

CBRFC
April 2015
CUWCD Briefing/Meeting

1pm April 13, 2015

Ashley Nielson



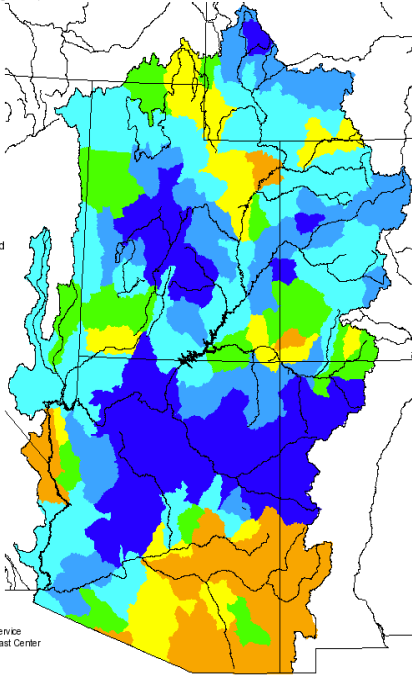
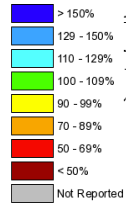
April Call Outline

- March Weather Review
- Snow conditions
- Water Supply Forecasts
- Upcoming weather (short and long range)

Winter Precipitation

Monthly Precipitation for December 2014
(Averaged by Hydrologic Unit)

% Average

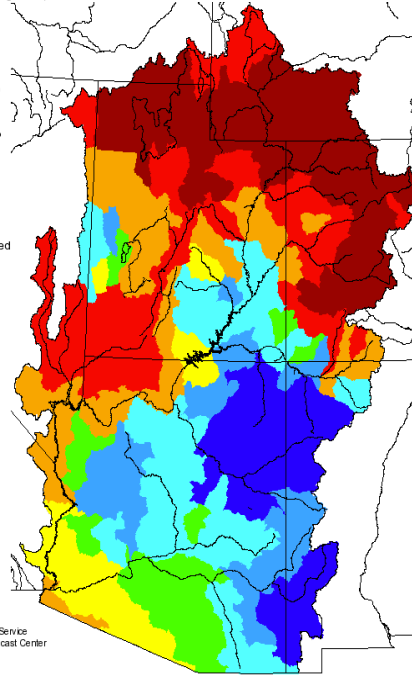
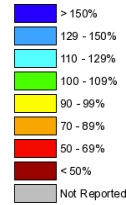


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Duchesne: 105%
Provo: 120%

Monthly Precipitation for January 2015
(Averaged by Hydrologic Unit)

% Average

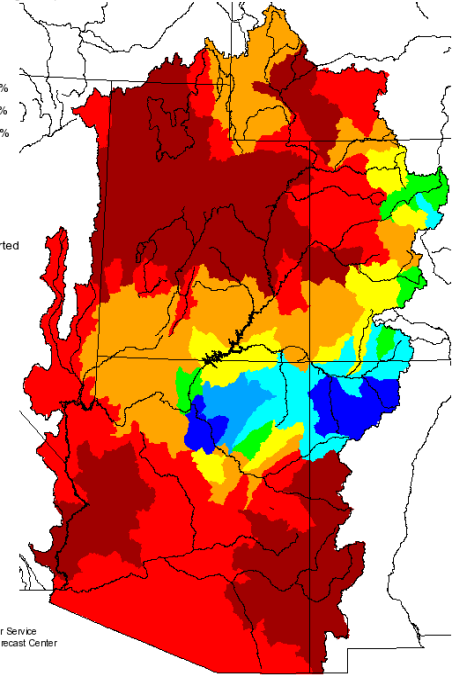
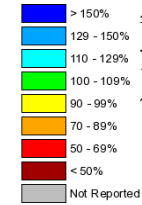


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Duchesne: 45%
Provo: 50%

Monthly Precipitation for February 2015
(Averaged by Hydrologic Unit)

% Average

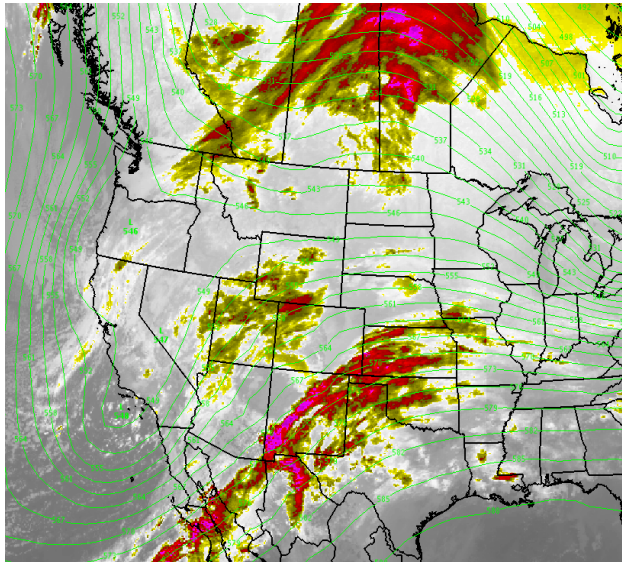


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

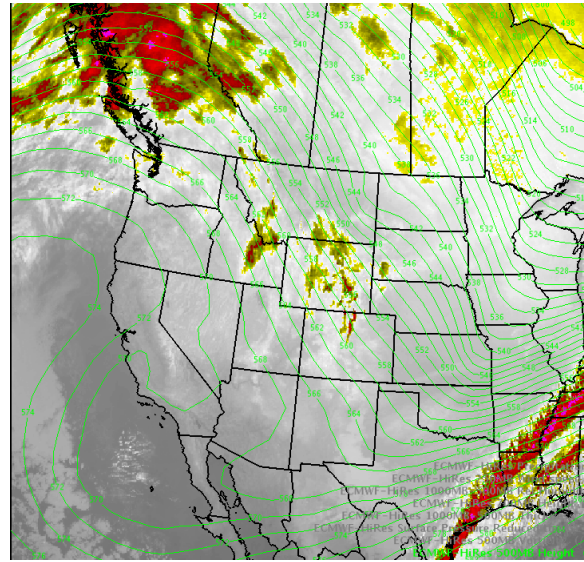
Duchesne: 34%
Provo: 31%

March Weather

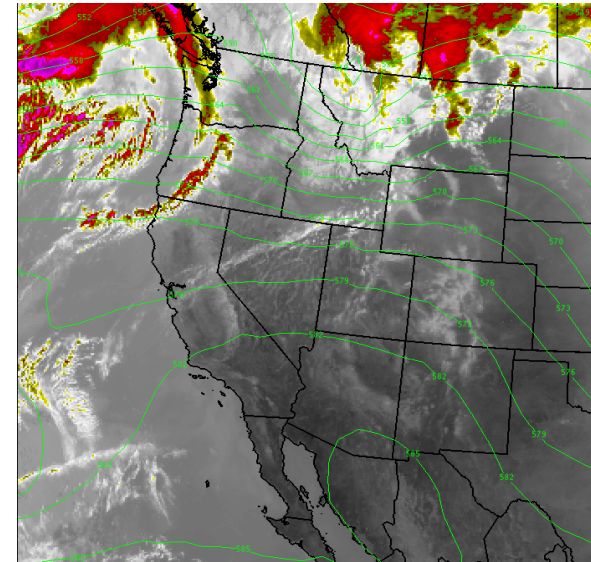
March 2 2015 – Storm



March 5 2015 – Ridge



March 28 2015 – Ridge



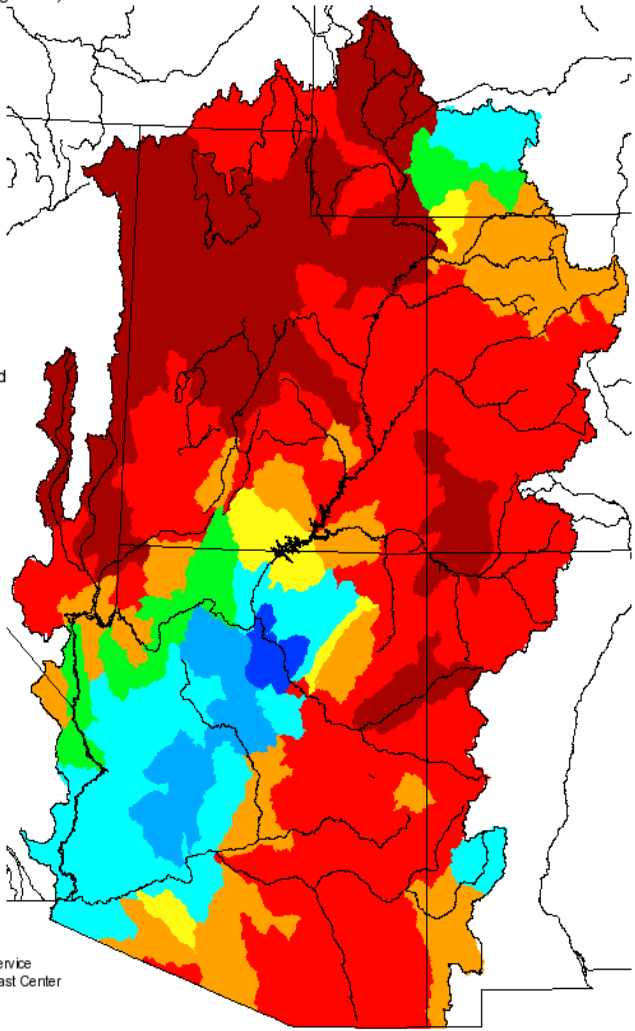
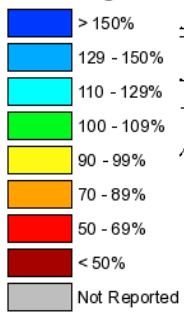
Summary: Storm early in the month followed by ridge of high pressure and dry and warm conditions for the rest of the month.

March and Seasonal Precipitation

Monthly Precipitation for March 2015

(Averaged by Hydrologic Unit)

% Average



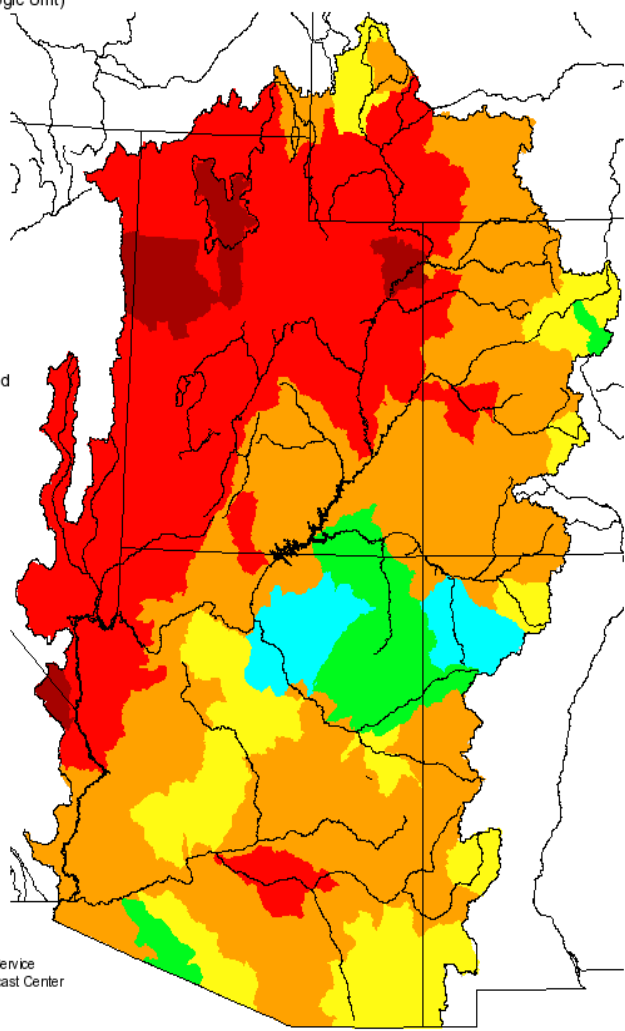
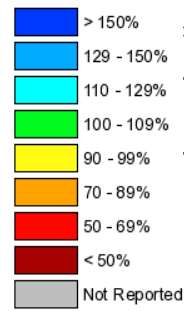
Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbifc.noaa.gov

Duchesne: 48%
Provo: 47%

Seasonal Precipitation, October 2014 - March 2015

(Averaged by Hydrologic Unit)

% Average



Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbifc.noaa.gov

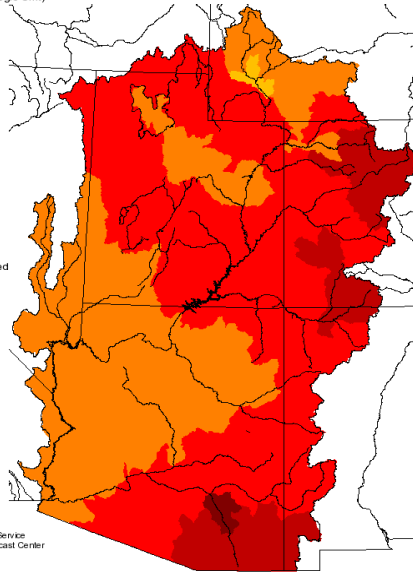
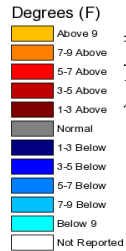
Duchesne: 57%
Provo: 59%

February/March Temperatures

* Warmest February/March on Record – Several Locations *

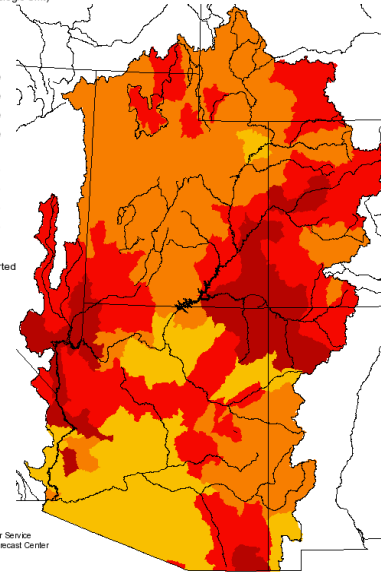
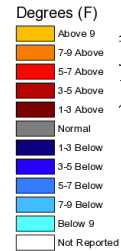
February

Monthly Max Temp Deviation for February 2015
(Averaged by Hydrologic Unit)



Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbafc.noaa.gov

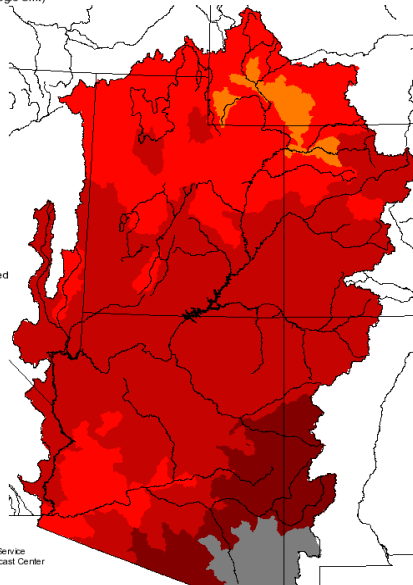
Monthly Min Temp Deviation for February 2015
(Averaged by Hydrologic Unit)



Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbafc.noaa.gov

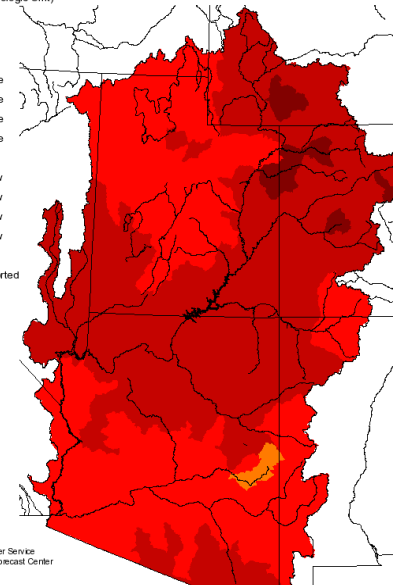
March

Monthly Max Temp Deviation for March 2015
(Averaged by Hydrologic Unit)



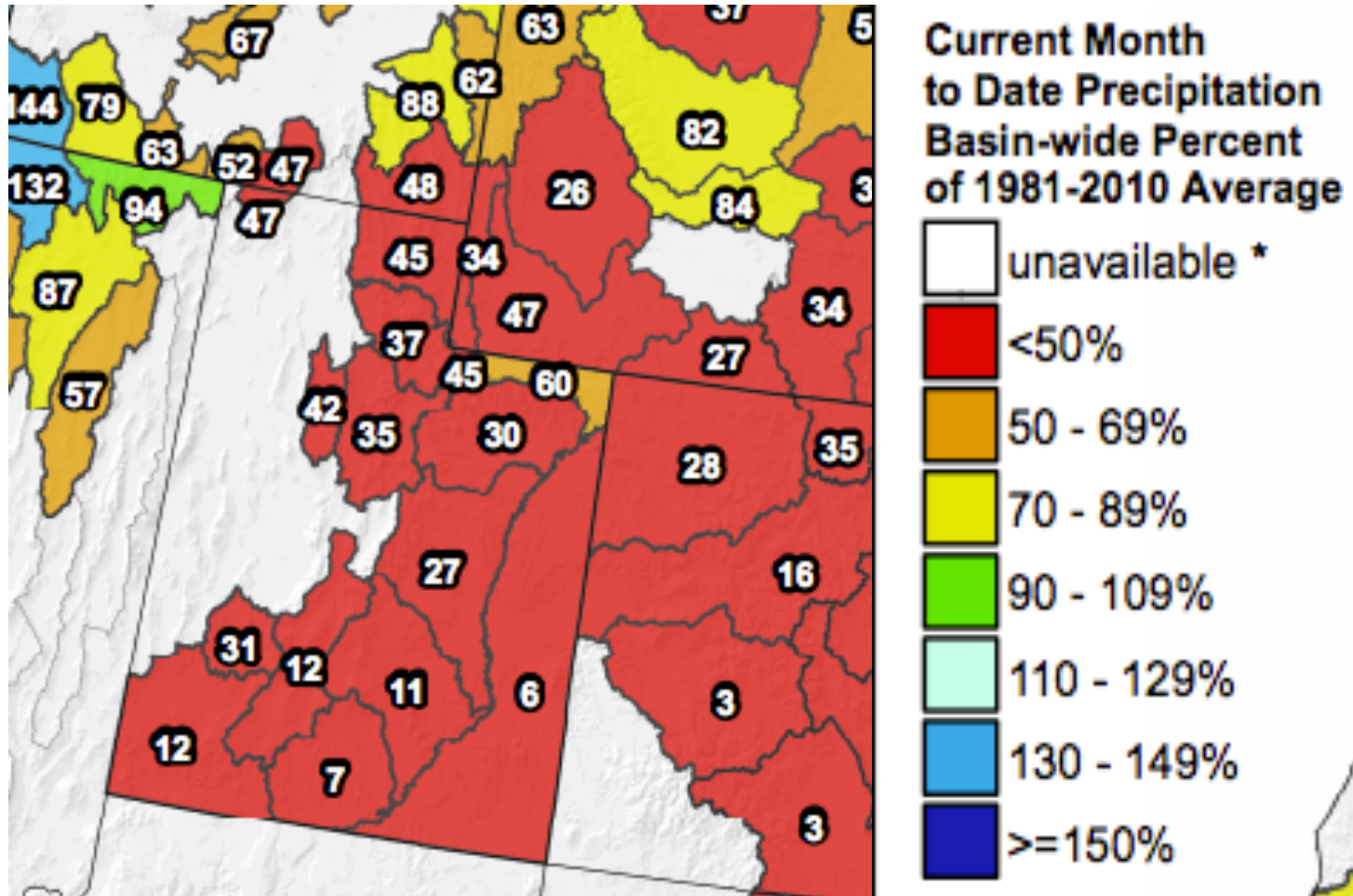
Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbafc.noaa.gov

Monthly Min Temp Deviation for March 2015
(Averaged by Hydrologic Unit)



Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbafc.noaa.gov

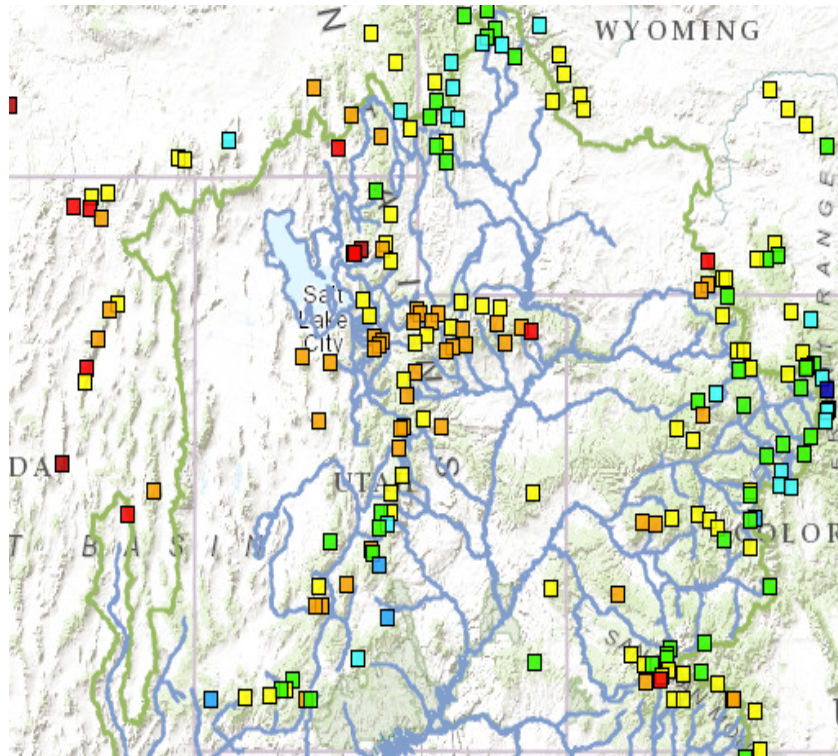
April Precipitation



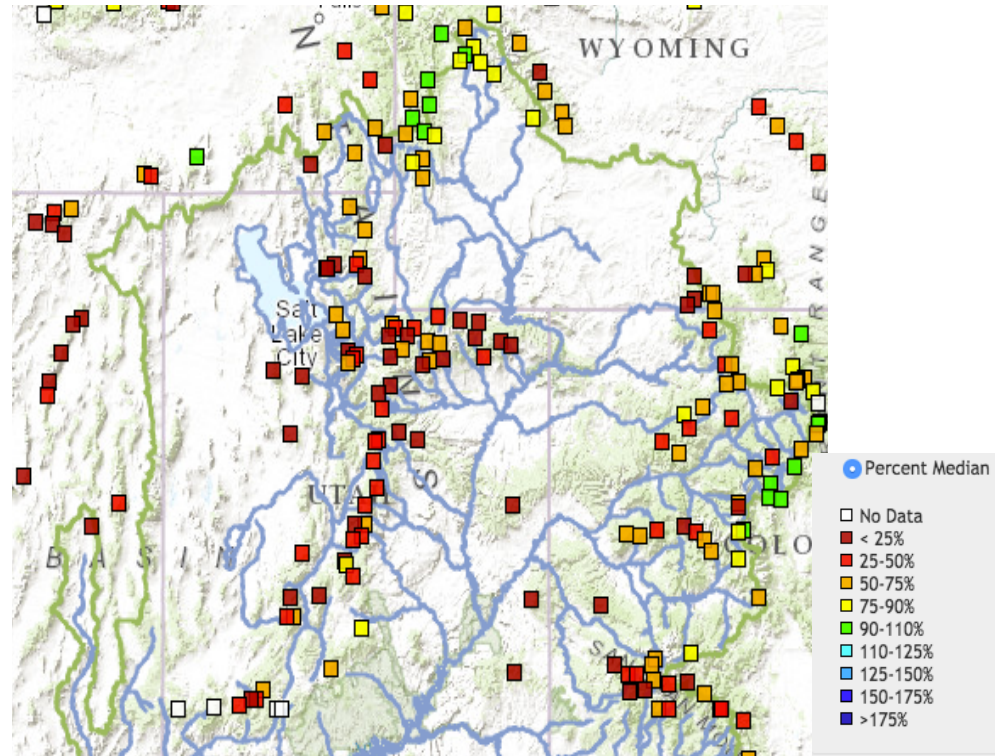
April Days 1-13 % of Normal Precipitation

Snow Conditions

SNOTEL SWE – MAR 7 2015



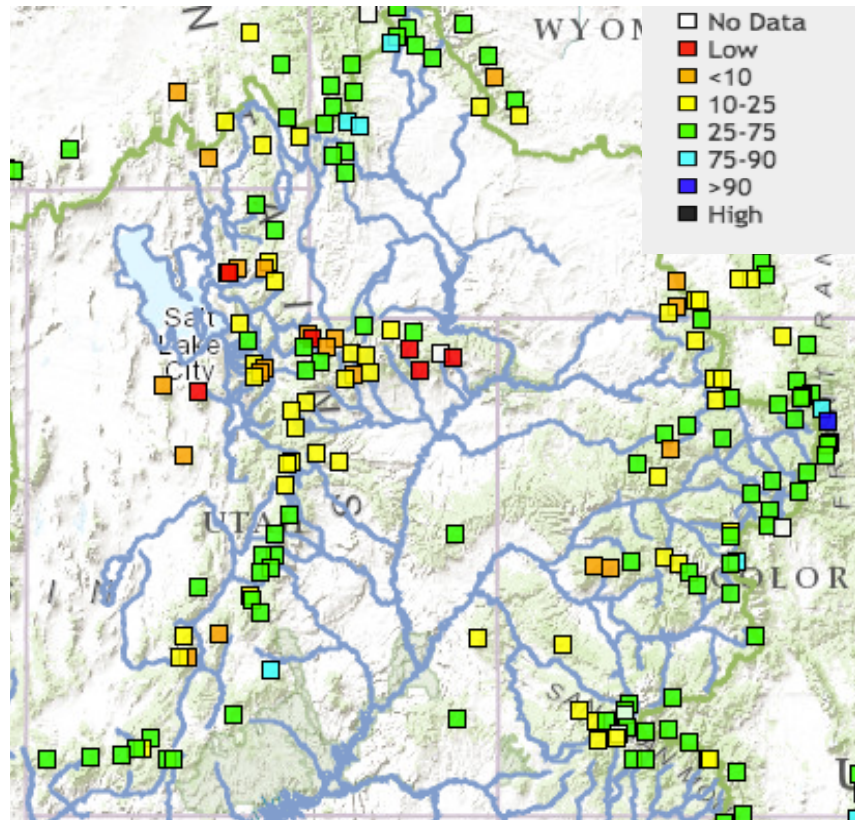
SNOTEL SWE – APR 9 2015



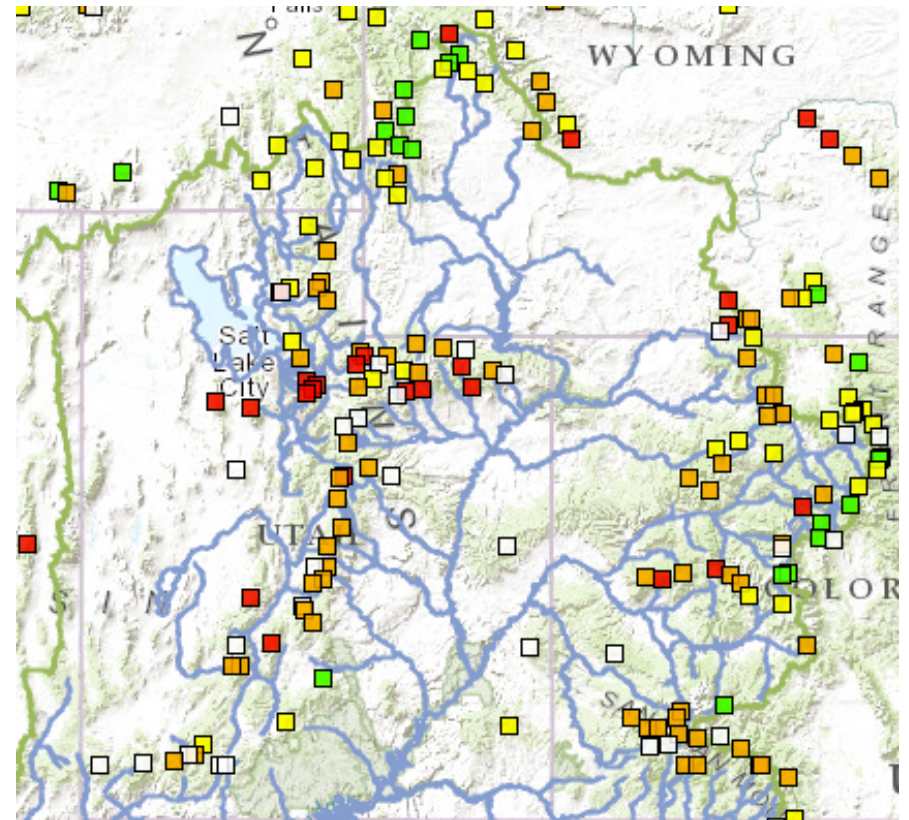
Snow Conditions

-Snow Rankings

MAR 7 2015



APR 9 2015



Red – Lowest on Record
Orange – Lowest 2nd-5th on record

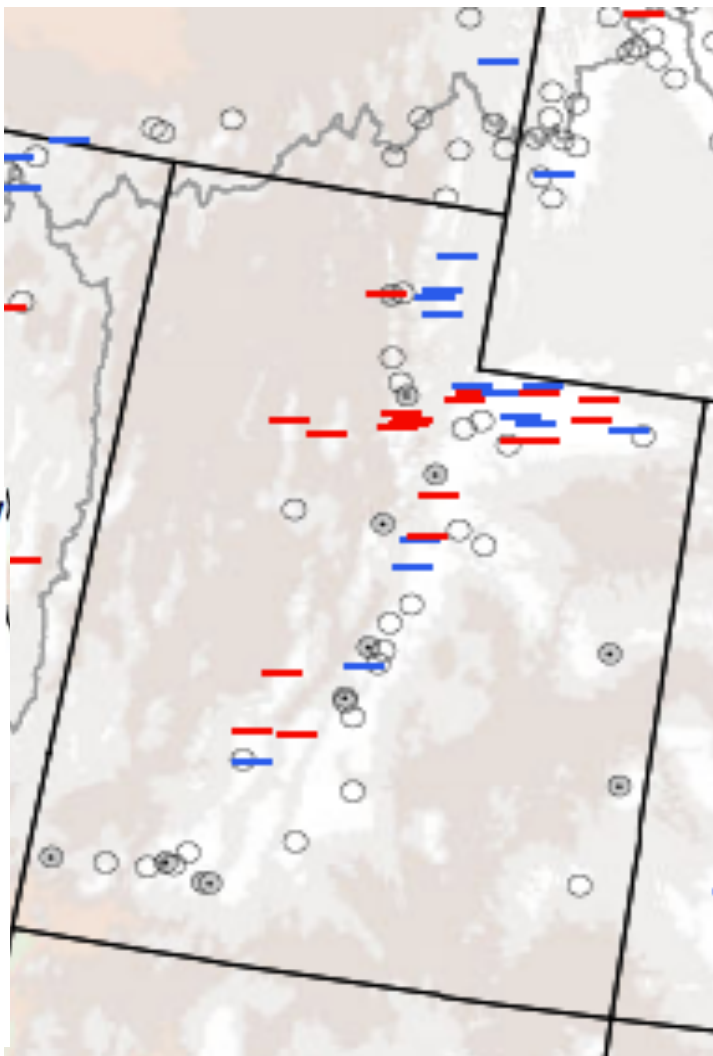
Period of Record
Most around 30-36 years

Snow Conditions

NRCS SWE Records: April 9

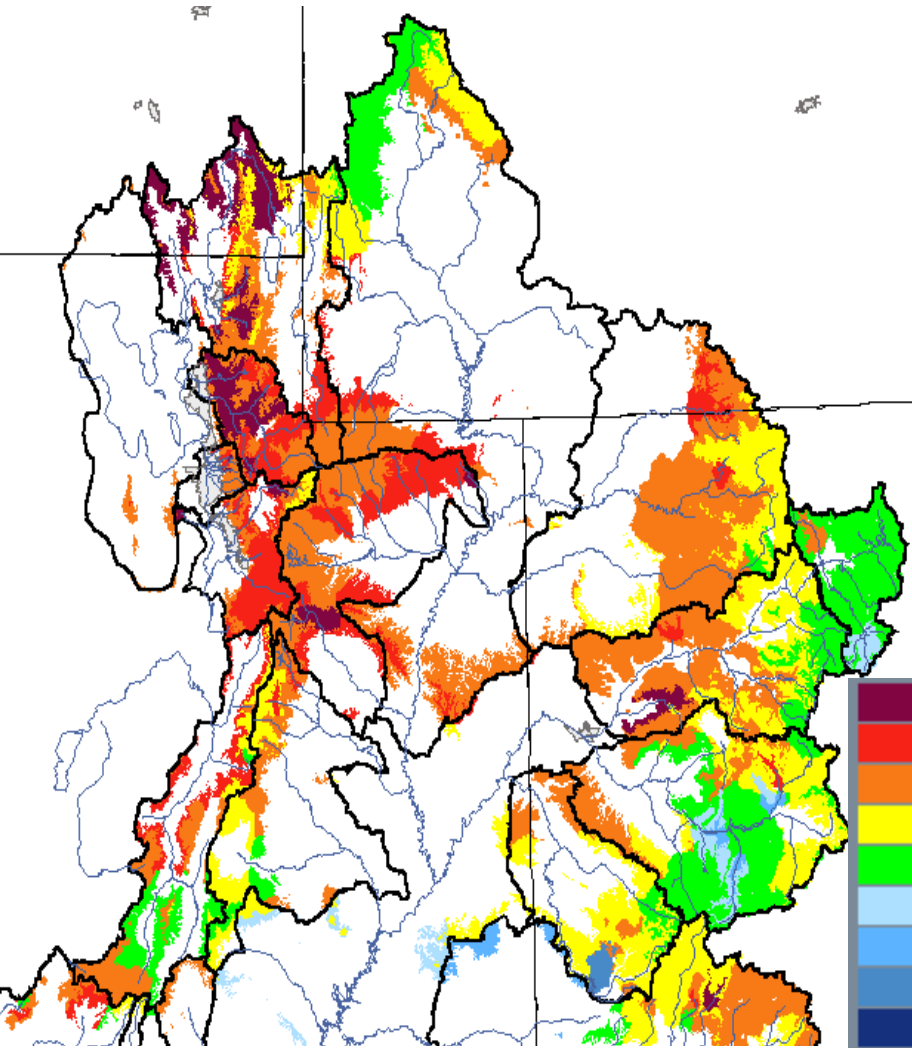
Current Snow Water (SWE) Equivalent Records

- + New High
- + Near High
- Non-Record
- New Low
- Near Low
- ⊙ snow free

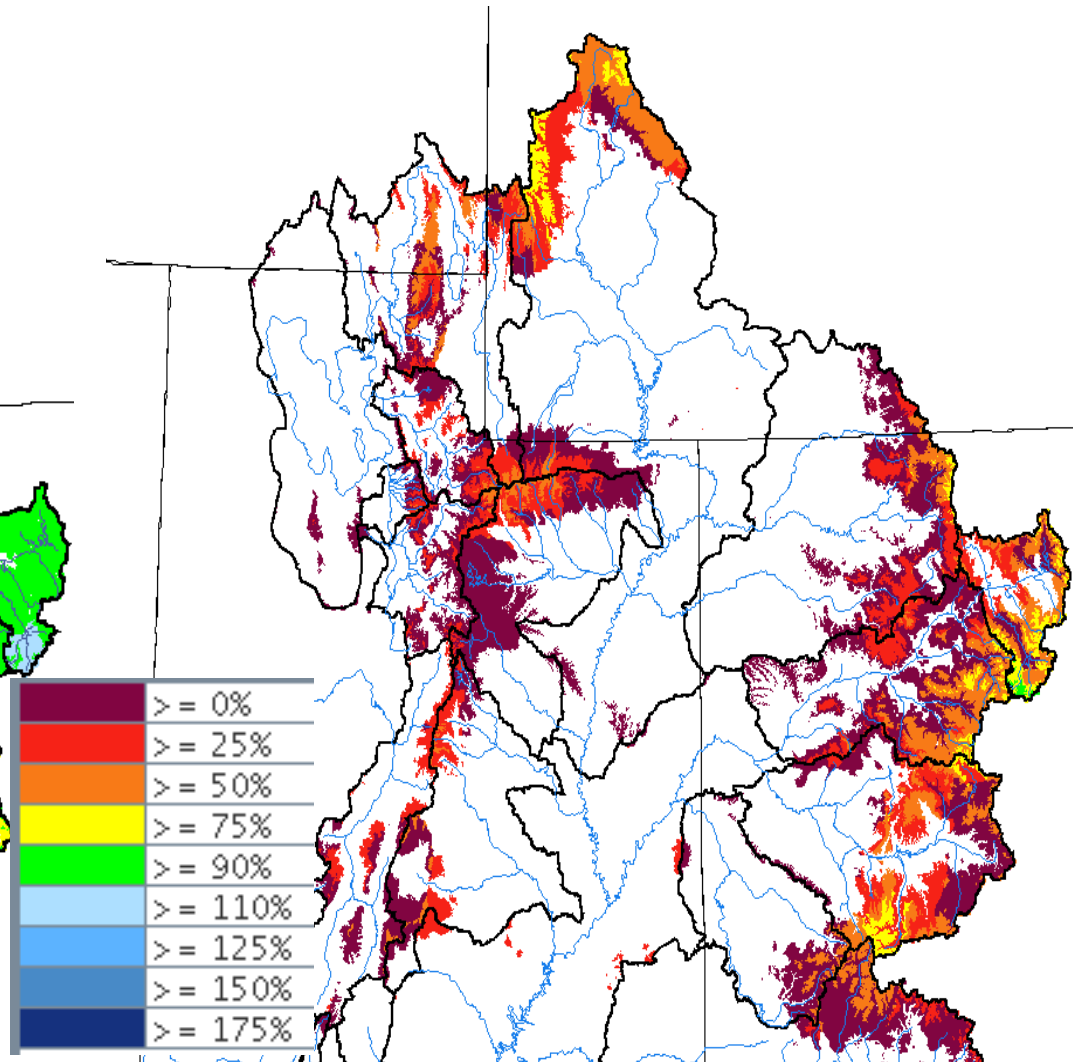


SNOTEL	April 1 SWE Rank	Jan-Mar Precip
Daniels-Strawberry	1	1
Strawberry Divide	1	1
Trial	6	6
Beaver Divide	4	1
Lake Fork	1	1
Rock Creek	1	3
Five Points	1	1
Lakefork #1	1	1

Model Snow
3/7/2015

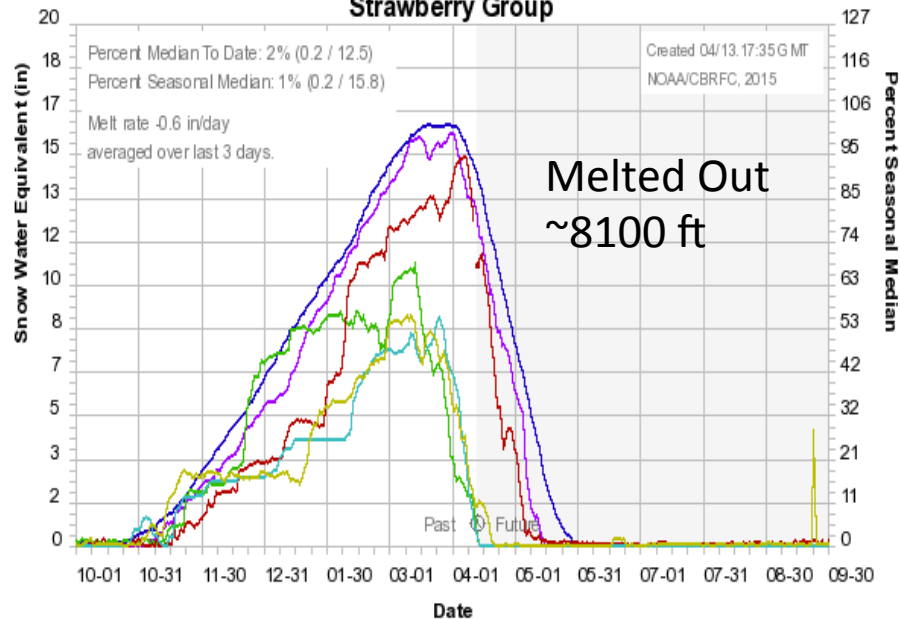


Model Snow
4/13/2015



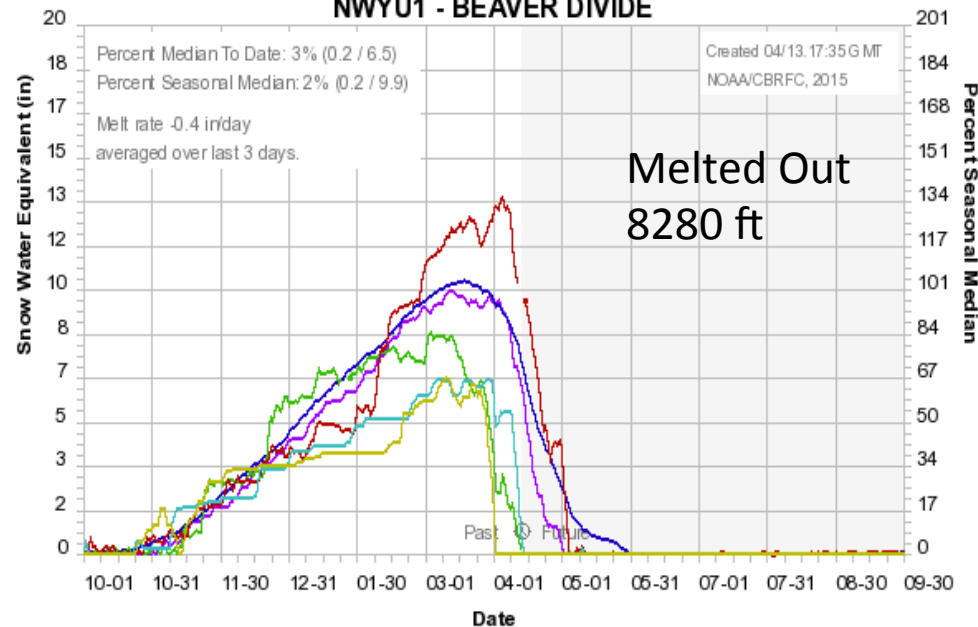
Colorado Basin River Forecast Center

Strawberry Group



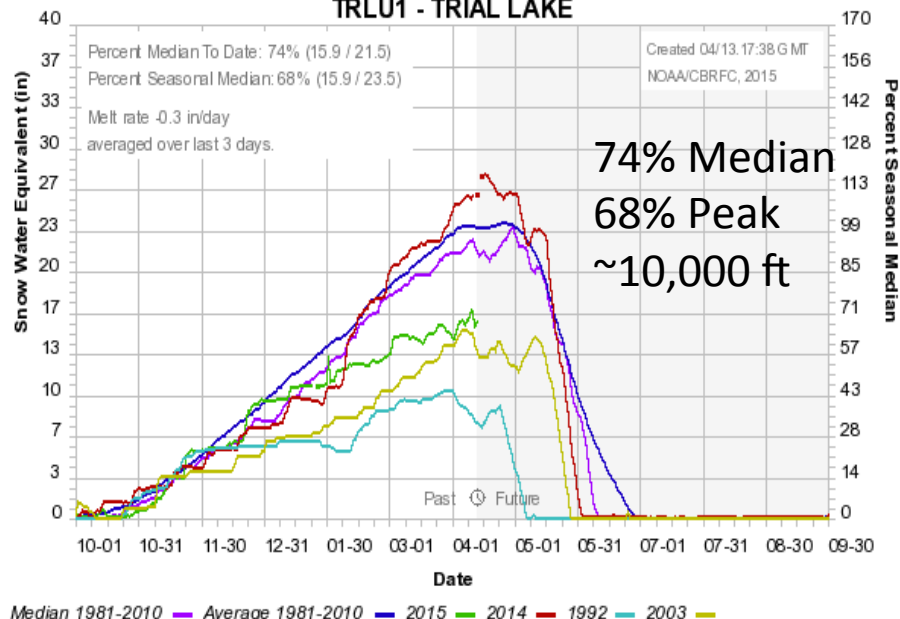
Colorado Basin River Forecast Center

NWYU1 - BEAVER DIVIDE



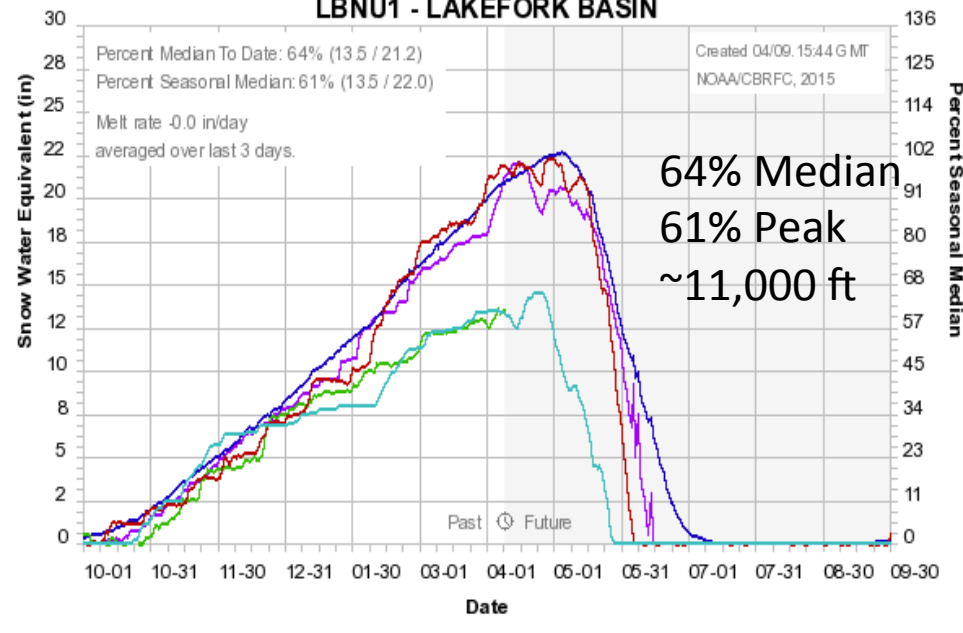
Colorado Basin River Forecast Center

TRLU1 - TRIAL LAKE

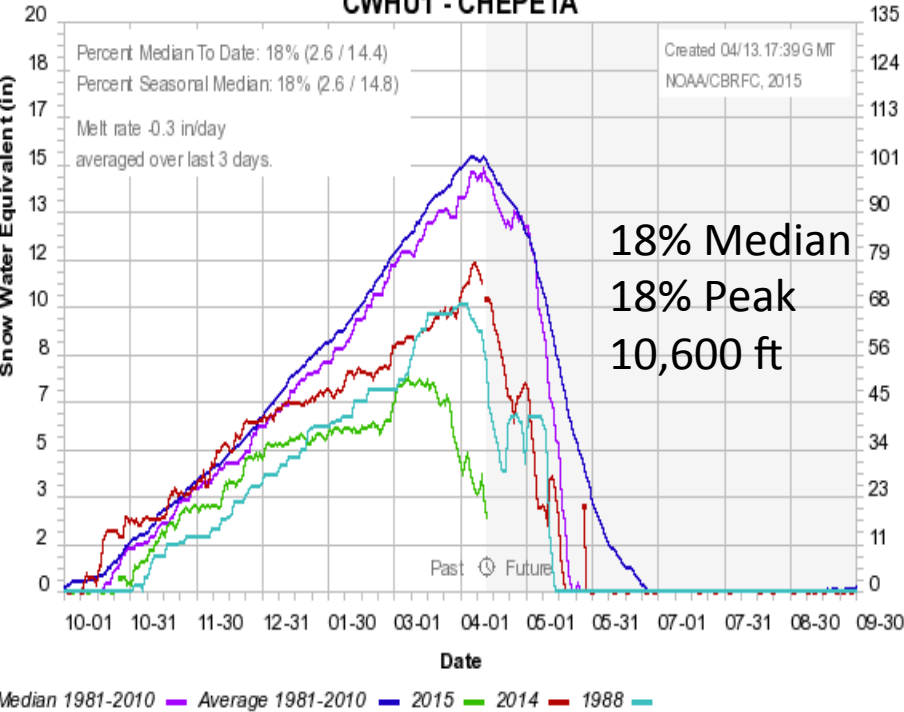


Colorado Basin River Forecast Center

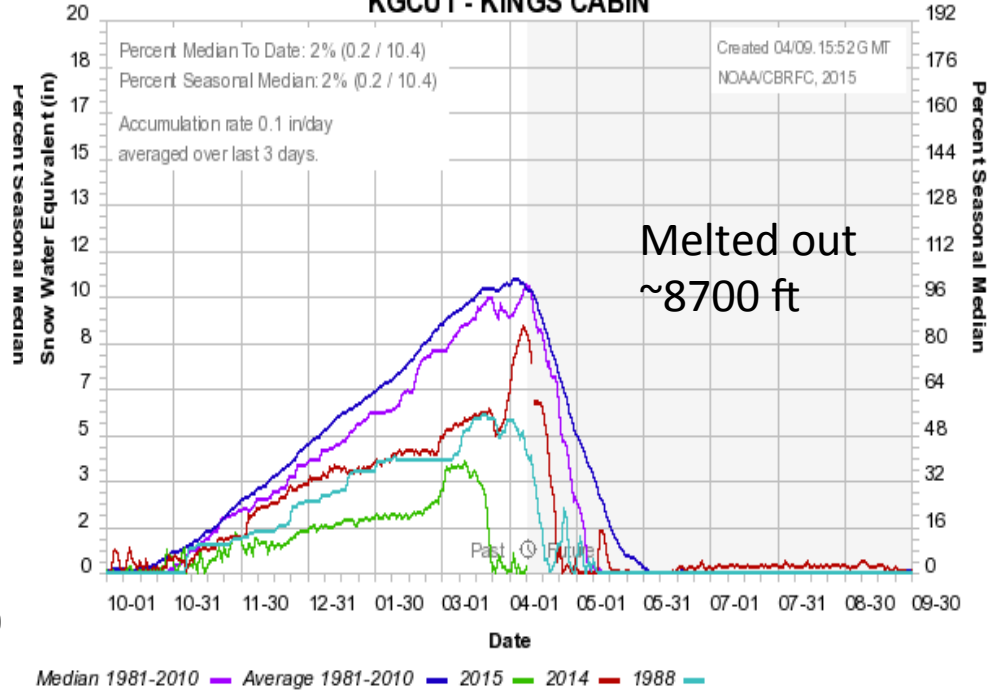
LBNU1 - LAKEFORK BASIN



**Colorado Basin River Forecast Center
CWHU1 - CHEPETA**

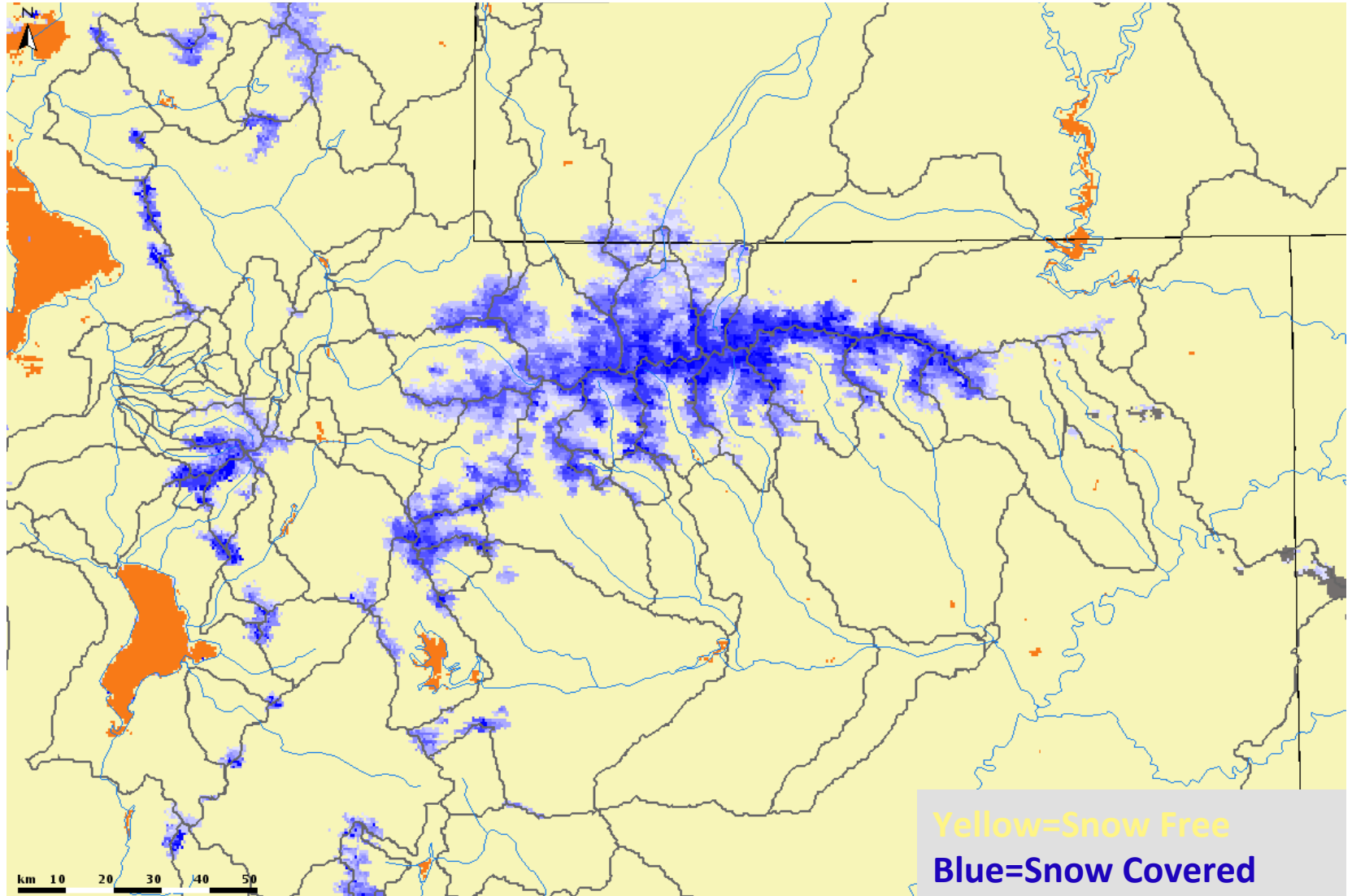


**Colorado Basin River Forecast Center
KGPU1 - KINGS CABIN**



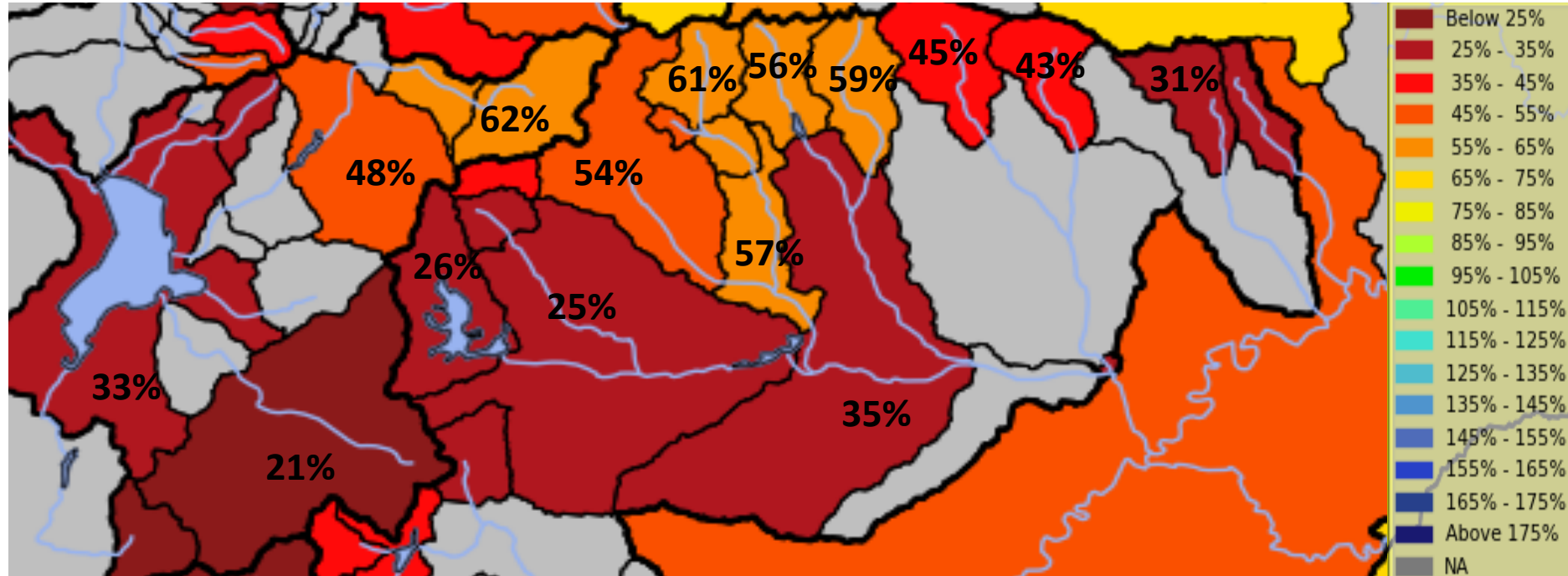
Snow Conditions

Satellite image of snow:4/12/15



April 1st Water Supply Forecasts

Duchesne and Provo River Basins



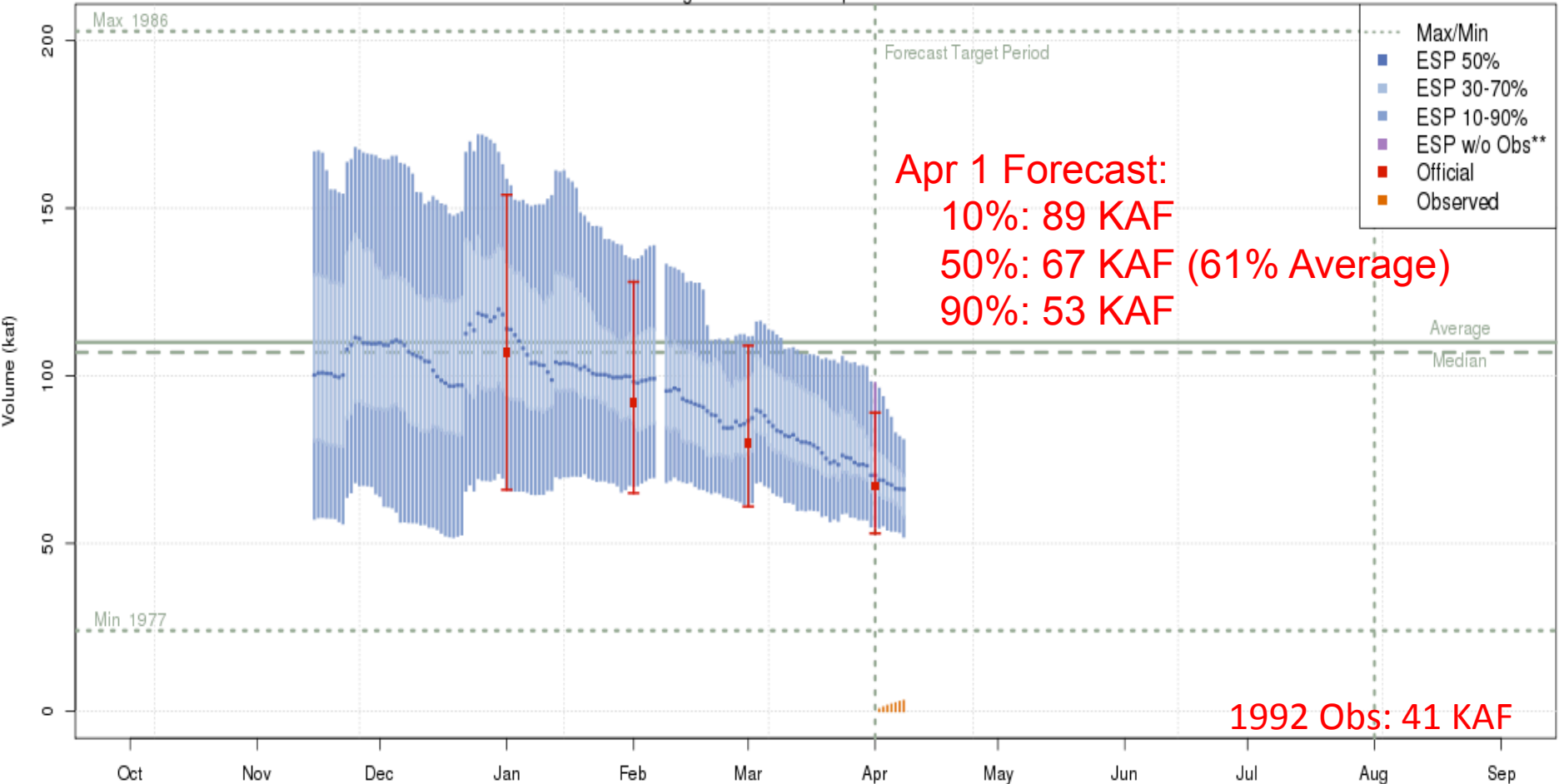
Forecasts decreased by ~20-30% by volume since March 1

Decreases a result of :

1. Dry, below normal precipitation
2. Runoff occurring in March

Forecasts: Provo nr Hailstone

Provo - Hailstone- Nr (PVHU1)
2015-04-01 Apr-Jul Official 50% Forecast: 67 kaf (61% of average)
ESP is Unregulated and No Precipitation Forecast Included

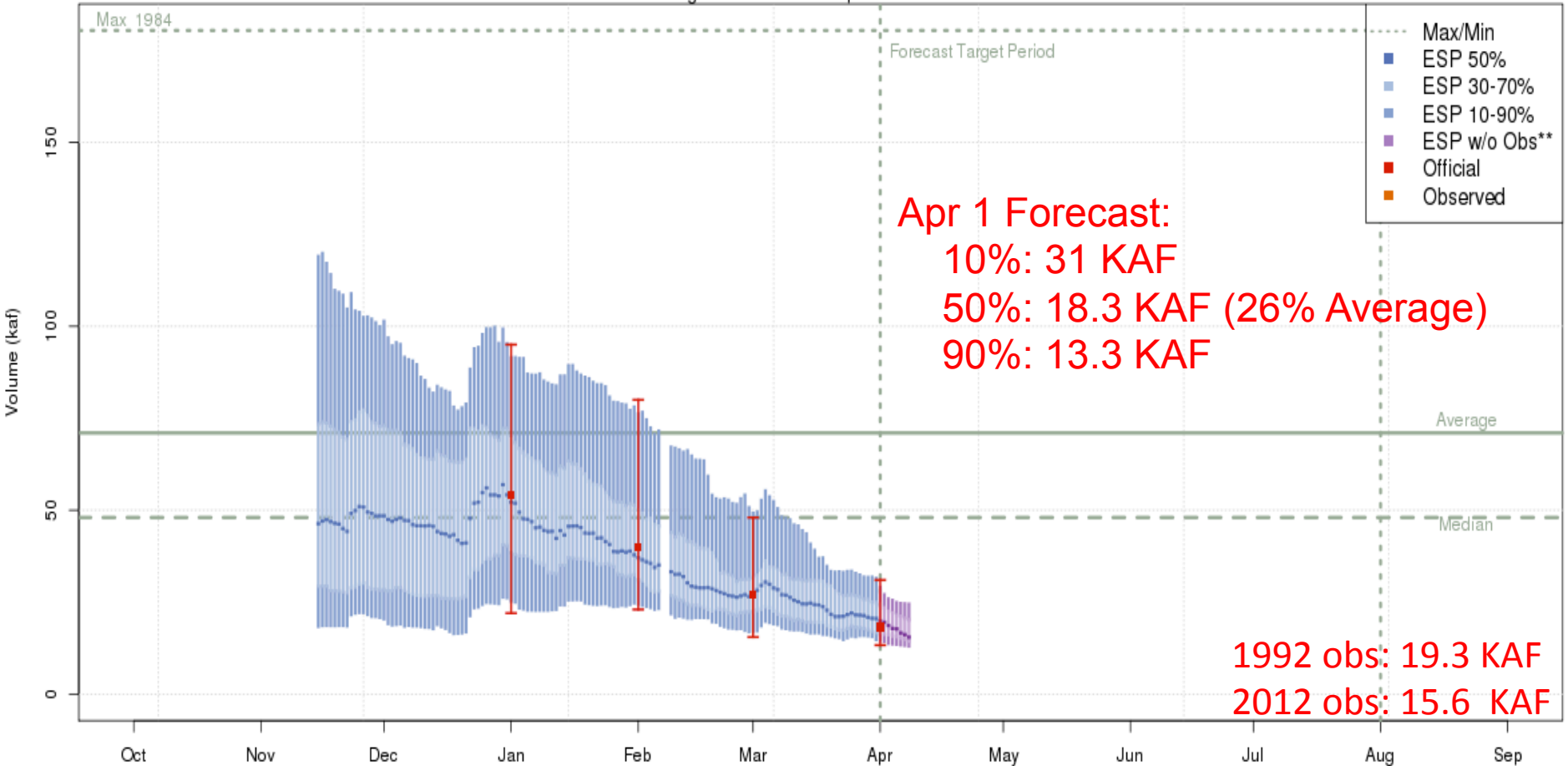


1992 Obs: 41 KAF

The latest (2015-04-08) 50% ESP forecast is 66 kaf.
Plot Created 2015-04-08 15:44:42, NOAA / NWS / CBRFC
Forecasts in the forecast target period include observed values.

Forecasts: Strawberry nr Solider Springs

Strawberry - Solider Springs-nr - Strawberry Res (STIU1)
2015-04-01 Apr-Jul Official 50% Forecast: 18.3 kaf (26% of average)
ESP is Unregulated and No Precipitation Forecast Included



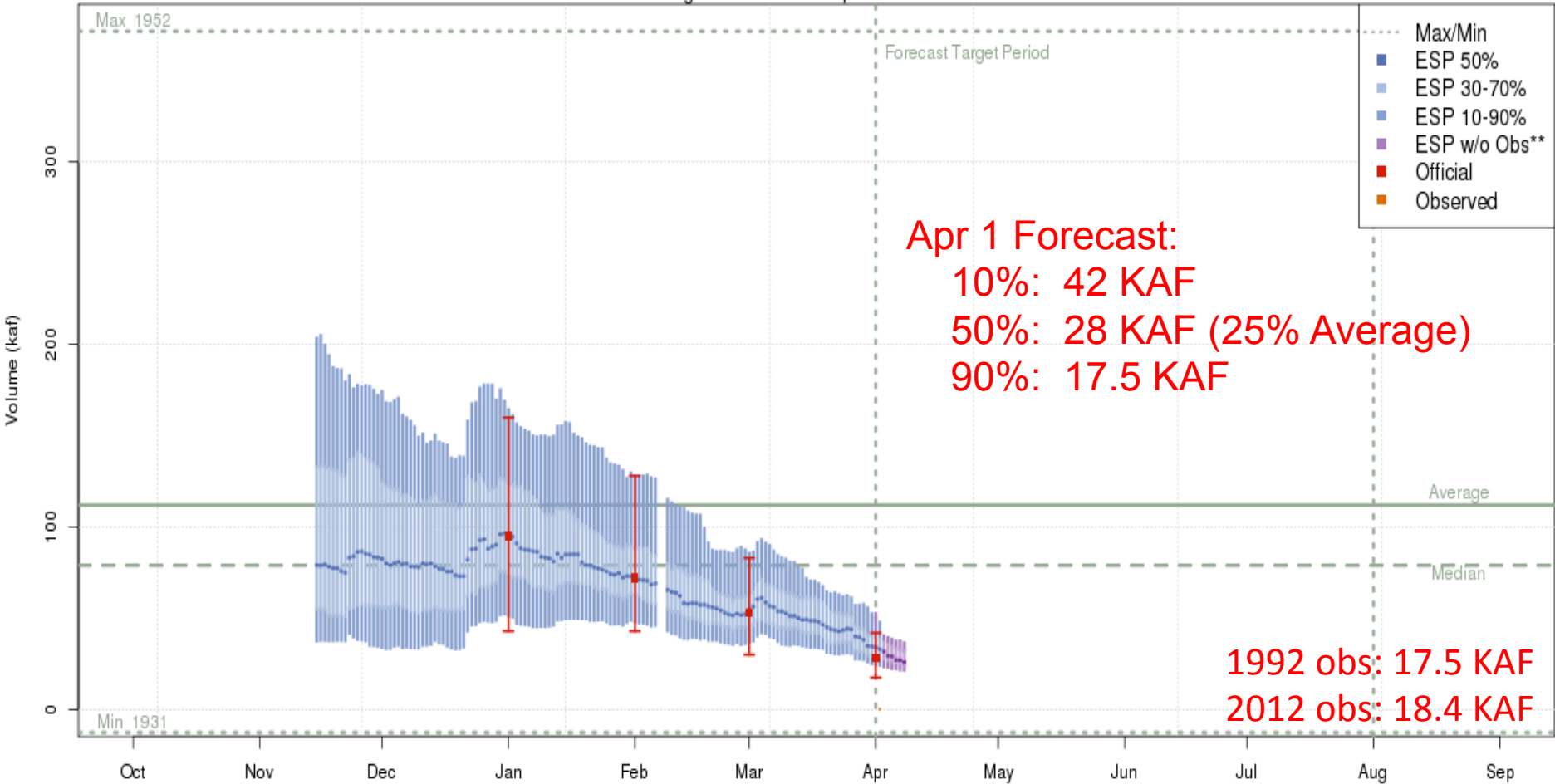
The latest (2015-03-31) 50% ESP forecast is 21 kaf.

Plot Created 2015-04-08 15:09:00, NOAA / NWS / CBRFC

**Purple ESP forecasts do not include observed and are not total runoff.

Forecasts: Starvation Reservoir

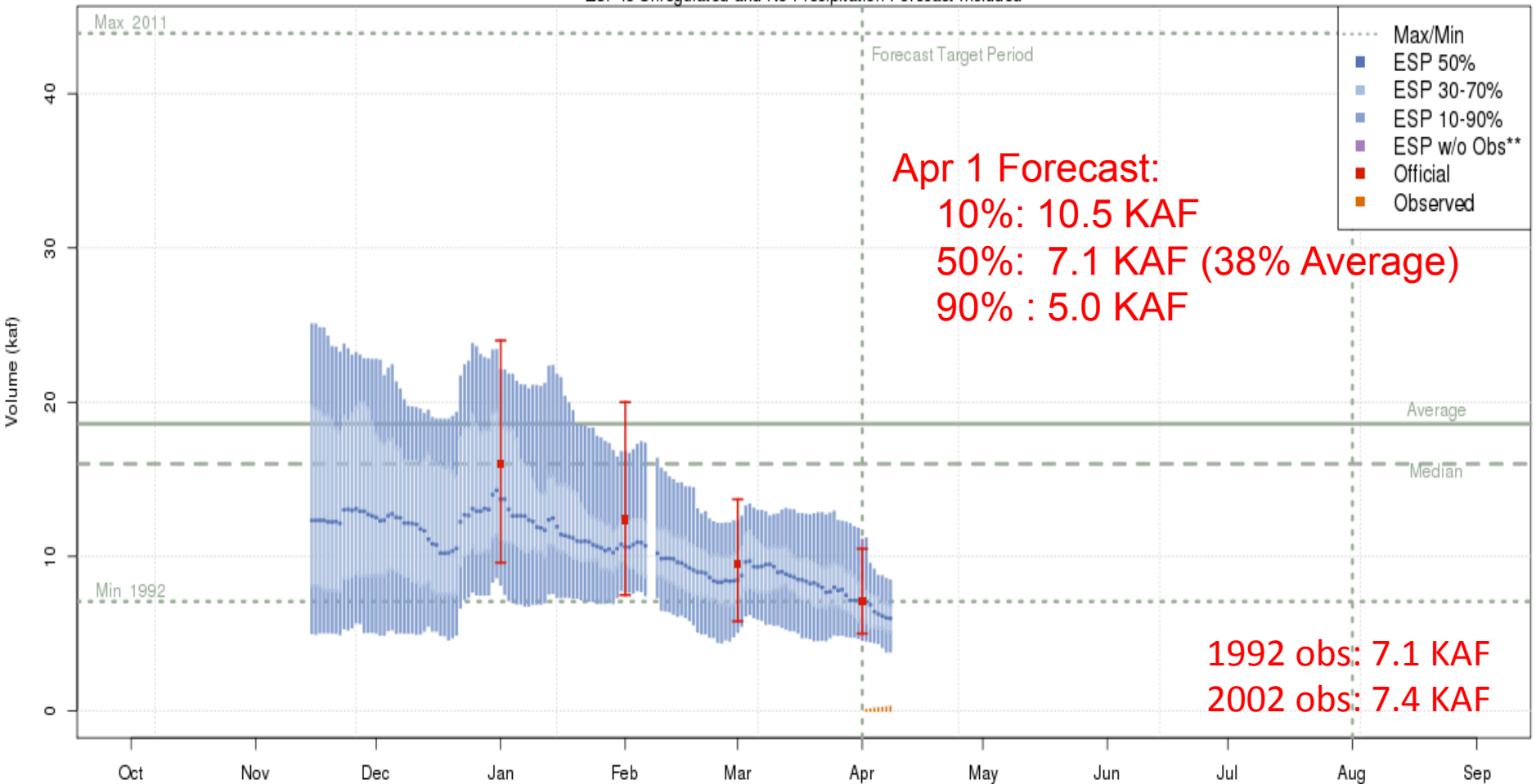
Strawberry - Starvation Res- Duchesne- Nr (STAU1)
 2015-04-01 Apr-Jul Official 50% Forecast: 28 kaf (25% of average)
 ESP is Unregulated and No Precipitation Forecast Included



The latest (2015-04-02) 50% ESP forecast is 33 kaf.
 Plot Created 2015-04-08 15:08:44, NOAA / NWS / CBRFC
 **Purple ESP forecasts do not include observed and are not total runoff.

Forecasts: West Fork below Vat

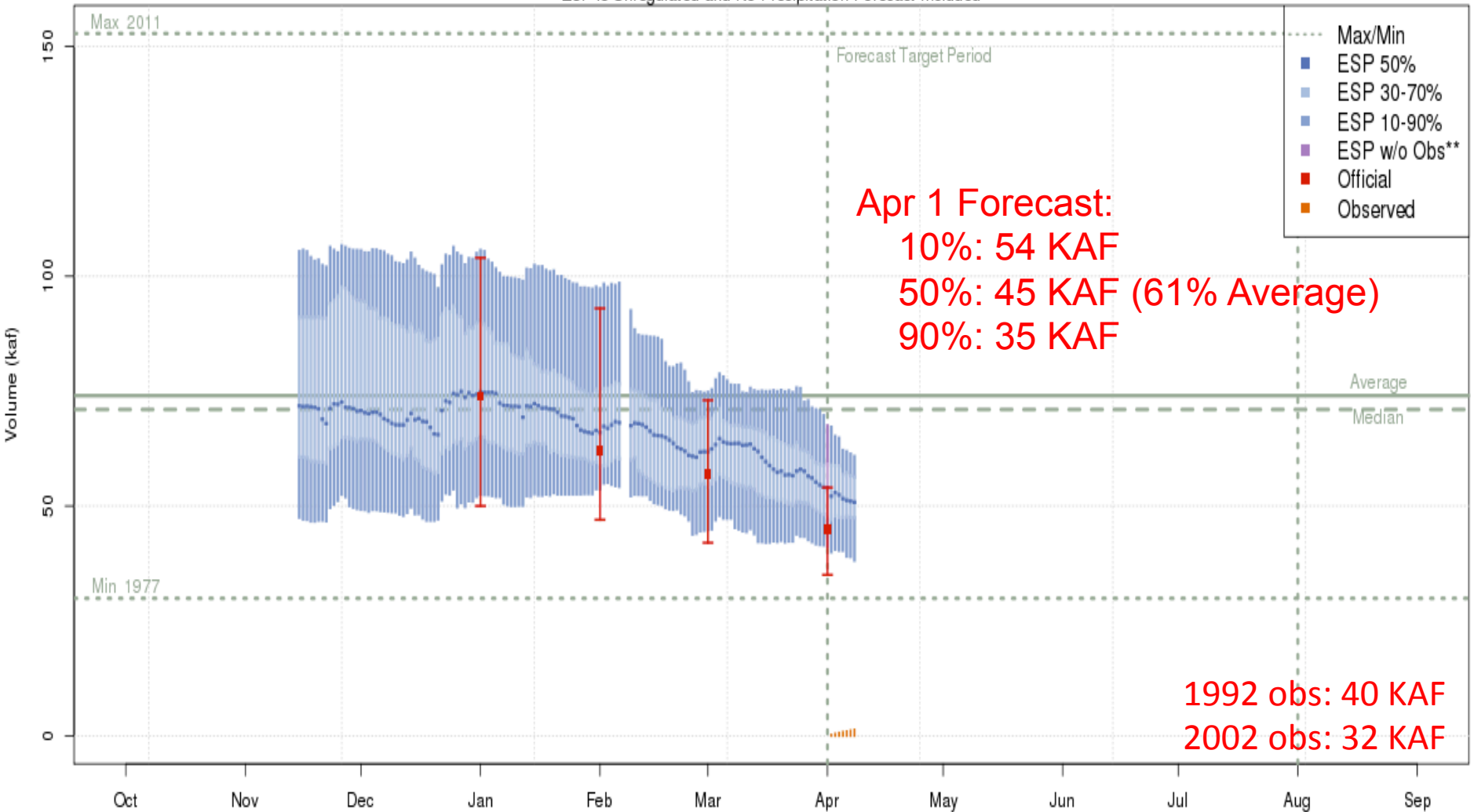
West Fork Duchesne - Vat Diversion- Blo (WFDU1)
2015-04-01 Apr-Jul Official 50% Forecast: 7.1 kaf (38% of average)
ESP is Unregulated and No Precipitation Forecast Included



The latest (2015-04-08) 50% ESP forecast is 6 kaf.
Plot Created 2015-04-08 15:09:48, NOAA / NWS / CBRFC
Forecasts in the forecast target period include observed values.

Forecasts: Upper Stillwater Reservoir

Rock Ck - Upper Stillwater Res (USTU1)
2015-04-01 Apr-Jul Official 50% Forecast: 45 kaf (61% of average)
ESP is Unregulated and No Precipitation Forecast Included



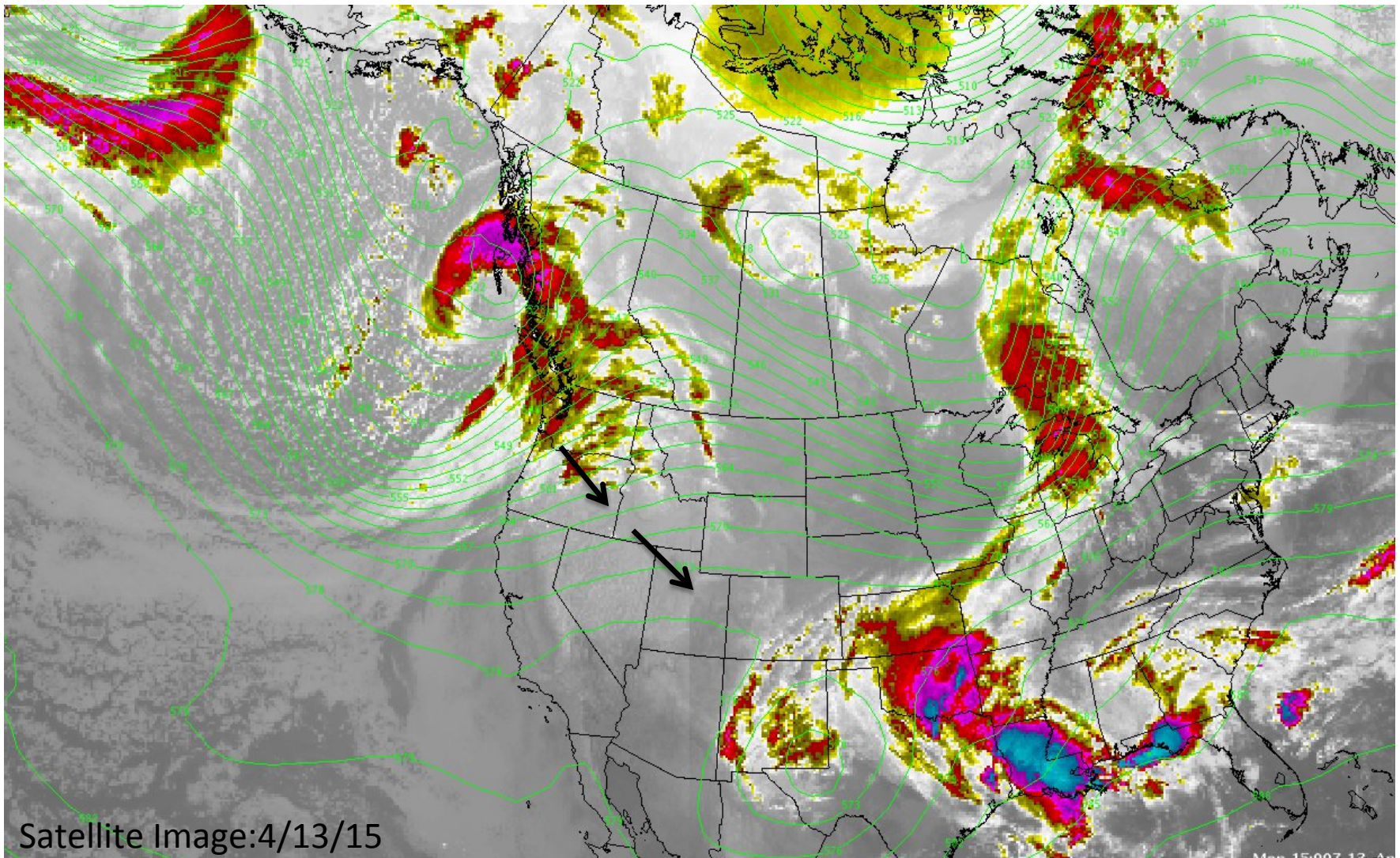
The latest (2015-04-08) 50% ESP forecast is 51 kaf.
Plot Created 2015-04-08 15:09:32, NOAA / NWS / CBRFC
Forecasts in the forecast target period include observed values.

Future Weather

Cold Strong Pacific Storm Tuesday-Wed

-Monday: Windy and Warm

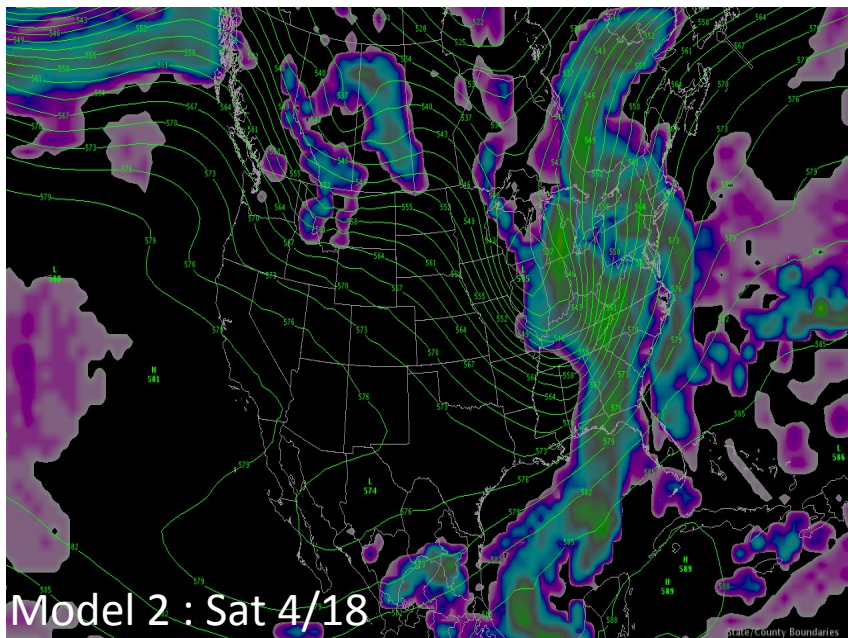
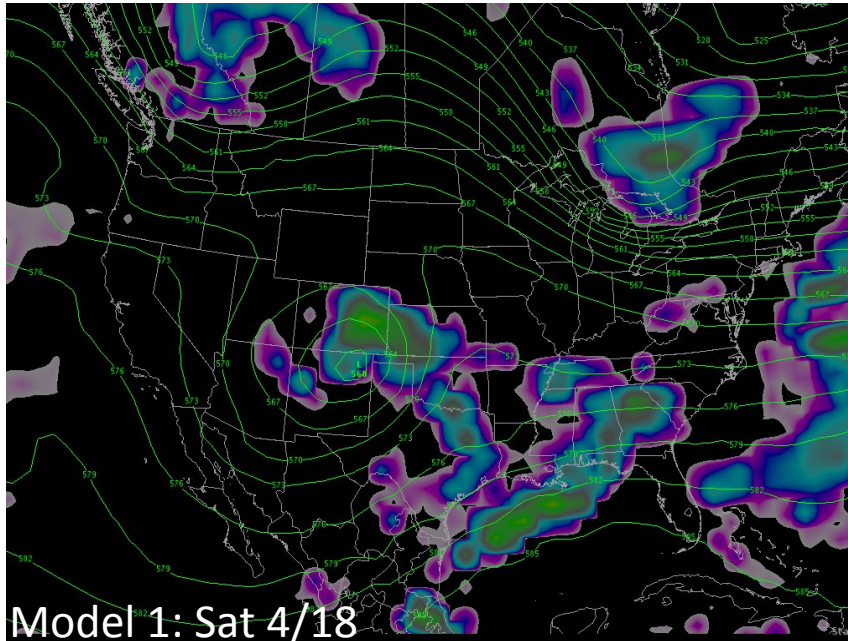
-Tue/Wed: Windy followed by cold and snow



Satellite Image:4/13/15

Map 15-007-13-Ap

Future Weather



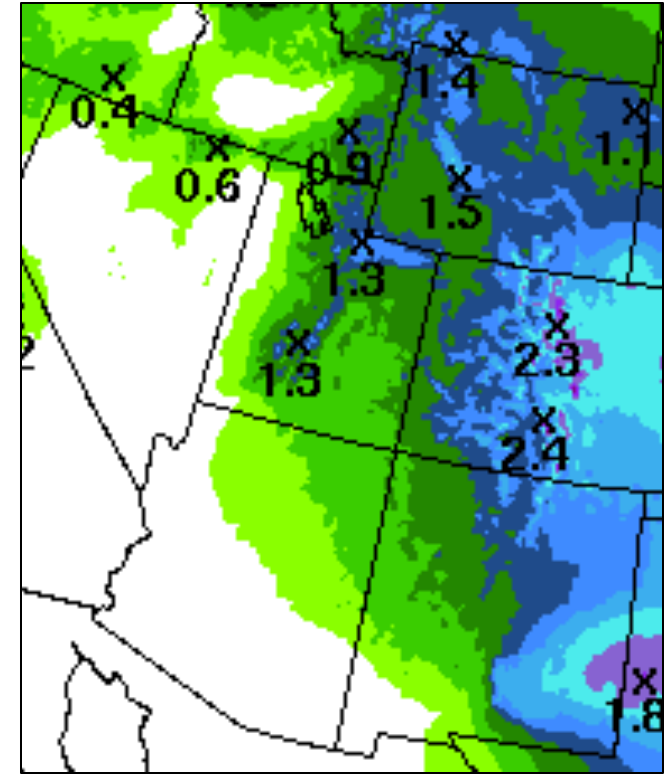
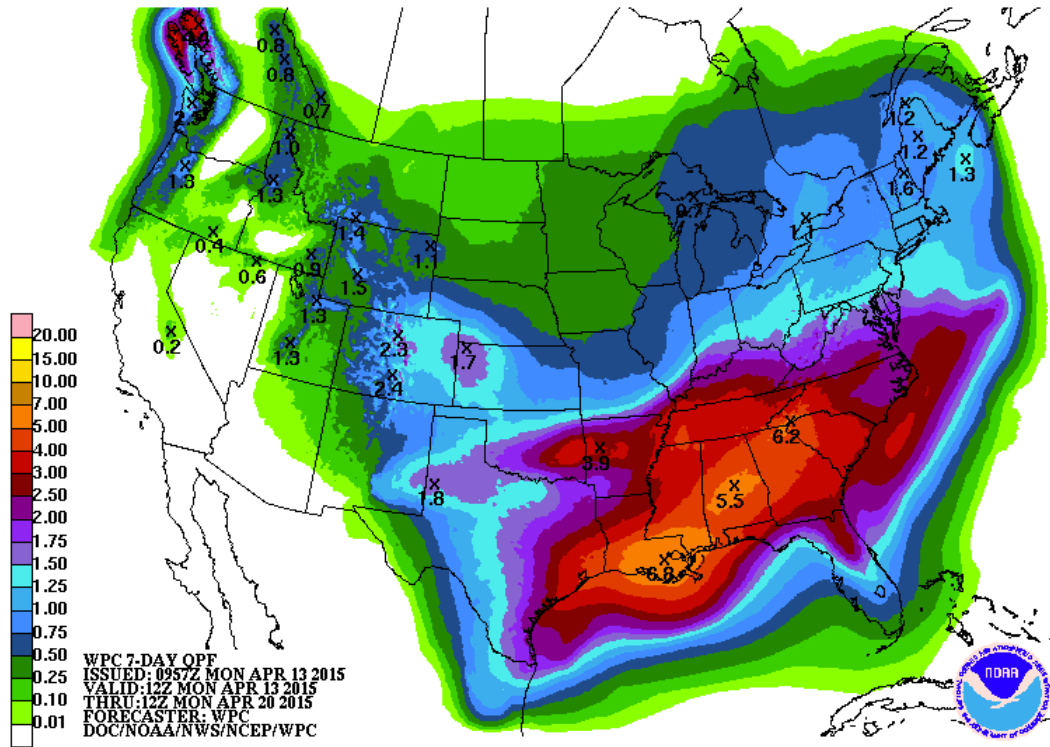
-Model Guidance is not consistent for the weekend

- Most likely will see dry and warming conditions through the weekend for northern Utah

Quantitative Precipitation Forecast

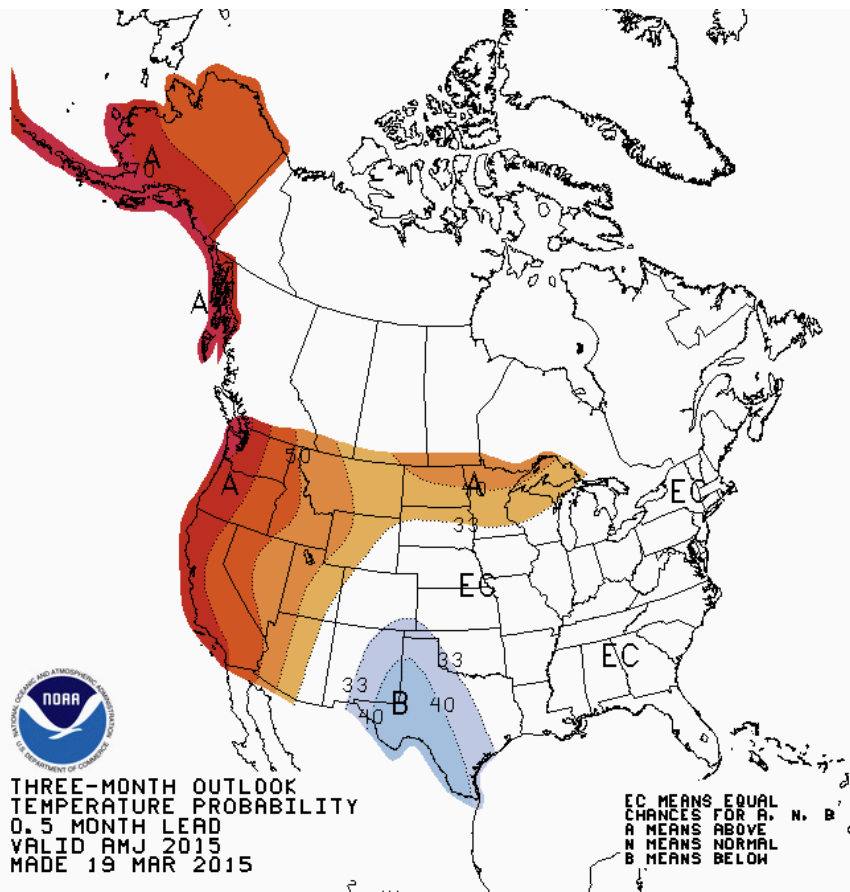
Weather Prediction Center (WPC)

7 Day Total April 13-20

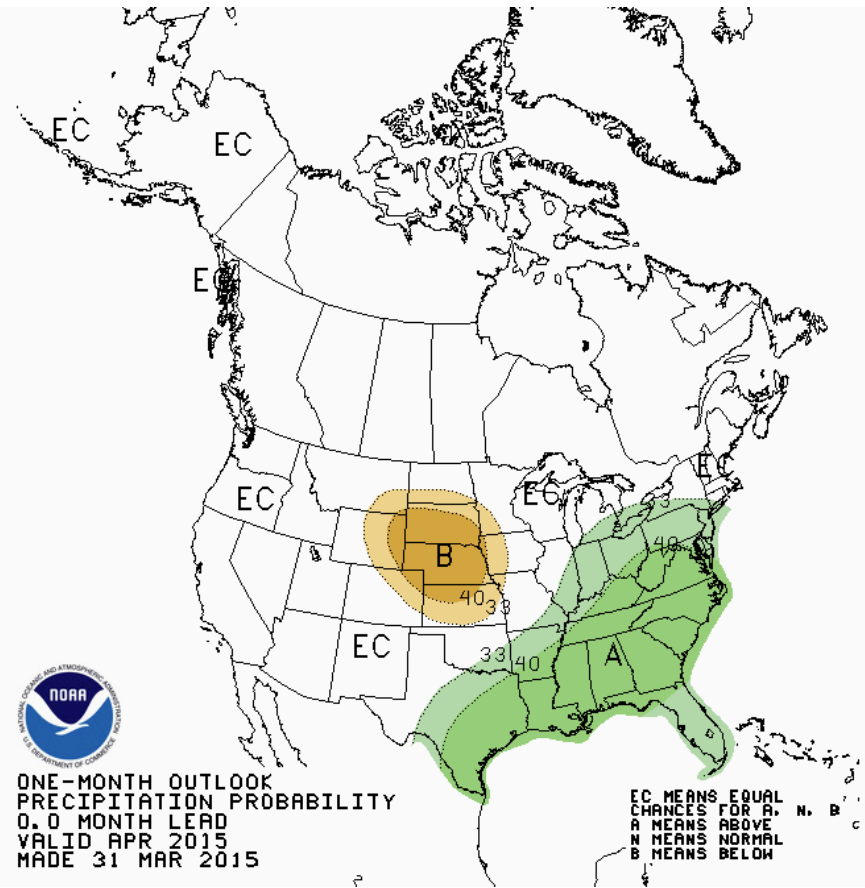


Long Range Weather

April Outlook



Temperature



Precipitation



April Summary



Snow

- Below normal conditions
- Record low snow in several locations
- Limited low and mid elevation snow left

Forecasts: Volume and Peaks

- Below average volume and peak forecasts
- Near record low volumes at some locations
- Decreases in volume forecasts since Mar 1
- Much below average peaks

Weather

- Strong cold storm Tue-Wed with snow, wind and cold temps
- Warming and drying for the weekend



Discussion

Forecast discussion

Operations discussion

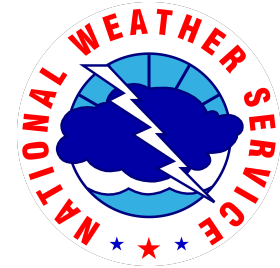
Data Questions:

- Strawberry Tunnel/Sixth Water Aqueduct
- Knights bypass

Contact or Socialize with us!



Ashley Nielson
CBRFC Senior Hydrologist
Phone: 801.524.5130 ext 333
Email: ashley.nielson@noaa.gov



@nwscbrfc



facebook.com/nwscbrfc