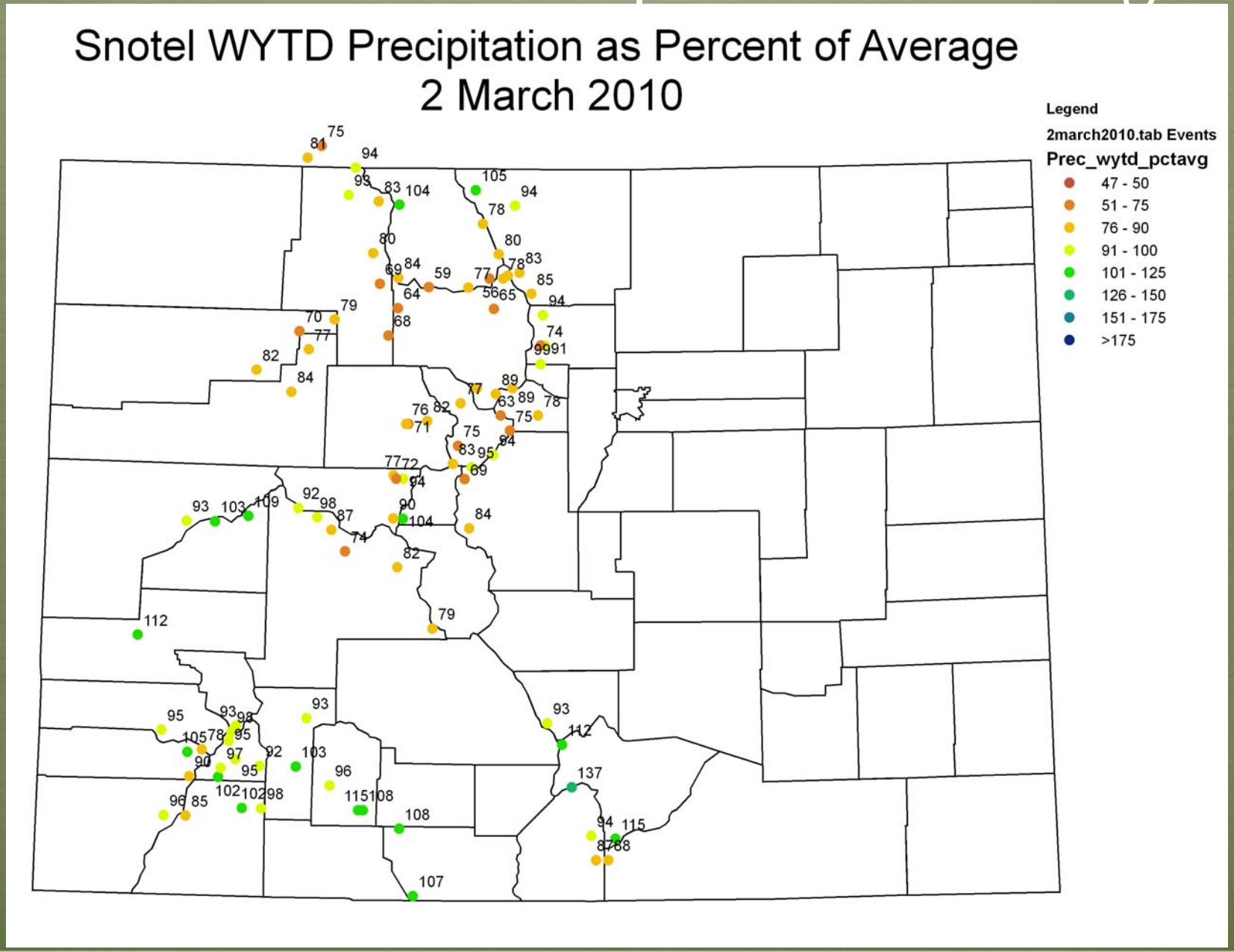
Snowpack: 95%
Elevation: 10,707 ft


Click here to drag area for zoom
Map
Satellite
Terrain
Saratoga
Grand
Laramie
Ranchettes
Cheyenne
Hayden
Craig
Fort Collins
Windsor
Loveland
Greeley
Longmont
Rangely
Brighton
Westminster
Denver
Glenwood
Ken Caryl
Centennial
Castle Rock
Colorado
Mineral Creek
view snotel plot >>
MINC2, Snow Point, 10040ft
11.6 in, 12.53 Avg, 92.6%, 0.0 in/dy
Observed on 2
Colorado Springs
Cimarron Hills
Fountain
Canon City
Florence
Pueblo West
Monte Vista
Alamosa
Dolores
Cortez
Mancos
Durango
Pagosa Springs
Bayfield
Trinidad

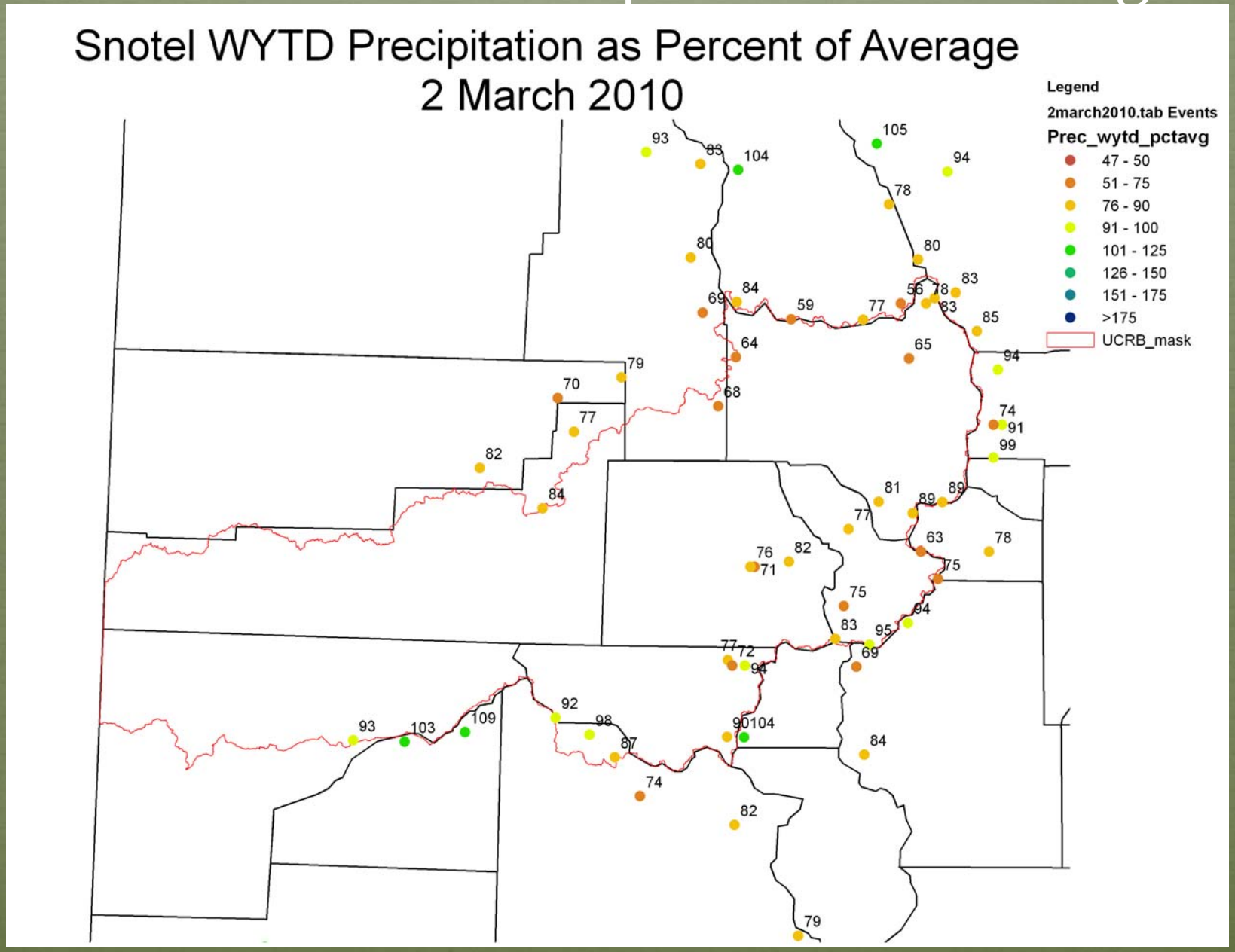


Snowpack: 93%
Elevation: 10,040 ft

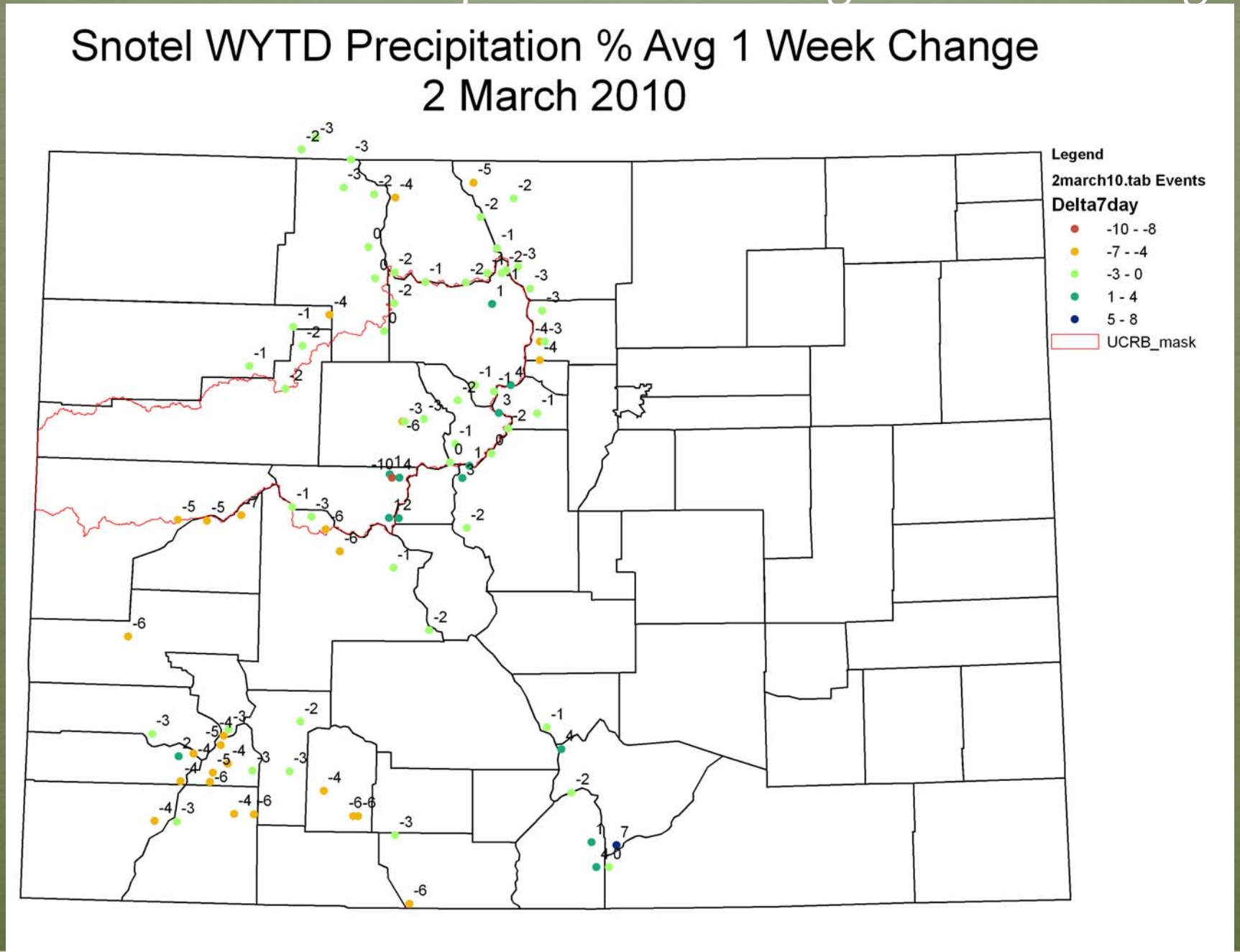
Snotel WYTD Precipitation % Average



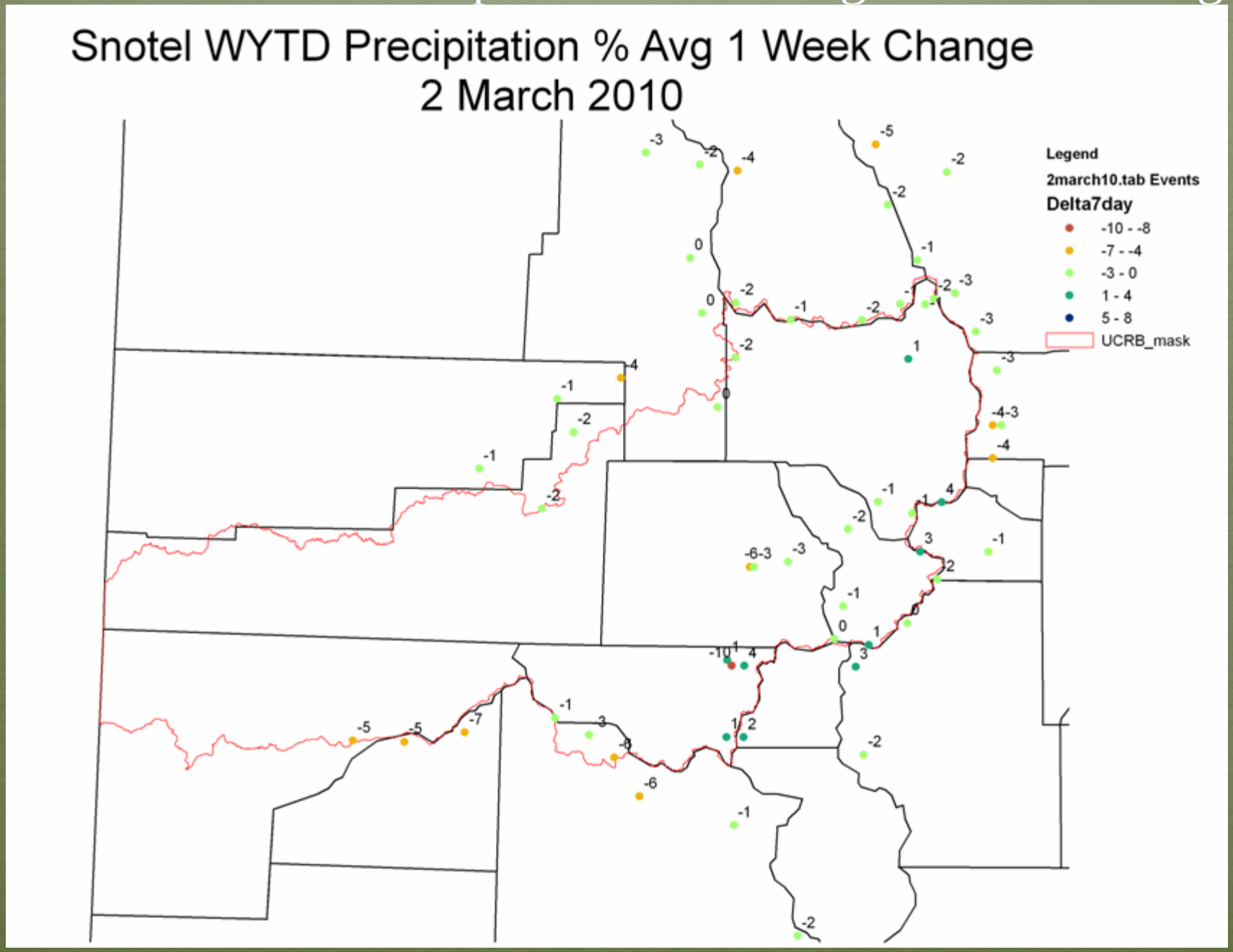
Snotel WYTD Precipitation % Average



Snotel WYTD Precipitation % Average 1 Week Change

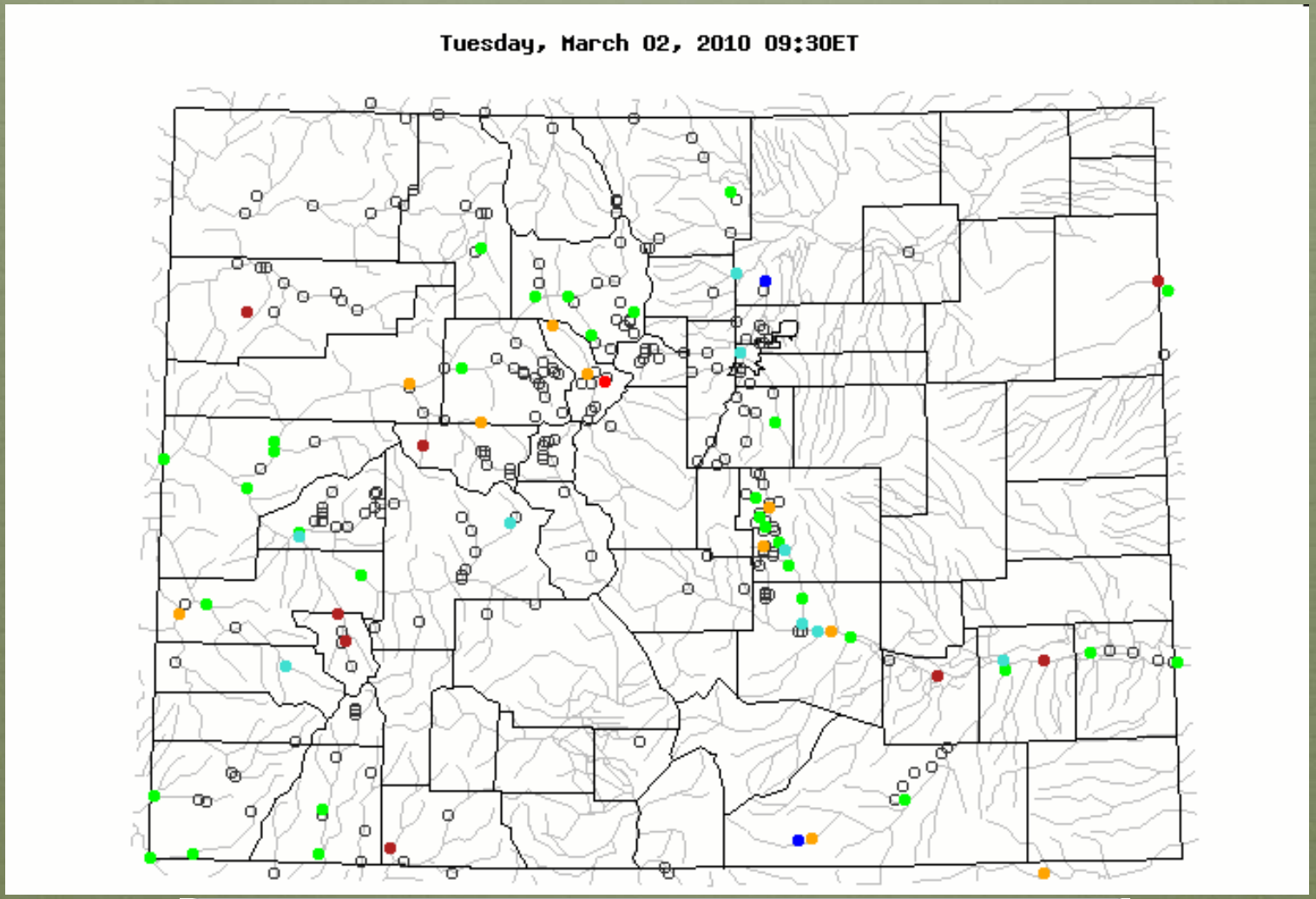


Snotel WYTD Precipitation % Average 1 Week Change



Streamflow Update

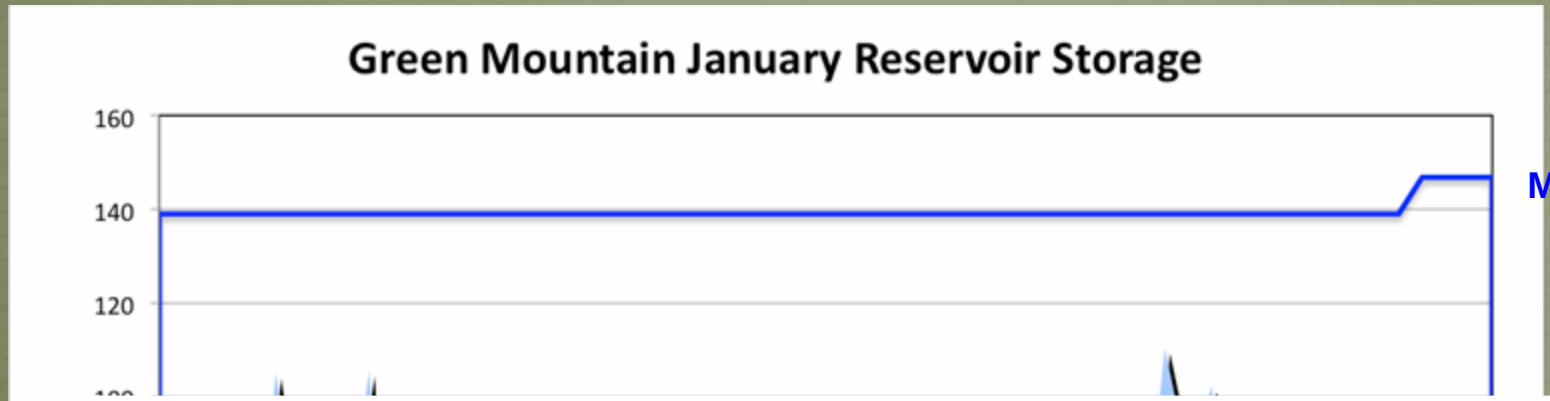
Streamflow 23 February 2010



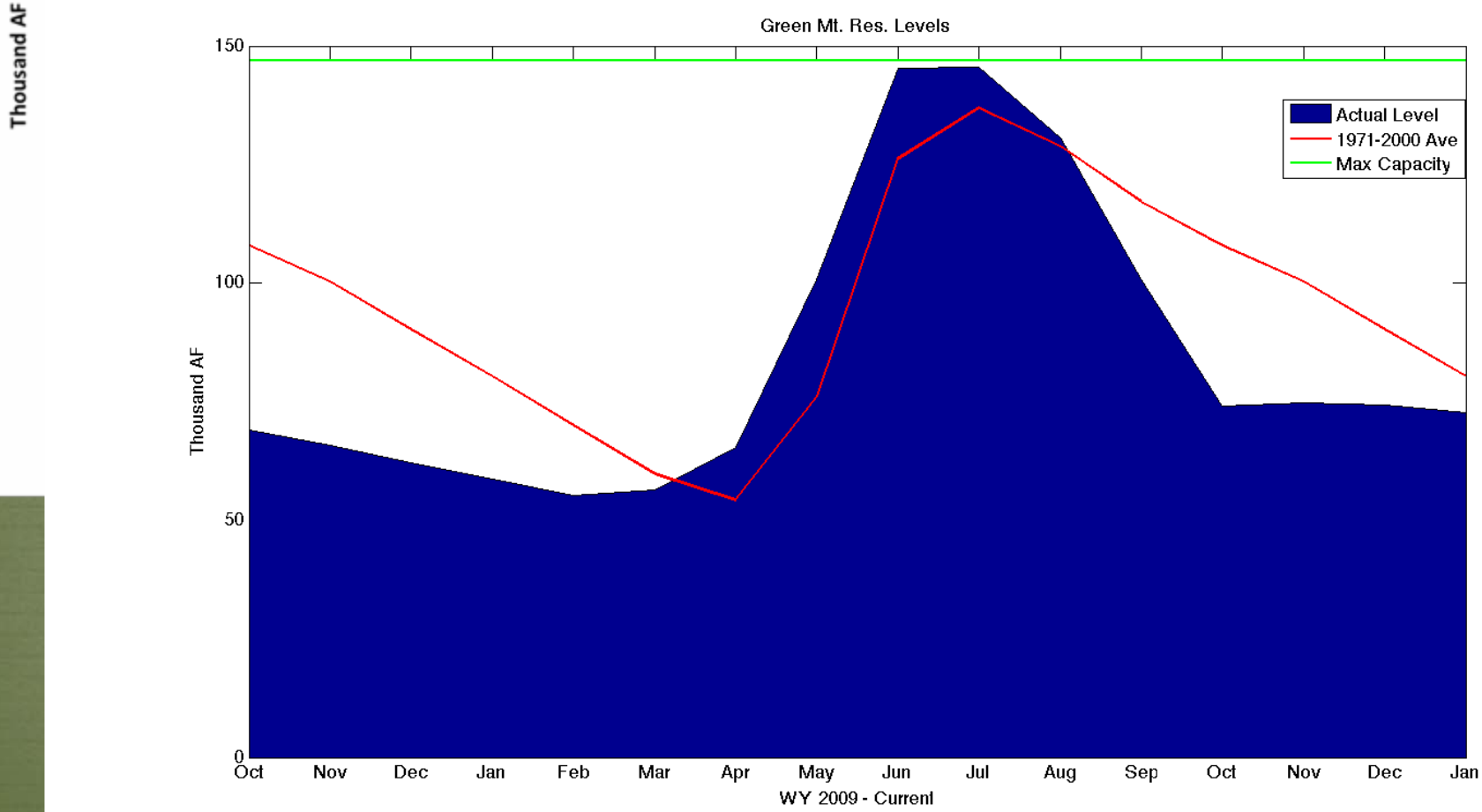
Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

USGS
science for a changing world

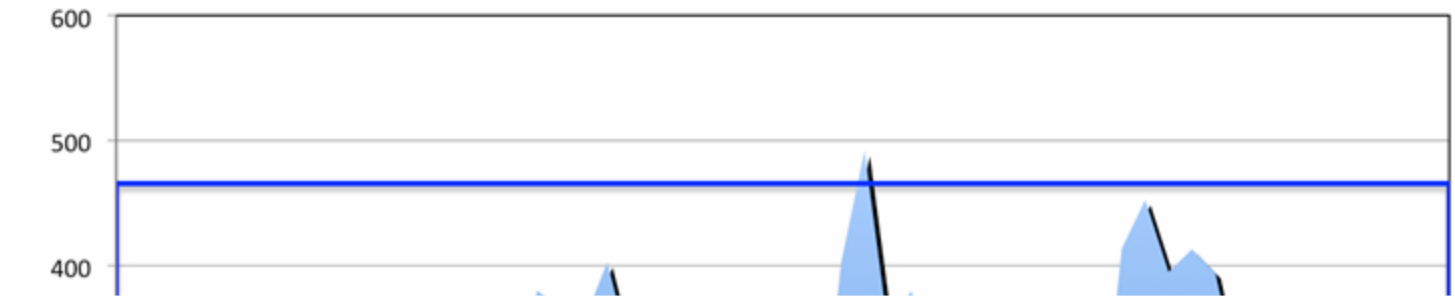
Reservoir Update



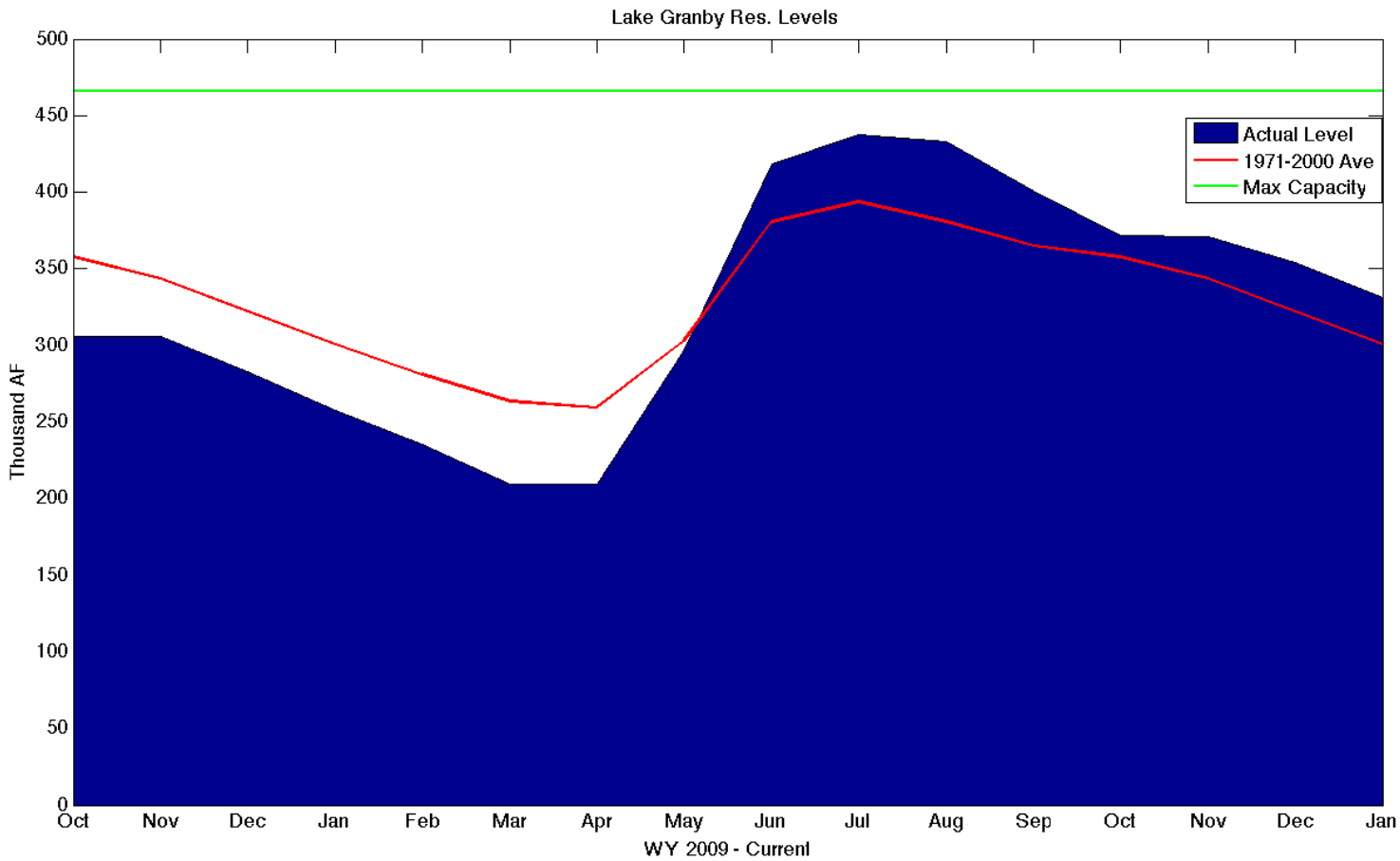
Max Capacity



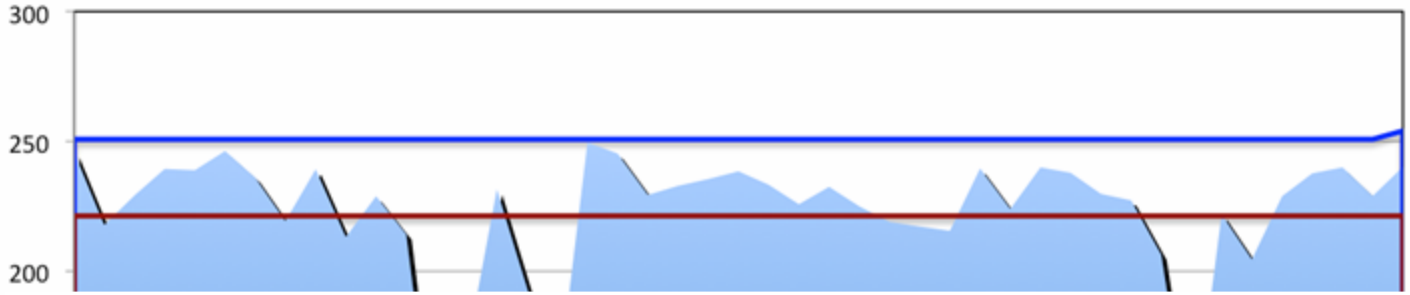
Lake Granby January Reservoir Storage



Max Capacity



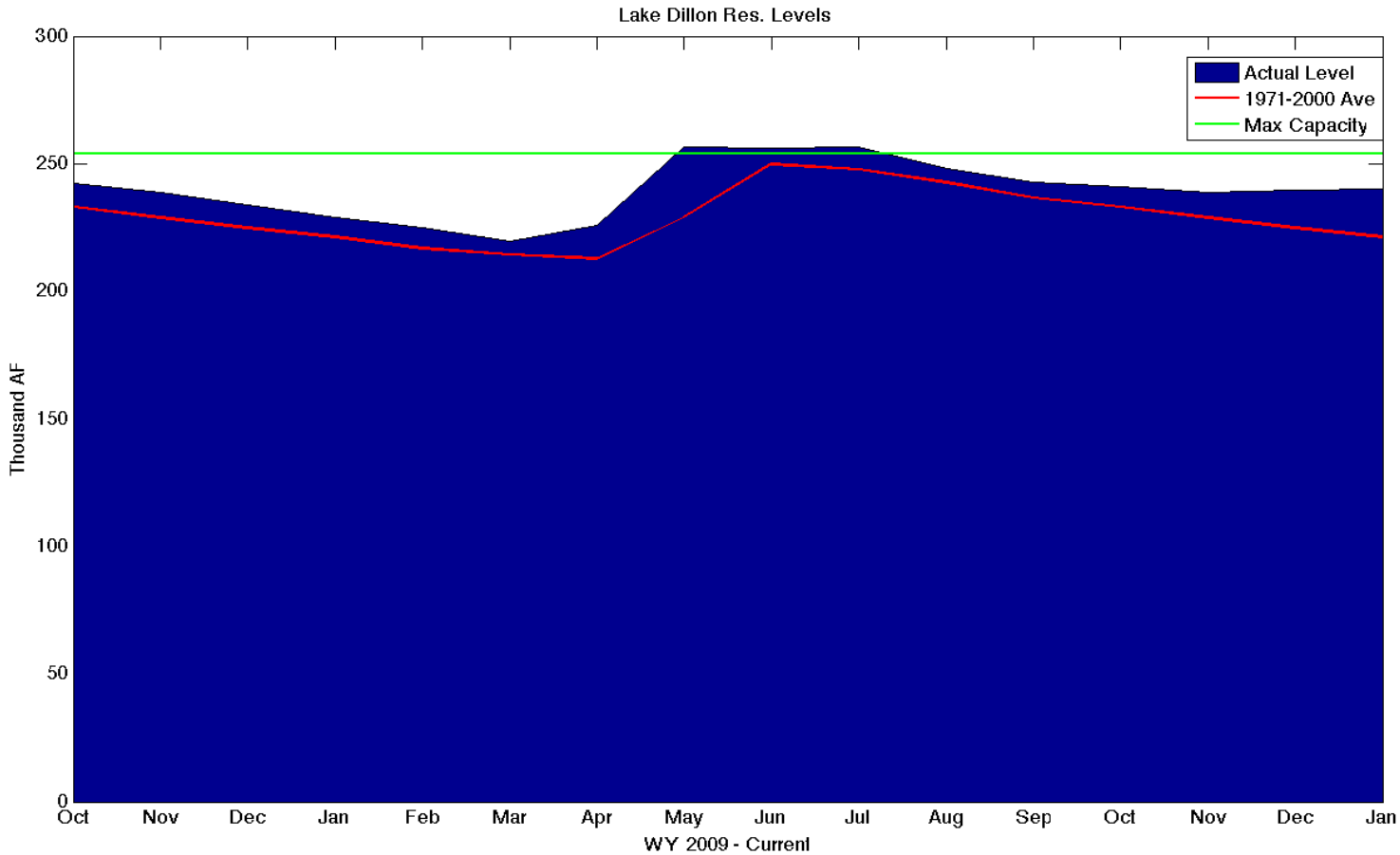
Lake Dillon January Reservoir Storage



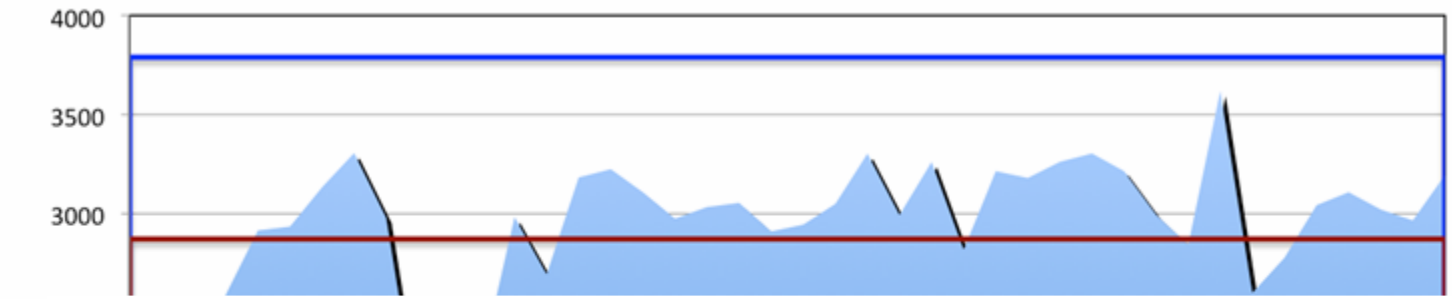
Max Capacity

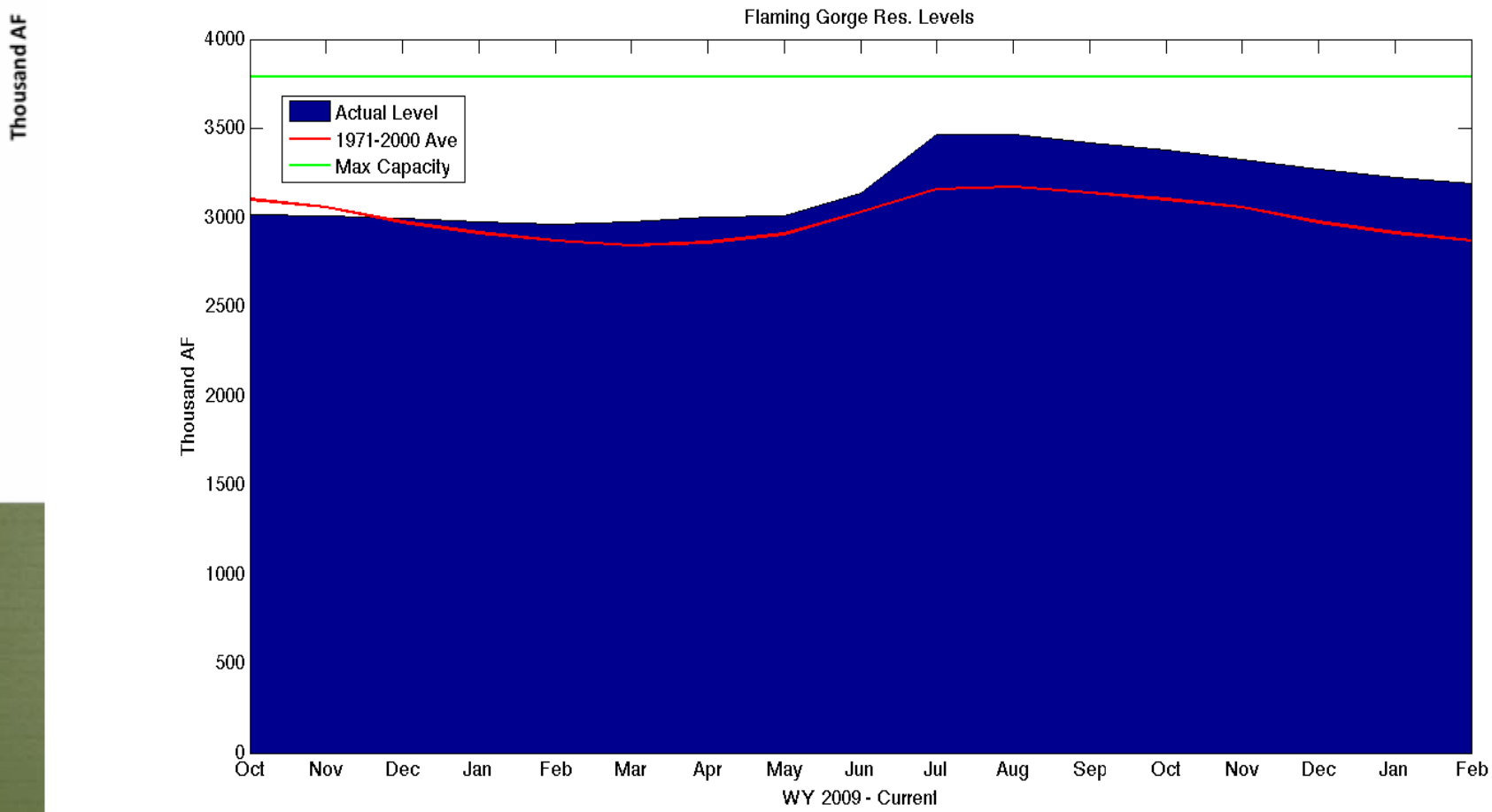
1971-2000 Average

Thousand AF



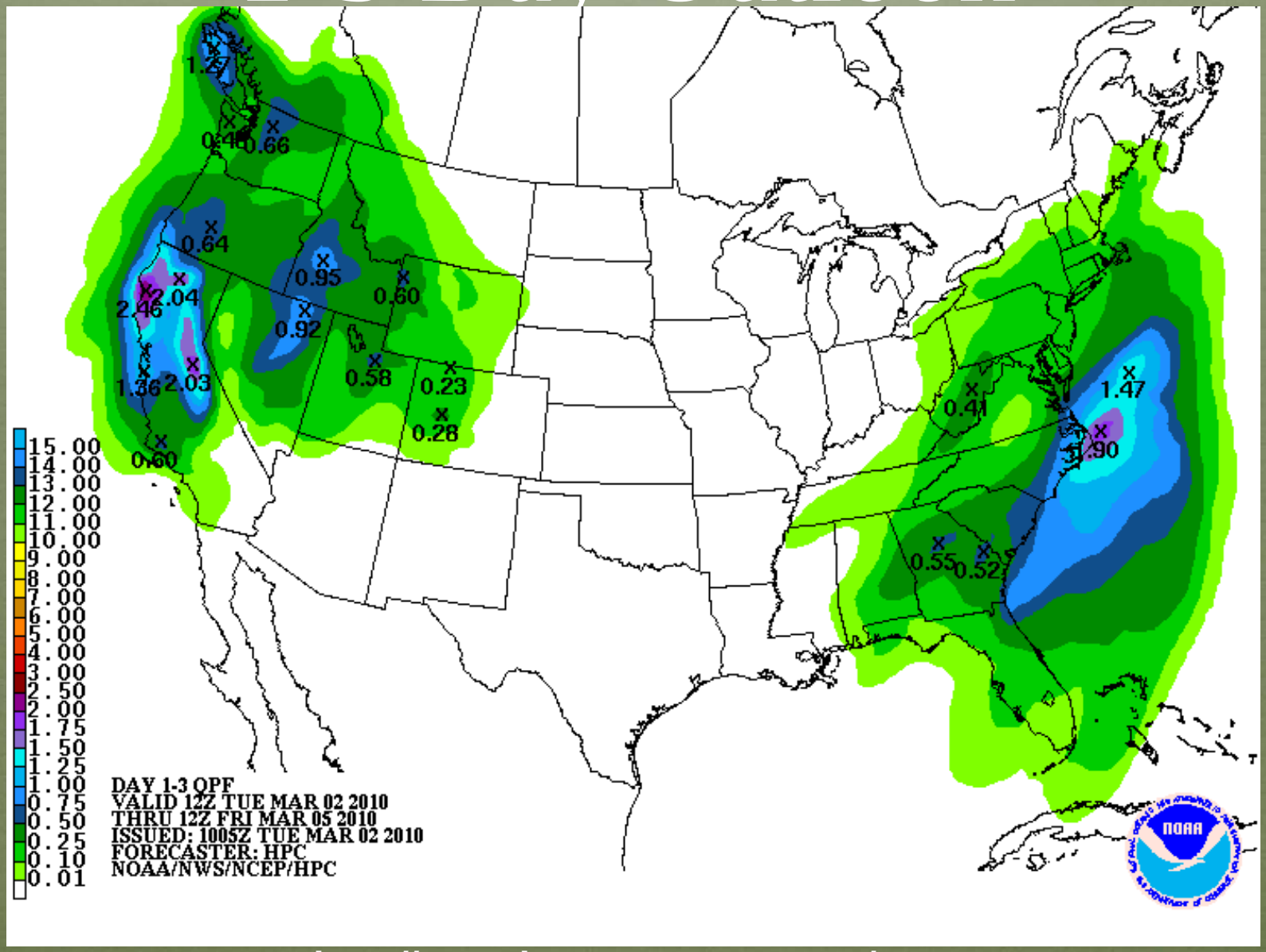
Flaming Gorge February Reservoir Storage





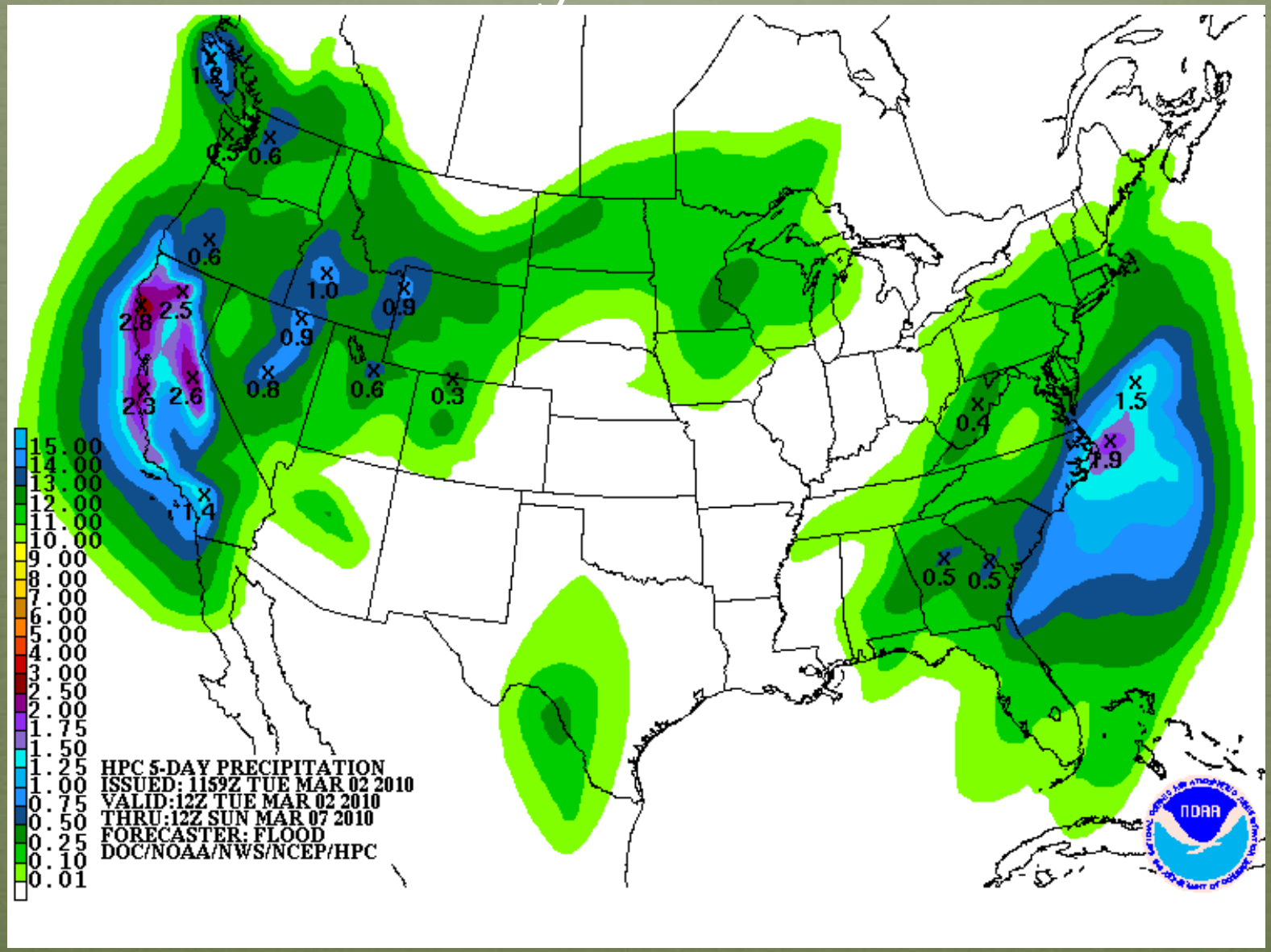
Precipitation Forecast

1-3 Day Outlook



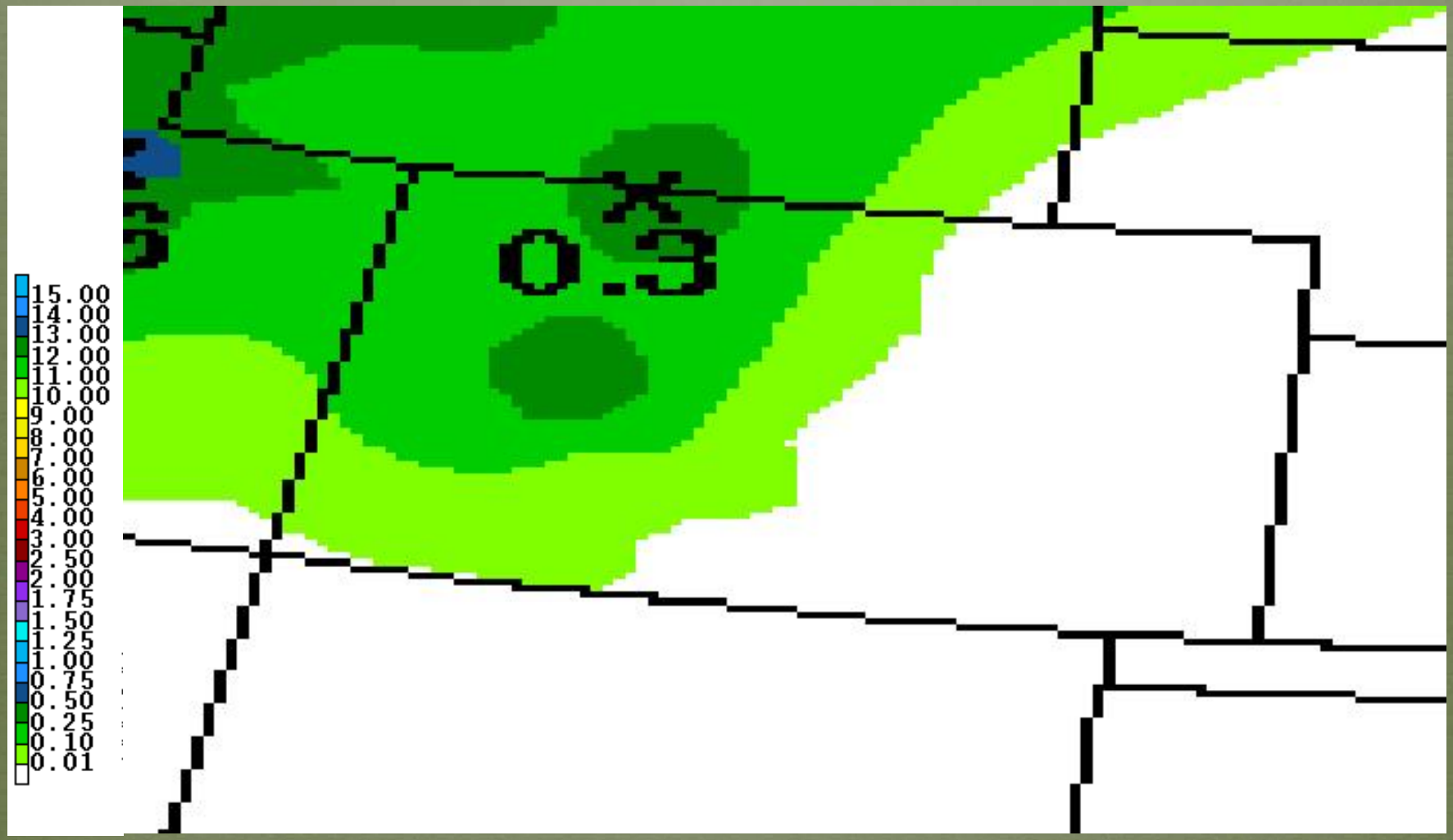
http://www.hpc.ncep.noaa.gov/

5 Day Outlook



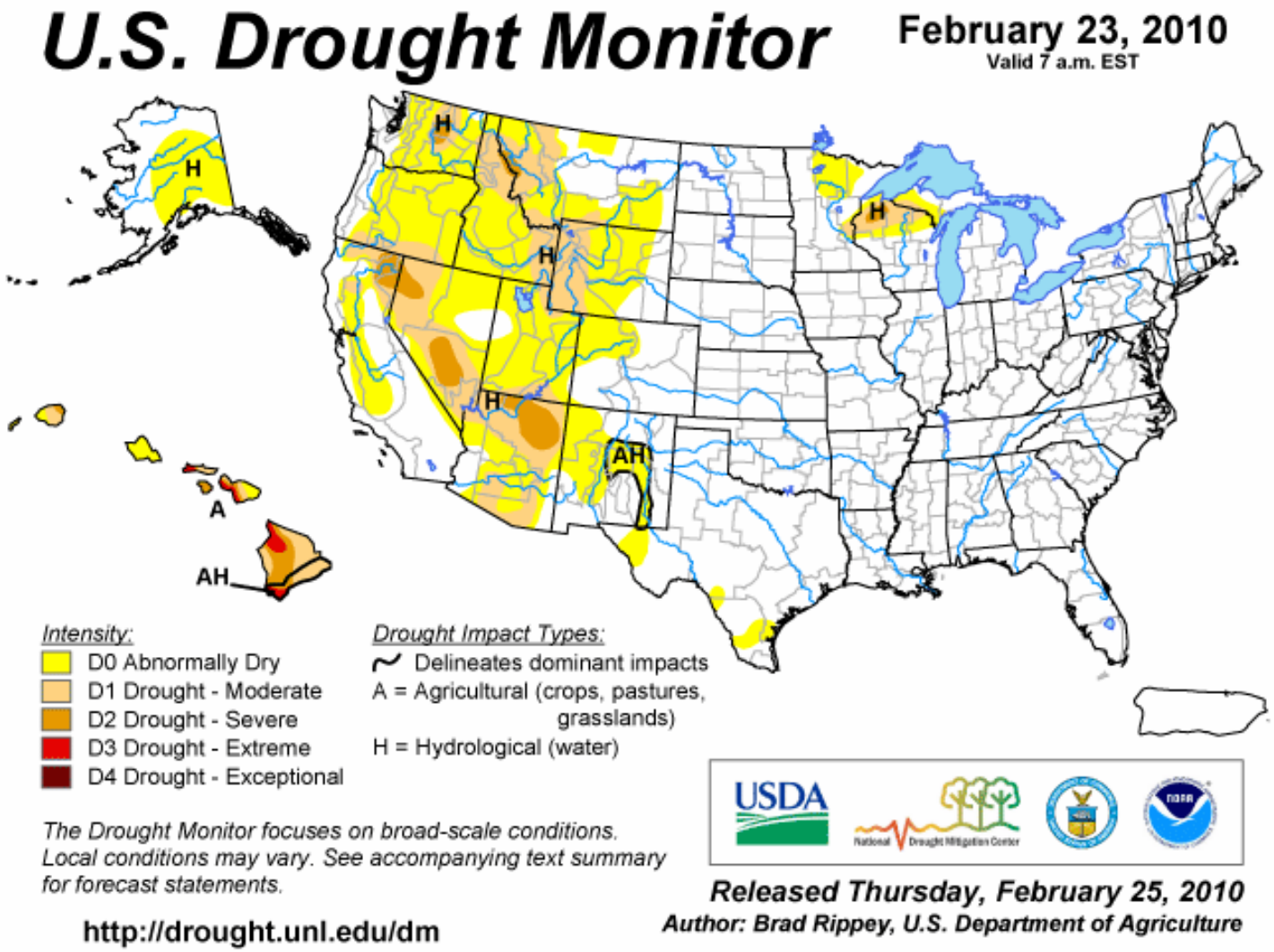
http://www.hpc.ncep.noaa.gov/

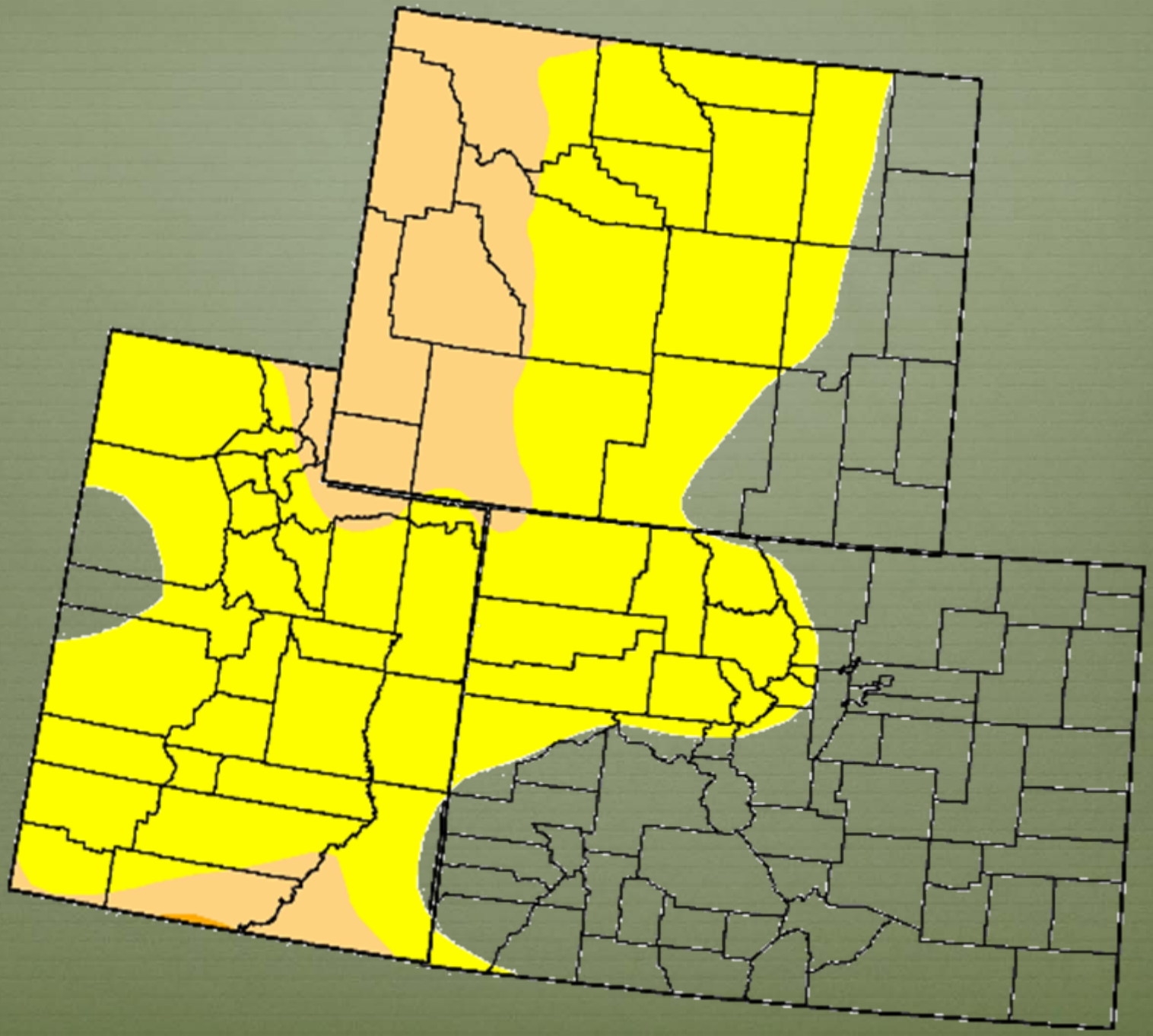
5 Day Outlook Colorado



http://www.hpc.ncep.noaa.gov/

Recommendations





Decisions

- In light of the recent moisture in Grand County, the decision was made to leave the Drought Monitor at the Status Quo for this week.

INFO

For more information

Summary

- Modest amounts of precipitation fell last week over much of the state, including the northern and central mountains. For the month of February, over 100% of normal precipitation fell along the eastern plains. The driest areas were Moffat county, south around the Rio Grande basin, and through much of the Upper Colorado River basin. Conditions continue to look very dry for western WY and drier than average for northeastern UT. Water-Year-to-date snotel precipitation changes over the last week show slight decreases in percentages throughout most of CO, though basin-wide percentages have stayed fairly steady.

  Two fairly minor systems are forecast to move through the region--the first around Thursday and the second late Sunday into Monday. Both systems look to bring only minor amounts of precipitation to the high country and dry regions. A couple of concerns were voiced about the systems this week. The first issue is that a fairly strong ridge has settled in to the area, bringing with it warm and dry conditions. Second, as the first trough moves through the area, there is the threat of high wind. Both these storm tracks have the possibility of being fairly active, but there is a good chance that conditions could deteriorate this week.

  The consensus of the webinar/conference call is to continue in "wait-and-see" mode for the Grand and Summit county areas. It was suggested that even if we introduced some D1 into this small area of the state, it would not be detectable on the national drought map. Also, with the continued passage of storms through the area--though only minor improvements have been seen--conditions have leveled off with little degradation. No other changes were suggested for the current DM map of the tri-state region, though we missed the company of our neighbor states on the call. If they have anything they would like to add, we would greatly appreciate their emails! If no other suggestions are made, it seems that it will be status-quo for the week.

- Becky