

## MEMORANDUM

Date: April 2, 2002

To: Members of the State Drought Task Force and all other Interested Parties

From: Jeff Brislawn, Drought Task Force Chair, 303-273-1790

Subject: **Minutes of the Thursday, March 21, 2002 Drought Task Force Meeting.**

The Drought Task Force met on Thursday, March 21, at the NOAA Skagg's building in Boulder. Twenty four participants attended. The following is a summary of the meeting and current conditions.

### Summary of Current Water Status:

Colorado continues to have a moderate drought, verging on severe in the southwest corner of the state. All mountain areas continue to have well below average mountain snowpack, with 60% of average statewide overall (63% of last year) as of March 21. Southwest Colorado basins have the largest deficits, though the South Platte basin is also in the 45% of average range. Streamflow forecasts for the runoff season are bleak, with all basins predicted to have below to much below average runoff. The Dolores, Rio Grande, and N Platte basins are forecasted to have extremely below average (<50%) runoff this spring. With statewide reservoir storage (March 1) at 88% of average, the reservoirs are not expected to fill this year. Water users with junior water rights should expect to see cutoffs this year. Most municipal reservoirs remain in good shape.

The forecast for April-June has a slight probability for above average precipitation in eastern Colorado, but the southwest corner remains neutral. The chance of making up snowpack deficits is very remote. The influence, strength, and duration of EL Nino remains uncertain at this time.

### 1. Current Water Availability Status

Temperatures - February temperatures were near average for the eastern slope. The western slope and the San Luis Valley had temperatures generally below average. March temperatures are tracking cooler than average.

Precipitation - February precipitation was again well below average across most of the state, particularly in the southwest and southeast corners of the state. The accumulated precipitation map for the water year so far (October 2001 through February 2002) shows mostly below average conditions statewide.

Snowpack - NRCS snowpack measurements were **60%** of average as of **March 21**, up 2% from an average of **56%** on March 1. The March 1 snowpack was **65%** of last year. NRCS added a new bottom category to its statewide snowpack map titled “Extremely below average.” Parts of the Dolores and Rio Grande basins fall into this category as of March 1. Most basins continued to drop further below average as of March 1. Snowpack remains well below average in all basins statewide. The lowest basins are the South Platte and Dolores at 45% of average, the Rio Grande basin at 46%, and the Gunnison basin at 58% of average. The Yampa/White basin and Colorado River basin have the highest values at 72% and 70% of average, respectively. Comparing this year’s March 1 snowpack to records kept back to 1968, this year is the lowest since 1981, and the last 5 years have been the only consistently below average period since 1968. NRCS provided an updated probability analysis of basins reaching average snowfall by April 1. The likelihood of that happening was virtually zero. NRCS provided another graph of probabilities by basin of an increase in snow water equivalent in April and May. The chances were best for a wet spring in the North and South Platte and Yampa White basins, but low for most other basins in Colorado.

Reservoir Storage - As of **March 1**, NRCS Reservoir storage was **88%** statewide, **90%** of last year. Storage is below average in all basins, except for the Gunnison and Yampa/White basins. BoR reservoir storage details show most reservoirs have below average storage as of January 31, with slightly above average content in Taylor Park, Blue Mesa, Carter Lake and Vallecito. Most reservoirs are not expected to fill this year based on this spring’s runoff forecast. Denver Water’s reservoir network is at 78% of capacity, which is typically at 82% of capacity this time of year. Denver Water does not anticipate imposing water use restrictions this year.

Stream Flow - Stream flows since the beginning of the 2002 water year (October 2001) continue to track 70-80% below average in all basins. NRCS stream flow forecasts for the irrigation season are for much below average to extremely below average flows. Most junior water users should expect to see cut-offs in the coming water demand season.

Standardized Precipitation Index (SPI) and Palmer Index - The six month SPI (September 2001-February 2002) shows most of the western slope under “moderate drought” with pockets of “extreme drought” in La Plata, Montezuma, and Saguache counties. Much of the eastern slope is in the “near normal” category, except for “moderate drought” in the southeast corner of the state. No Palmer values were provided for February.

Surface Water Supply Index (SWSI) - February’s SWSI values dropped with the decrease in snowpack. The SWSI values for February are negative in all basins, mostly in the “moderate drought” range. Three of the seven basins are in the “severe drought” category: The Yampa, Dolores, and Rio Grande basins.

Forecasted Weather - **The short term** outlook was for warming temperatures Friday and Saturday March 22 and 23, with another system expected to bring some snow mostly to the mountains on Sunday and Monday. The 8-14 day outlook calls for normal temperatures and below normal precipitation. **Long term** - April-June temperature outlooks tend to be above normal for the southern half of Colorado. So far March temperatures have had record breaking lows, but these cold fronts have been affecting Northern Colorado. Experimental forecasts for April - June show a slight potential for wetter than average conditions in eastern Colorado, but neutral for the southwest corner. Most models are continuing to predict at least mild to growing El Nino conditions for the next six months. How long it will last or how strong it will be is difficult to forecast at this time. Klaus Wolter's forecast can be viewed in detail at: <http://www.cdc.noaa.gov/~kew/CO.predictions/MAR.html>

Other Data - The U.S. Drought Monitor map (as of **March 19**) shows most of Colorado now in the 'Moderate drought' category, and the southwest corner of Colorado in 'Severe Drought'. The Seasonal U.S. Drought Outlook map through June 2002 shows drought likely to persist in the southwest corner of the state, with slow improvement but some persisting water shortages for the rest of Colorado.

## **2. Impact Task Force Comments:**

**Agriculture-** The Drought Task force chair Jeff Brislawn passed along comments for Bob McLavey, Agricultural Impact Task Force Chair who reported that 3 counties have requested Secretary of Agriculture Drought Declarations: Phillips, Kit Carson, and Cheyenne. At this point it is too soon to tell how the growing season will be impacted. Prowers County declared a drought emergency following wildfires last week. Jeff Tranel with CSU Coop extension mentioned that the temperatures will also have a great impact on the growing season if cool temperatures delay planting.

**Municipal-** Barry Cress from DOLA reported that no municipal systems have reported any problems meeting demands.

**Wildlife-** Mary Halstead with DOW reported that the division is monitoring the situation but not taking any steps at this time.

**Economic Impacts** - Recently appointed chair Andrea Anglada from OSPB reported that she is brushing up on the issues and her office is considering factoring in drought to the state's economic model.

**Tourism** - Recently appointed chair Stefanie Dalgard from the Colorado Tourism Office was not present but reported that the ski industry has done better than expected this year. The rafting industry could suffer from the anticipated low runoff.

### **3. Areas of Concern and Potential Impacts**

So far Colorado is drier this winter than it has been the past five years, which were all below average on March 1. The March 1 snowpack of 56% of average is the lowest March 1 snowpack since 1981, the last major drought in Colorado. 1979 and 1980 had well above average March 1 snowpack. The last time we had above average snowpack on March 1 was in 1997. It is becoming highly unlikely that precipitation deficits will be made up this spring. All of Colorado is experiencing drought to some extent, but southeast and southwest Colorado are the areas of most concern at this time. This area of Colorado also appears to have the least chance of recovery in the next couple months based on typical spring climate trends and the long term forecast. Northern mountains have the best chance of recovering in terms of snowpack in April and May. Southeastern plains could benefit from enhanced monsoons if El Nino strengthens this summer.

#### **Fire danger**

The March fires in Prowers county confirm concerns of an early onset of the fire season, which is anticipated to be an active one this year.

#### **Early melt/runoff and Low Stream flows**

The low snowpack is susceptible to an early melt off. Melt off will depend mostly on temperatures in April and May. Fortunately March temperatures have been on the cool side thus far. Without substantial spring rains there will be lower peak flows and a shorter runoff duration. The Division of Water (DWR) resources expects substantial administration of in-stream water rights this year. Administration of water rights may begin earlier than normal in some basins. Those without senior water rights will be curtailed. The DWR is working with Division of Wildlife (DOW) to identify stream reaches that may go dry from diversions. DWR will try to notify DOW early enough to try and purchase water to maintain minimum streamflows to protect aquatic habitat. Communities dependent on in-stream flows as a water source could see impacts.

#### **Low Reservoirs**

Large reservoirs are not expected to fill this year. This could impact marinas in the short term but also have larger implications if dry winters continue.

#### **Agriculture**

Agriculture, particularly rangeland and dry land farming, will be very dependent on spring and summer rains this year, though it may be too late to benefit grasslands. Federal land agencies are already warning of rangeland grazing restrictions.

#### **Recreation/Tourism**

Marinas at some reservoirs may be adversely affected by low level conditions. Activities dependent on adequate streamflows such as rafting and fishing could have a short season this year.

#### 4. **Recommended actions**

Thus far the impacts have not been great enough to warrant activation of the State's drought plan. State and federal agencies have ongoing mitigation and preparedness efforts and are continuing to warn water users to expect shortages this year. These action recommendations from last month remain valid:

- ! The task force will continue meeting monthly to closely monitor the situation.
- ! Continue ongoing water user/rangeland user drought education and awareness efforts being put forth by Coop extension, Division of Water Resources, and Federal land agencies.
- ! Continue work towards development of a drought status graphic/report.
- ! Continue to focus on mitigation efforts outlined in the Colorado Drought Mitigation and Response Plan.
- ! Proceed with vulnerability assessment efforts such as the Colorado Drought water survey.
- ! Review agency roles and responsibilities outlined in the Colorado Drought Mitigation and Response Plan. Impact task force chairs are advised to develop membership lists and provide them at the next meeting. The drought plan can be referenced online at: <http://www.dola.state.co.us/oem/Publications/publications.htm>

#### 5. **Other Items Discussed**

##### **Drought Status Report**

Brad Lundahl from the Colorado Water Conservation Board presented a draft drought status report containing graphics pertinent to Colorado. There is a need to develop a condensed packet of information to inform decision makers and the press of the current drought status. The idea is to have something that could be updated every two weeks during dry times. A draft was circulated for review and comment.

##### **Vegetation Health Index**

Vegetation health maps by climate divisions in the U.S. can be viewed at:

<http://orbit-net.nesdis.noaa.gov/crad/sat/surf/vci/usavhcd.html>

#### 6. **Next Meeting**

The next meeting of the Drought Task Force will be held Wednesday, April 24, from

1:00-3:00, at the Colorado Office of Emergency Management in Golden.