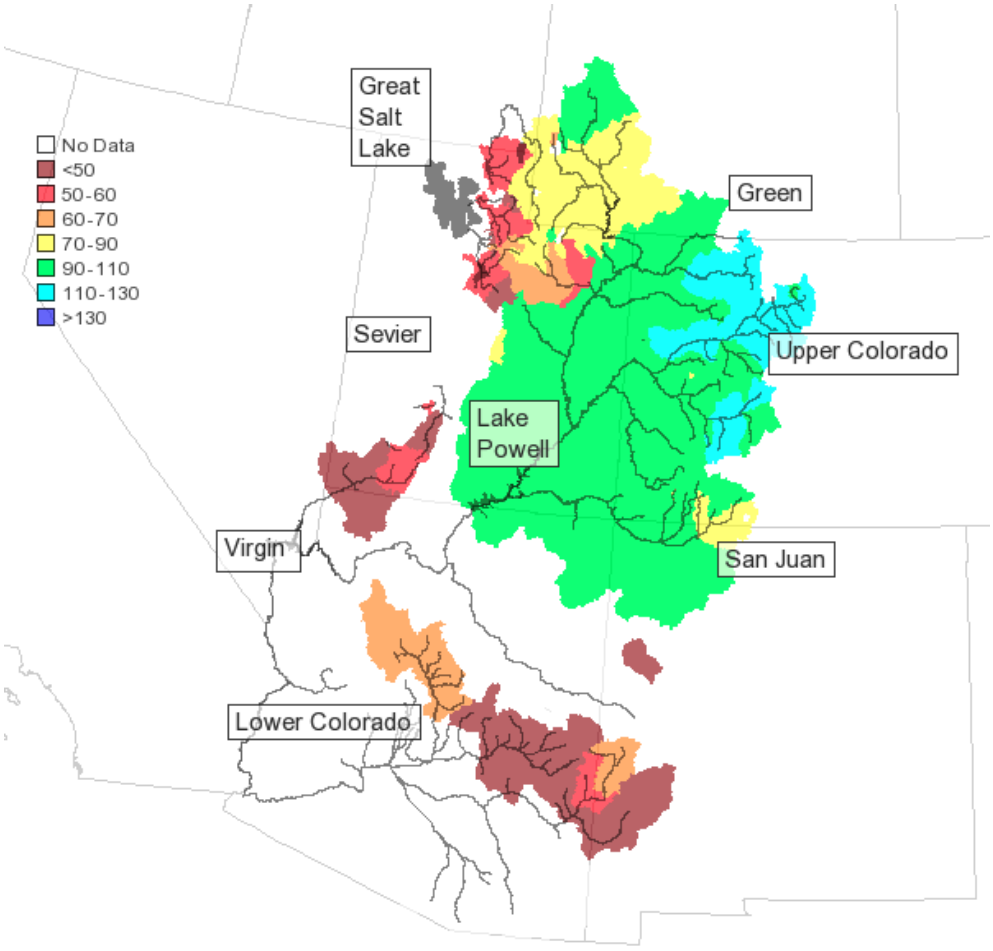
February 1, 2014 Water Supply Forecast Discussion

The Colorado Basin River Forecast Center (CBRFC) geographic forecast area includes the Upper Colorado River Basin, Lower Colorado River Basin, and Eastern Great Basin.

Seasonal Water Supply Forecasts:

Quick Summary:
Water supply forecasts for the Colorado Basin vary greatly over the area. Above average April-July runoff volumes are expected in the Yampa and the Colorado River above Cameo. Near to above average volumes are forecast for the Gunnison and Upper Green Basins, with slightly below average forecasts in the San Juan Basin. The Lower Colorado River Basin has been very dry and much below average volumes are forecast. The Great Basin is expecting below average volumes. The disparity in snowfall this past month, with most storms reaching the upper Colorado basin from the northwest, and bypassing the rest of the CBRFC's area, combined with widely varying soil moisture conditions had the greatest impact on this month's forecast updates.

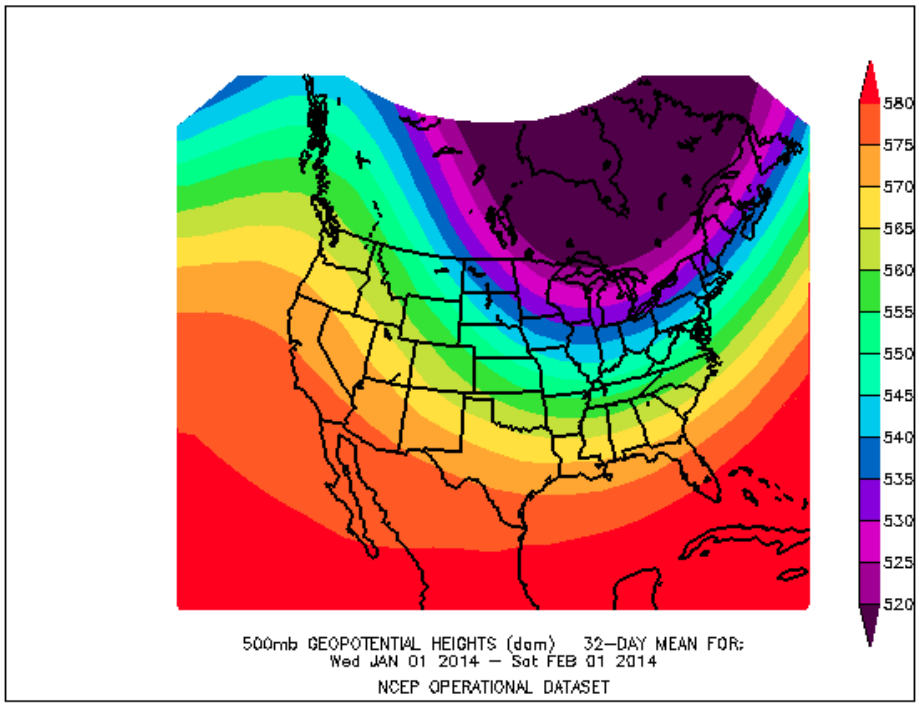


Click here for specific site water supply forecasts

Water Supply Discussion

Weather Synopsis:

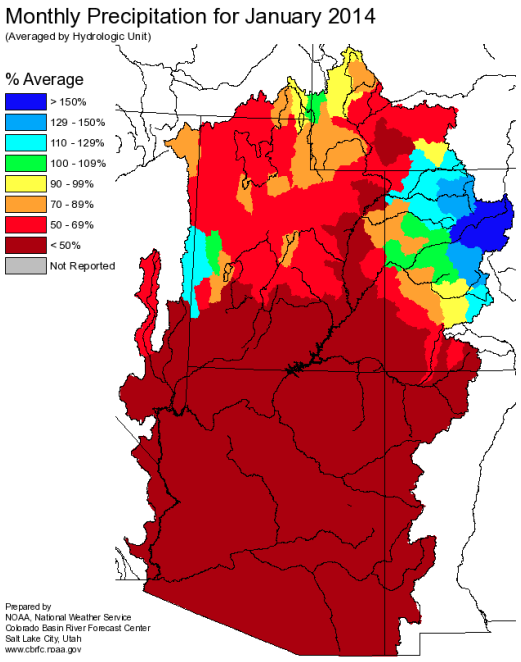
January was marked by a strong persistent ridge of high pressure over the west coast, which for the most part kept storms at bay from the Colorado and Great Basins, with the exception of the Upper Colorado and Yampa headwaters in northern Colorado which received decent amounts of snowfall in a few storms.

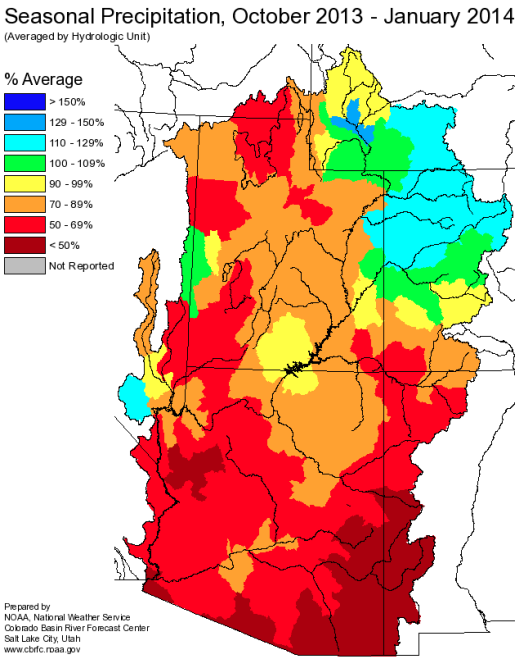


Mean upper air pattern during January 2014.

Precipitation and Temperatures:

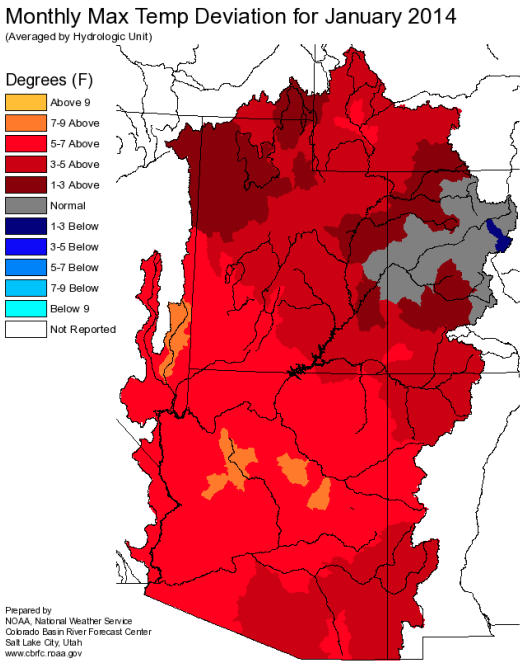
January precipitation was well below average throughout Arizona, southern Utah, southwest Colorado and western New Mexico, where less than half of average was recorded. In contrast, the Colorado River above Cameo received well above average precipitation amounts (over 150% of average). The White, Yampa and Gunnison basins were also above to near average. Elsewhere, precipitation accumulations were in general below average for the month. For the water year to date, the Colorado above Cameo, White and Yampa basins have received above average amounts of precipitation, the Gunnison and Green near average, and below average elsewhere, including the Great Basin.

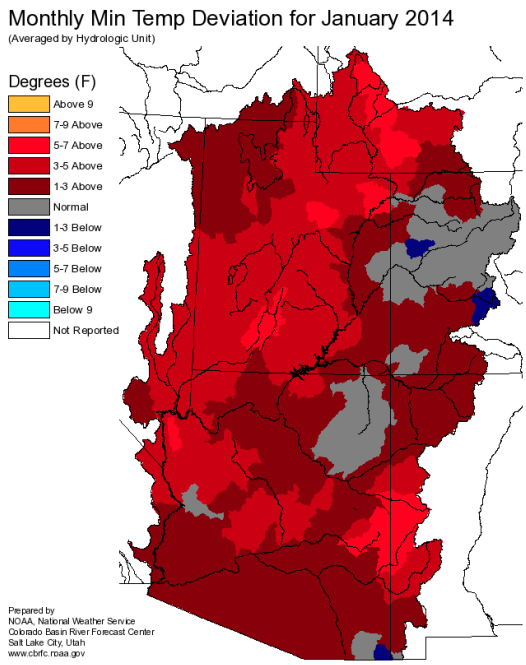




Monthly and seasonal precipitation for the Colorado River Basin.

Maximum and minimum temperatures were well above average over the entire CBRFC area, with the exception of the Upper Colorado River where normal to slightly below normal temperatures occurred. This led to early snowmelt in the lower areas of Arizona and southwest Utah.

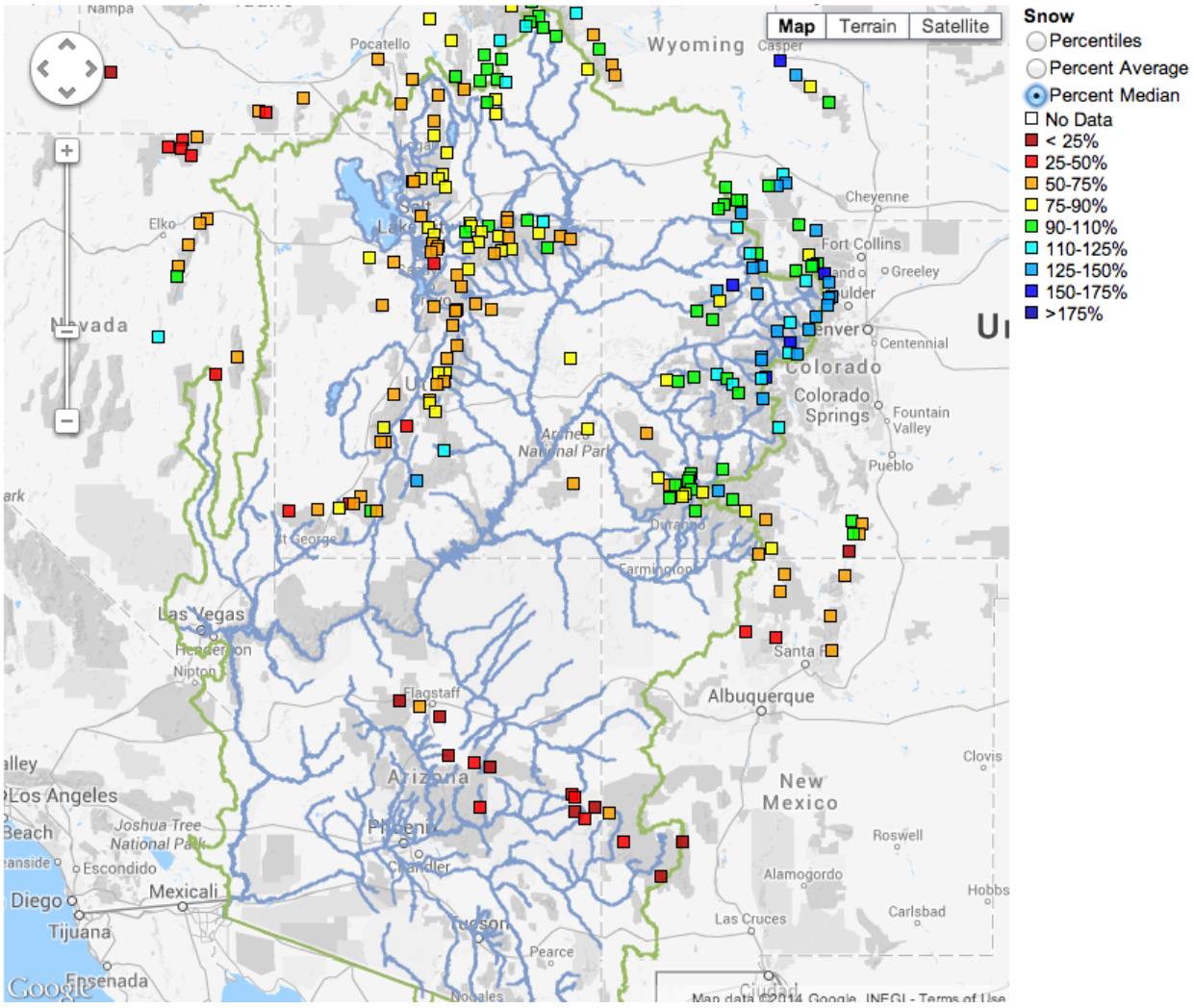




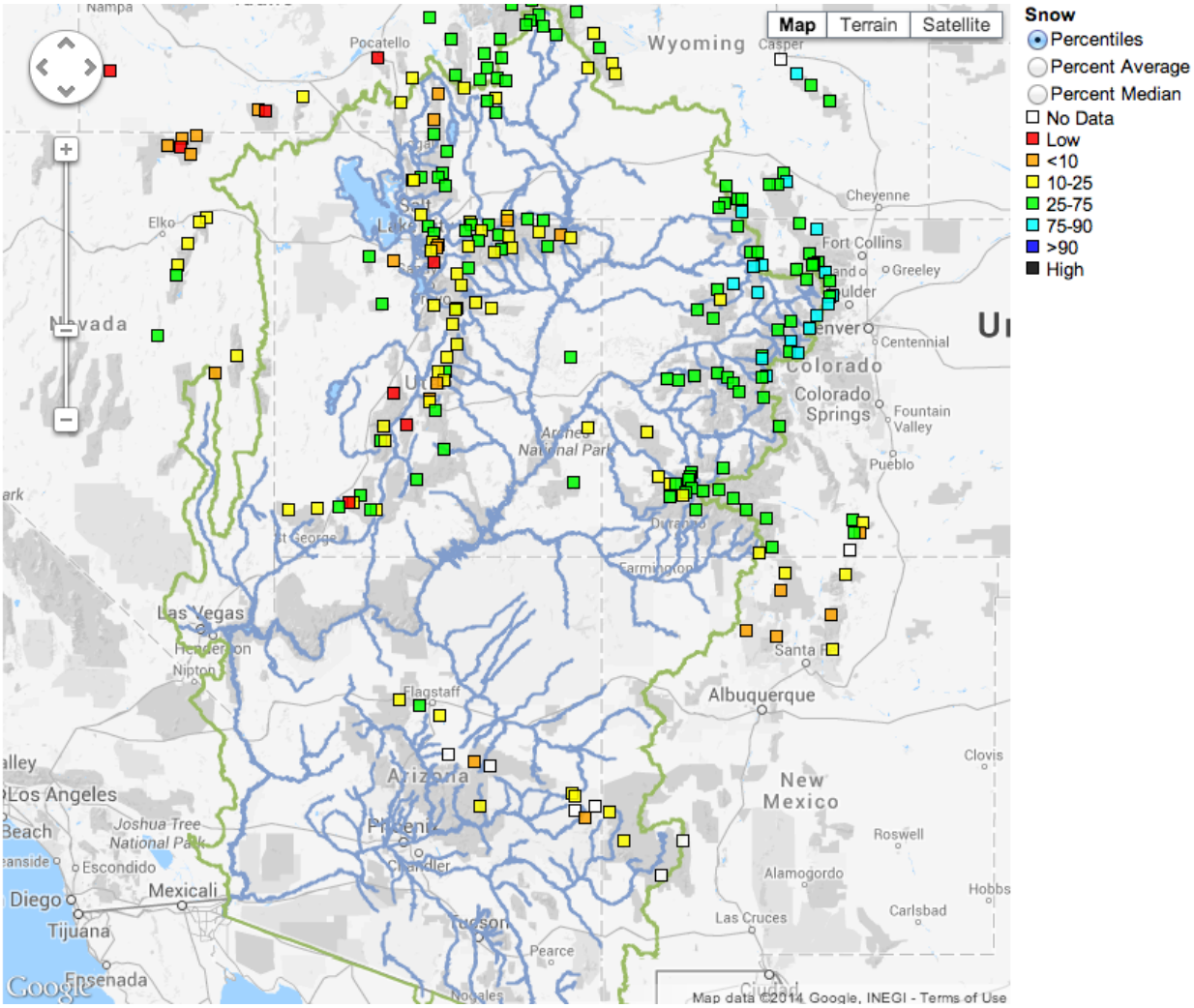
Monthly maximum and minimum temperature deviation for the Colorado River Basin.

Snowpack:
At the beginning of February, snow conditions were above the historical median across the Colorado above Cameo and Yampa River Basins. Below median conditions were widespread across the Great Basin, extending into the Duchesne River Basin. The Upper Green River Basin had near median conditions. The Verde River Basin was well below median conditions as well as the upper Salt and Gila Basins.

The maps below show conditions of snotel sites across the CBRFC area as of February 3, 2014. For more details and daily updates, please refer here.



Percent Median Snow condition as of February 3, 2014



Percentiles snow conditions as of February 3, 2014. Sites ranked based on historical record:

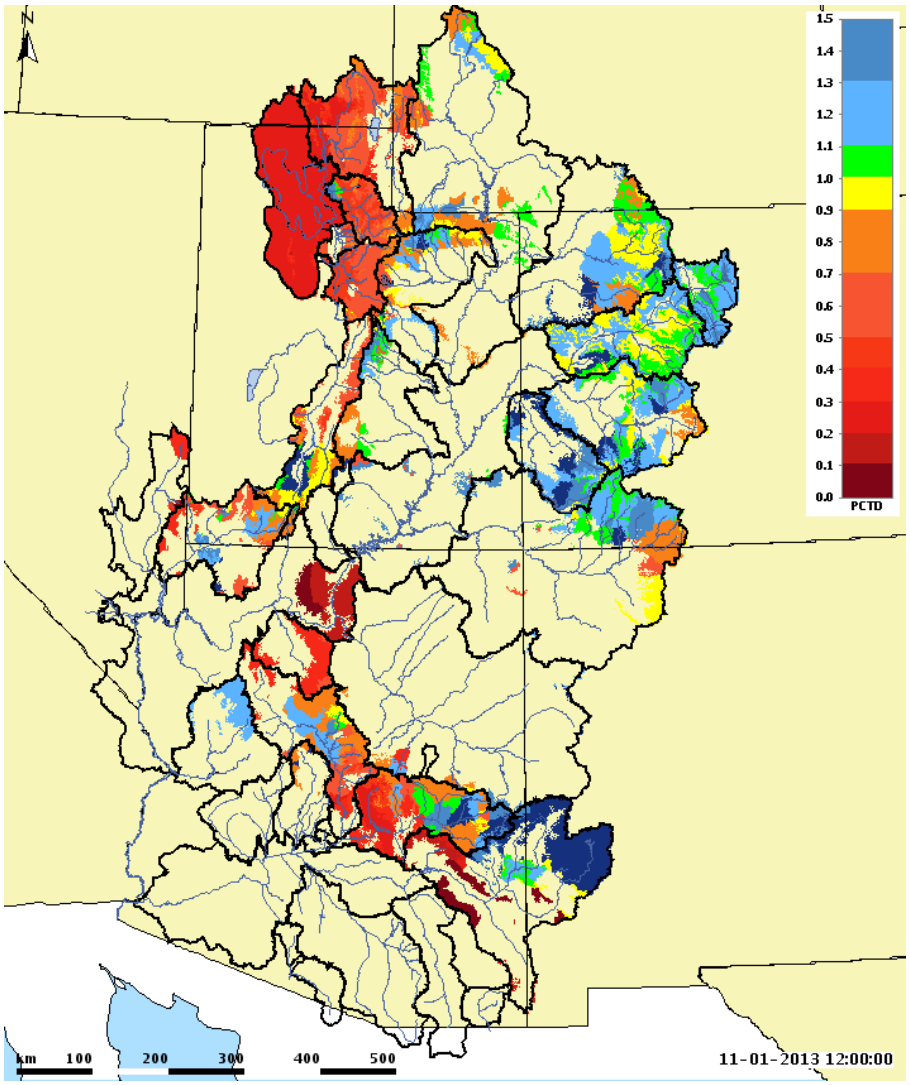
Soil Moisture:

Soil moisture conditions in the higher elevation headwater areas are important entering the winter, prior to snowfall, as it influences the efficiency of the snowmelt runoff the following spring. Modeled soil moisture conditions

as of November 1st were above average over much of the Upper Colorado Basin, and parts of the upper Salt and upper Gila Basins. Elsewhere conditions were below average.

The soil moisture conditions are having an impact on forecasts, particularly in areas where the modeled soil moisture is well above average yet the snow conditions are near or below average. The above average soil moisture is acting to keep the forecasts at a higher level than they would be if soil moisture conditions were closer to average. This is most pronounced in the San Juan and parts of the Gunnison Basin. In addition, the combination of above average soil moisture and above average snow conditions in the Colorado above Cameo and Yampa River basins has resulted in much above average runoff forecasts. The opposite is occurring in the Great Basin where dry soils and low snowpack have combined to create very low runoff volume forecasts.

In the map below areas in blue are above the historical model soil moisture average while those in the red and orange are below average



Modeled soil moisture as of November 1st 2013

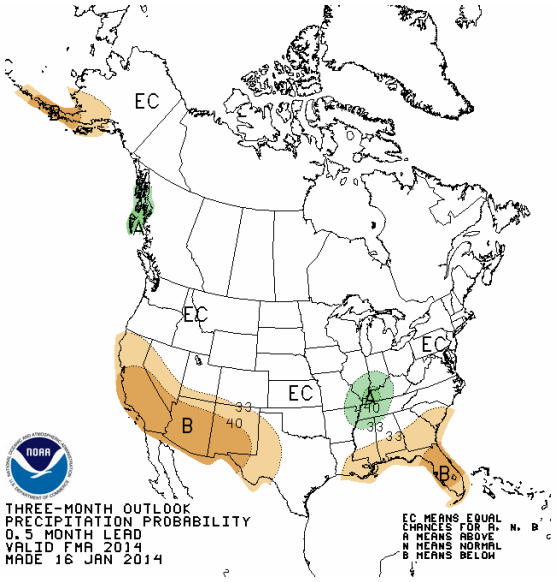
Streamflow:

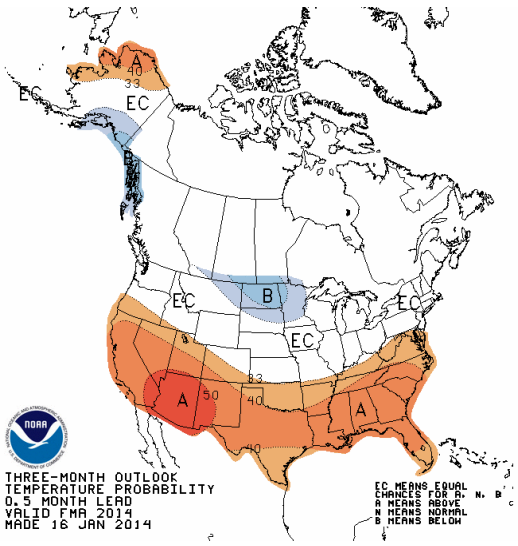
Above average streamflow was observed in late fall in the Colorado River headwaters above Kremmling, Yampa River Basin, and Gila River Basin. Near or slightly above average streamflow was observed in parts of the Gunnison ,San Juan, Upper Green and Duchesne River Basins. In the lower Green River Basin and across the Great Basin below to much below streamflow was observed, indicative of the much drier conditions in those areas.

Climate Outlook:

The El Nino Southern Oscillation (ENSO) condition is currently neutral and expected to continue as neutral through 2014. The Climate Prediction Center indicates higher chances of below average precipitation in the southern portions of the Colorado Basin for February through April, and equal chances for above or below average precipitation throughout the rest of the CBRFC forecast area. There is a higher chance of above normal

temperatures throughout the basin for the same time period.





Conclusion:
Two vastly different scenarios exist in the CBRFC forecast area. Favorable soil moisture and snow conditions in the upper Colorado River Basin resulted in near to above average water supply forecasts. Over much of the Great Basin, the western Duchesne Basin and the Virgin River Basin soil moisture is less favorable and snow conditions are much below average. April-July runoff volumes less than 80% of average, and in some cases less than 50% of average are forecast.

It is still early in the snow accumulation season. Snow conditions over the next three months can drastically change the forecasts as we move further into the winter and spring.

End Of Month Reservoir Content Tables

- Green River Basin
- Upper Colorado River Basin
- San Juan River Basin
- Great Salt Lake Basin
- Sevier Basin
- Virgin River Basin

Basin Conditions and Summary Graphics

- Green River Basin
- Upper Colorado River Basin
- San Juan River Basin
- Great Salt Lake Basin
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- Virgin River Basin