

CBRFC
February 2015
CUWCD Briefing/Meeting

1pm February 11, 2015

Ashley Nielson



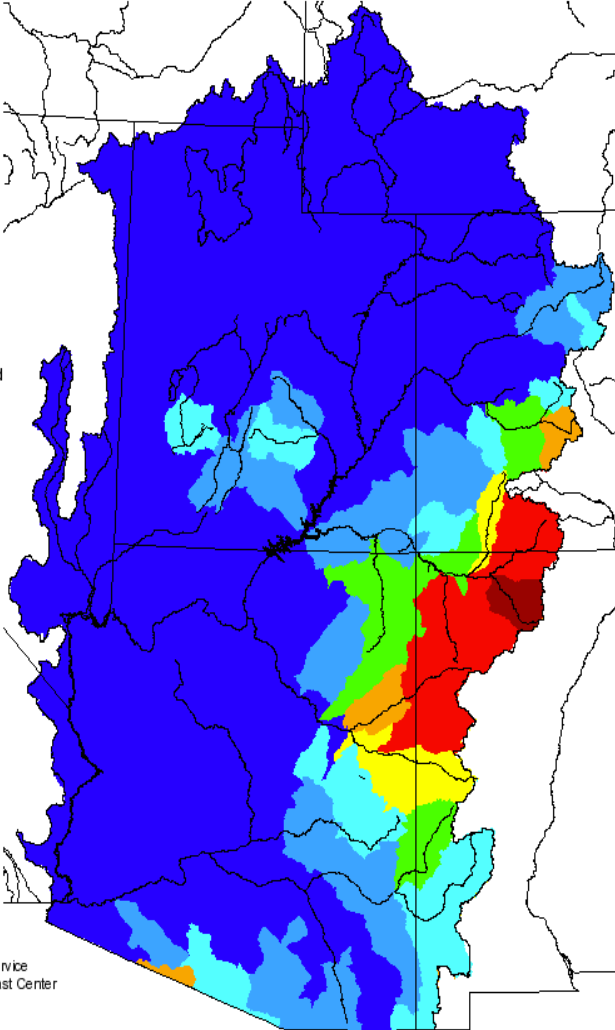
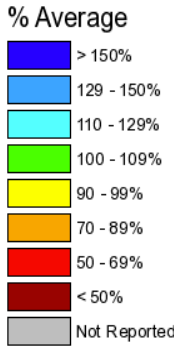
February Call Outline

- Fall/Winter Weather
- Current conditions driving forecasts
 - Soil Moisture, Snow Conditions
- Water Supply Forecasts
- Upcoming weather (short and long range)
- Website Updates

Late Summer/ Fall Precipitation

Monthly Precipitation for August 2014

(Averaged by Hydrologic Unit)

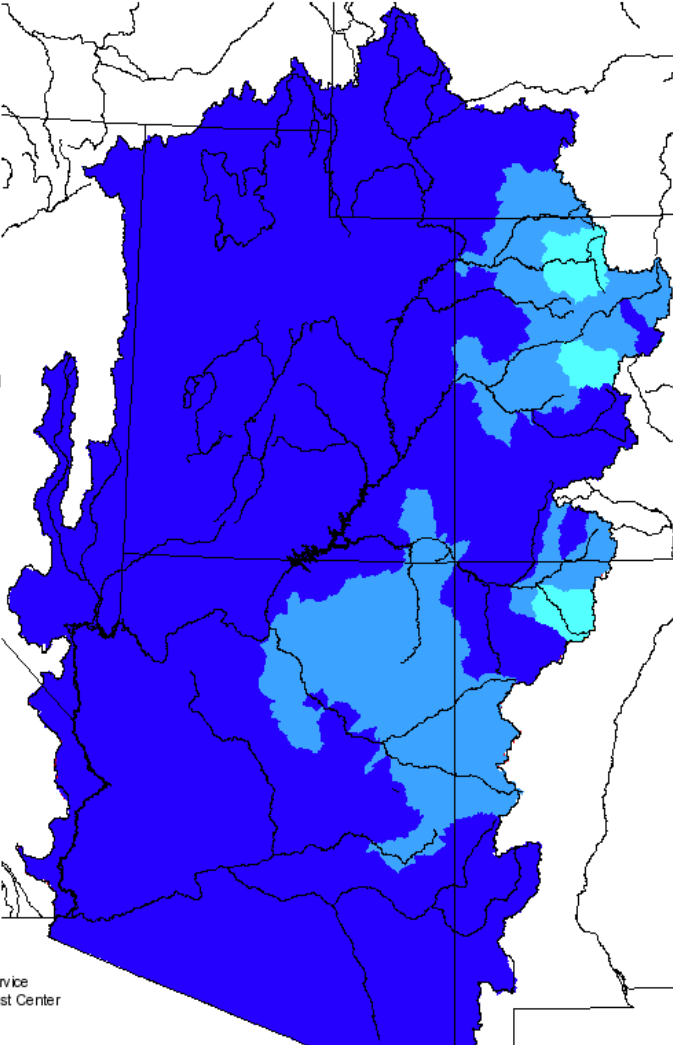
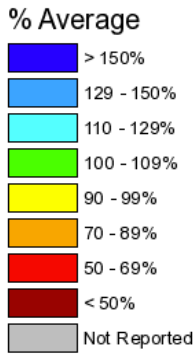


Prepared by
 NOAA, National Weather Service
 Colorado Basin River Forecast Center
 Salt Lake City, Utah
 www.cbafc.noaa.gov

Duchesne: 240%
 Provo: 270%

Monthly Precipitation for September 2014

(Averaged by Hydrologic Unit)



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Duchesne: 220%
 Provo: 210%

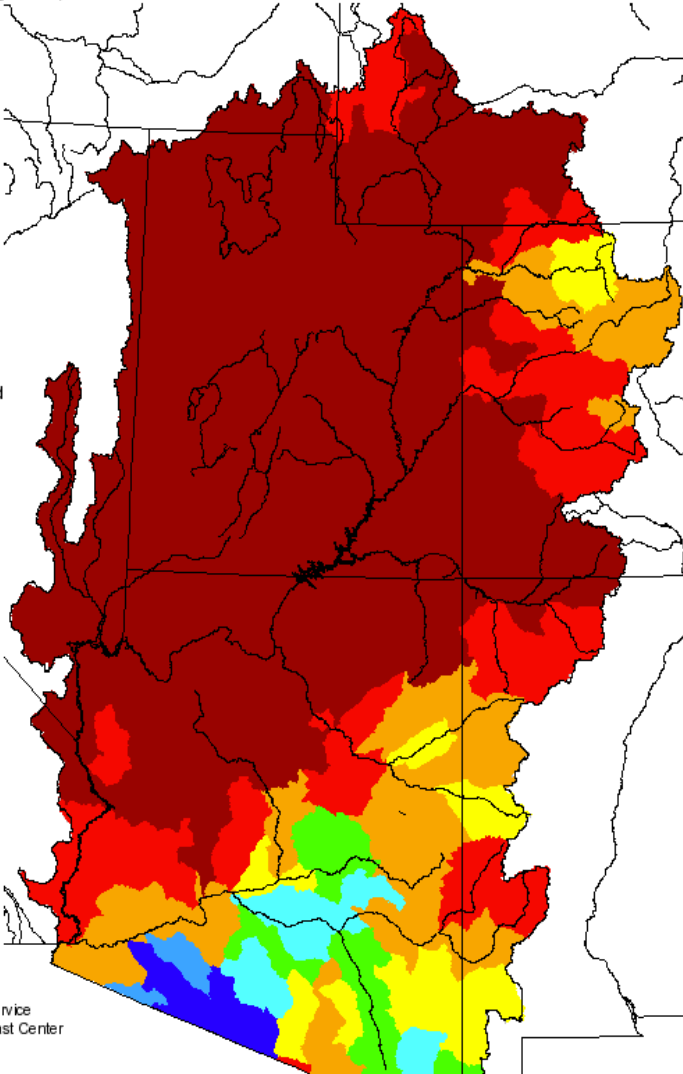
Fall Precipitation

Monthly Precipitation for October 2014

(Averaged by Hydrologic Unit)

% Average

- > 150%
- 129 - 150%
- 110 - 129%
- 100 - 109%
- 90 - 99%
- 70 - 89%
- 50 - 69%
- < 50%
- Not Reported



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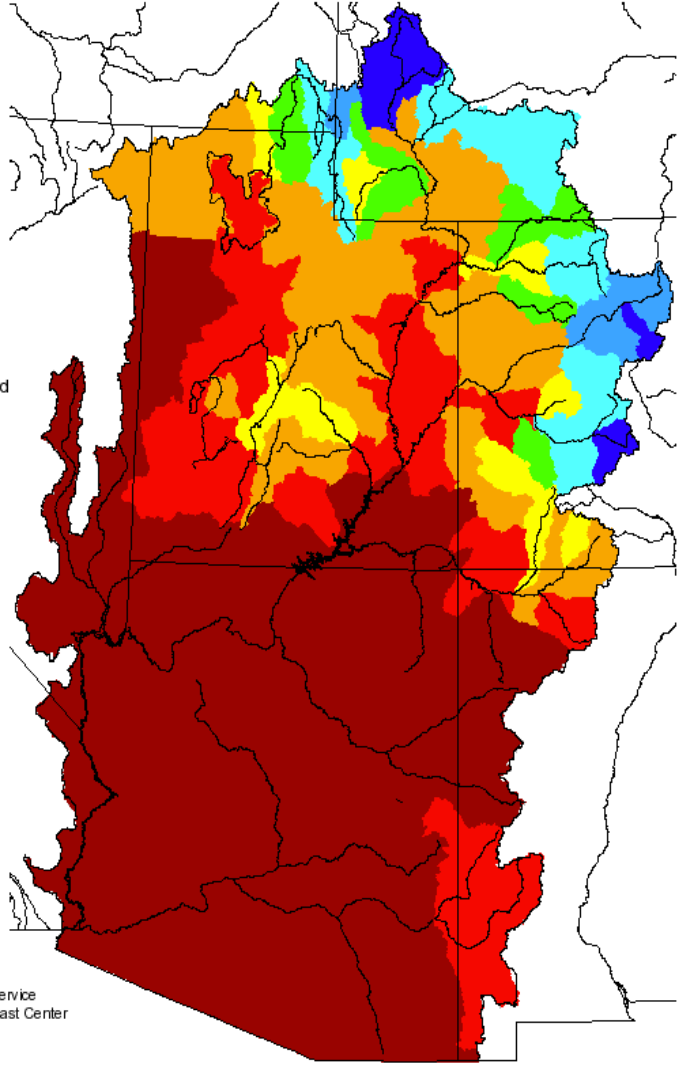
Duchesne: 18%
Provo: 20%

Monthly Precipitation for November 2014

(Averaged by Hydrologic Unit)

% Average

- > 150%
- 129 - 150%
- 110 - 129%
- 100 - 109%
- 90 - 99%
- 70 - 89%
- 50 - 69%
- < 50%
- Not Reported



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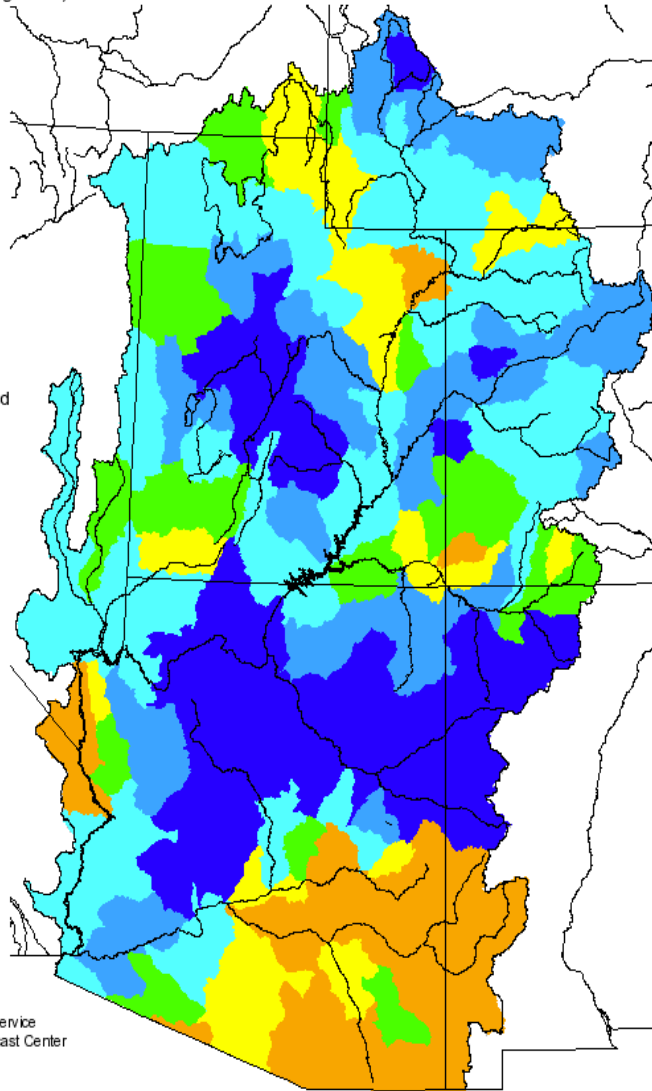
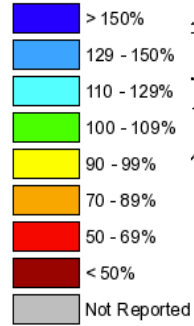
Duchesne: 86%
Provo: 82%

Winter Precipitation

Monthly Precipitation for December 2014

(Averaged by Hydrologic Unit)

% Average



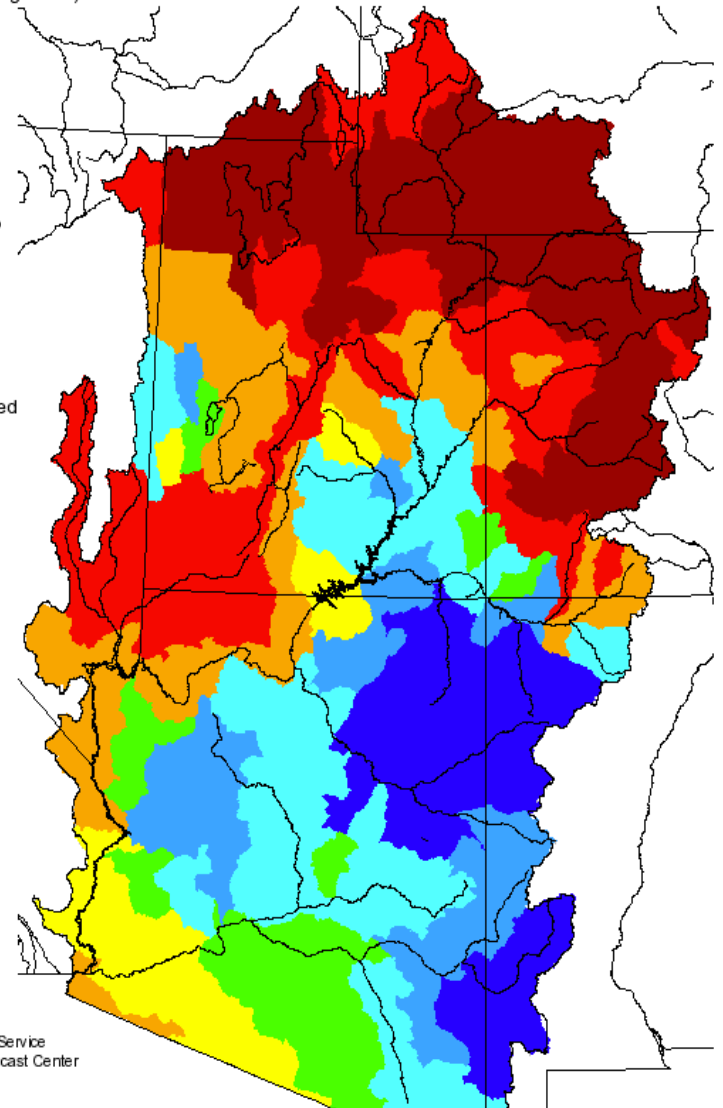
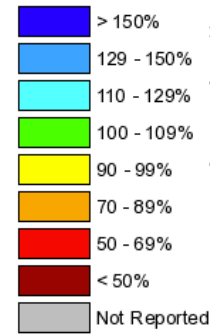
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Duchesne: 105%
Provo: 120%

Monthly Precipitation for January 2015

(Averaged by Hydrologic Unit)

% Average



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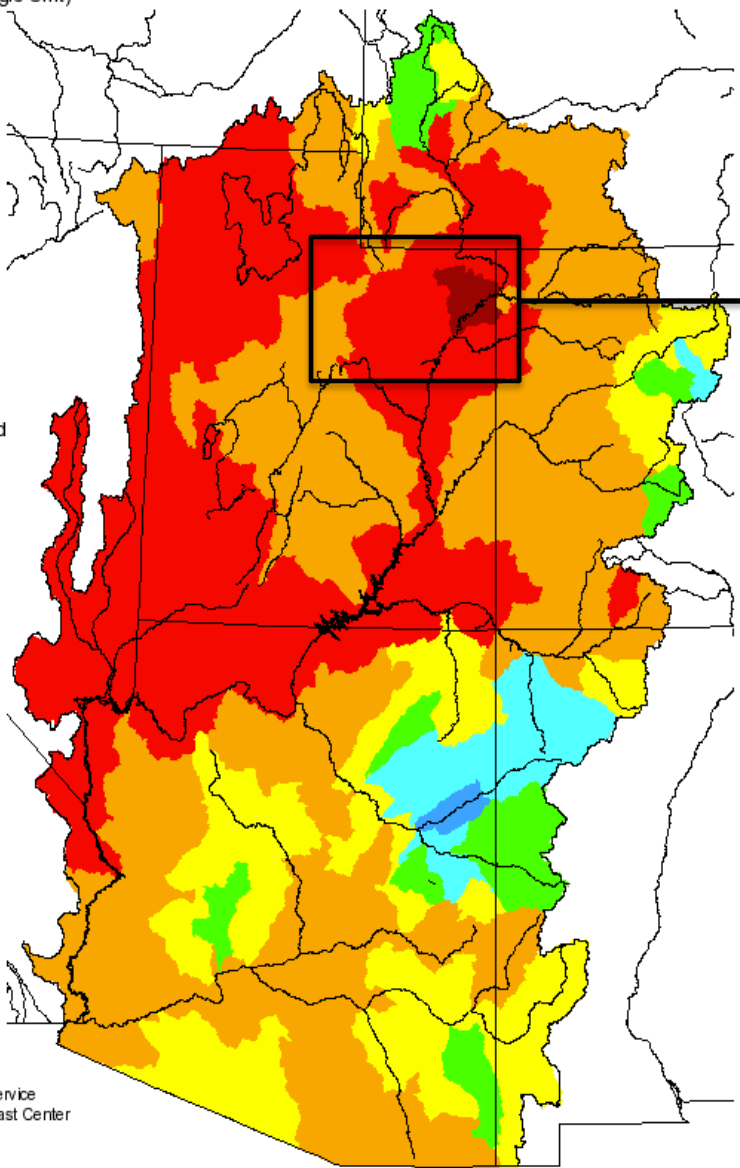
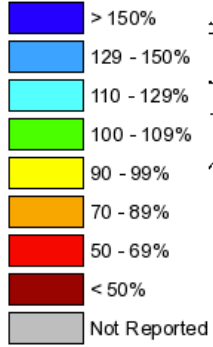
Duchesne: 45%
Provo: 50%

Seasonal Precipitation

Seasonal Precipitation, October 2014 - January 2015

(Averaged by Hydrologic Unit)

% Average

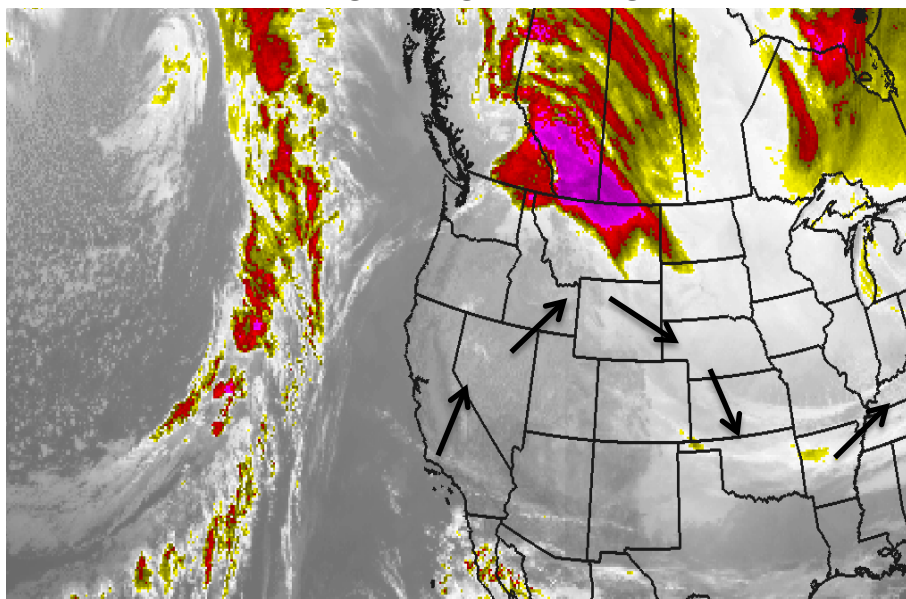


Duchesne: 64%
Provo: 70%

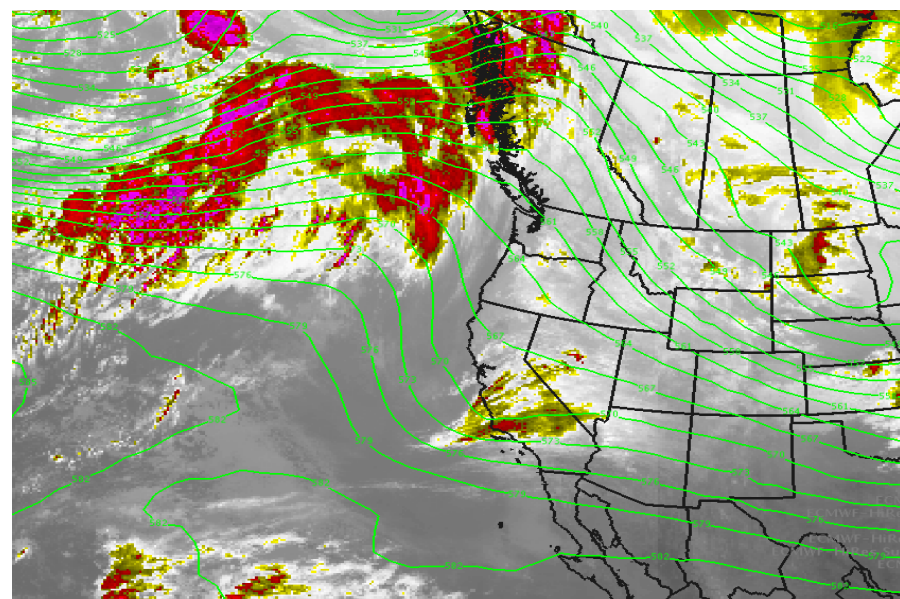
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January Weather

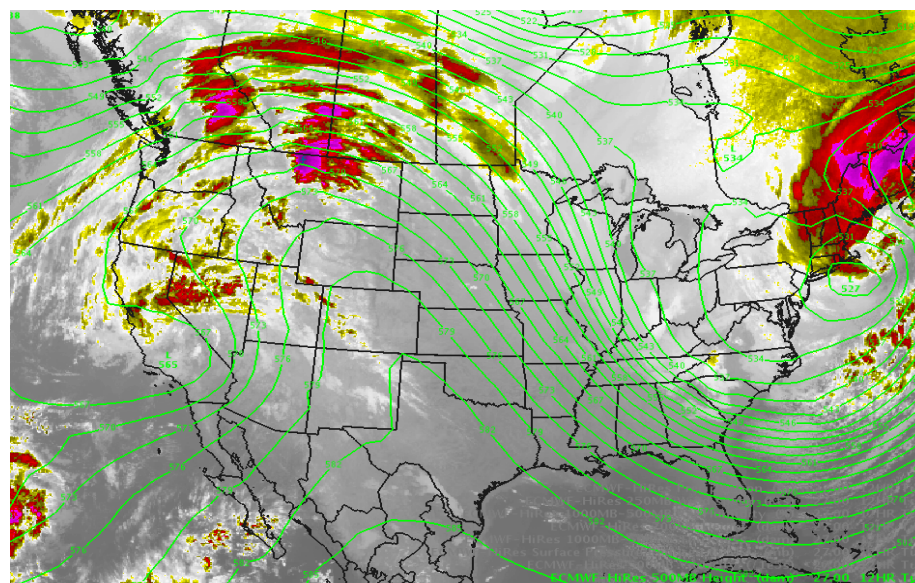
Jan 7 2015 – Big Ridge of High Pressure



Jan 20 2015 – Ridge Flattens – Weak Storm



Jan 27 2015 – Tropical Moisture South

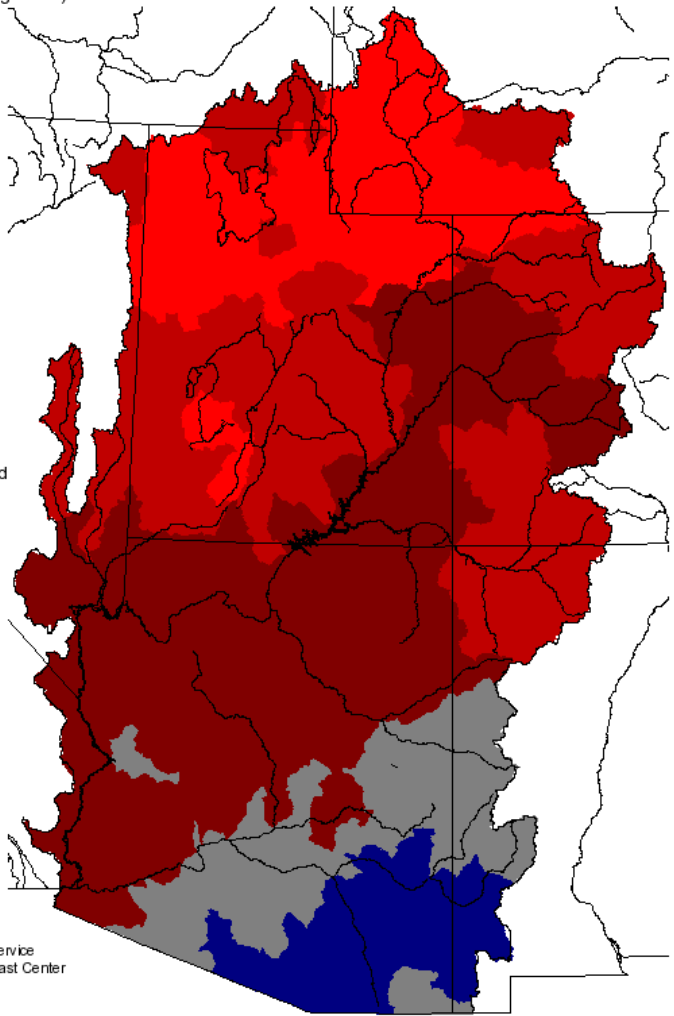
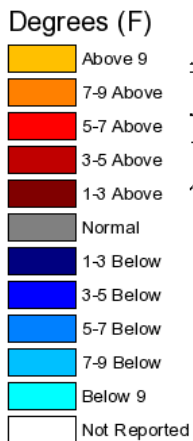


January Temperatures

* several daily temperature records established *

Monthly Max Temp Deviation for January 2015

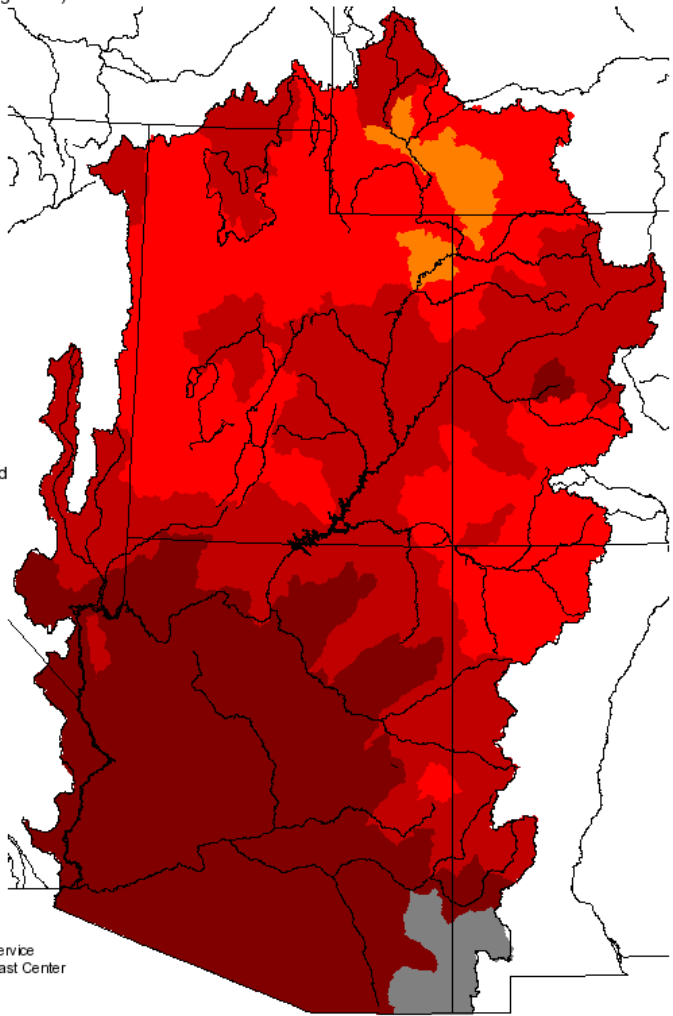
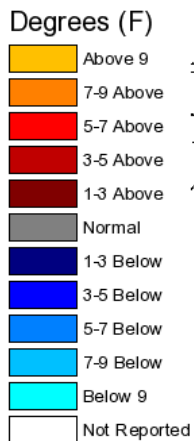
(Averaged by Hydrologic Unit)



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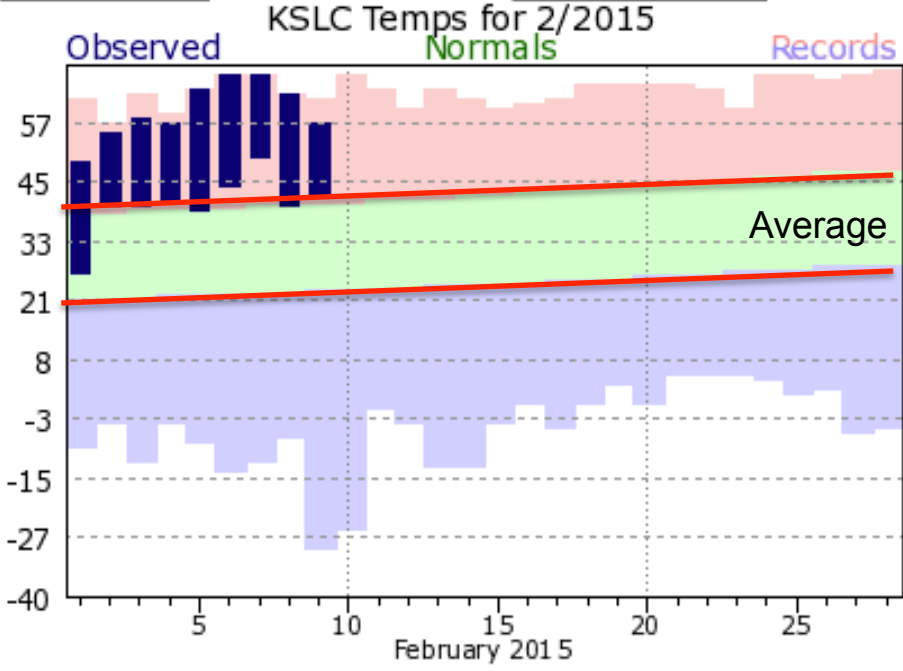
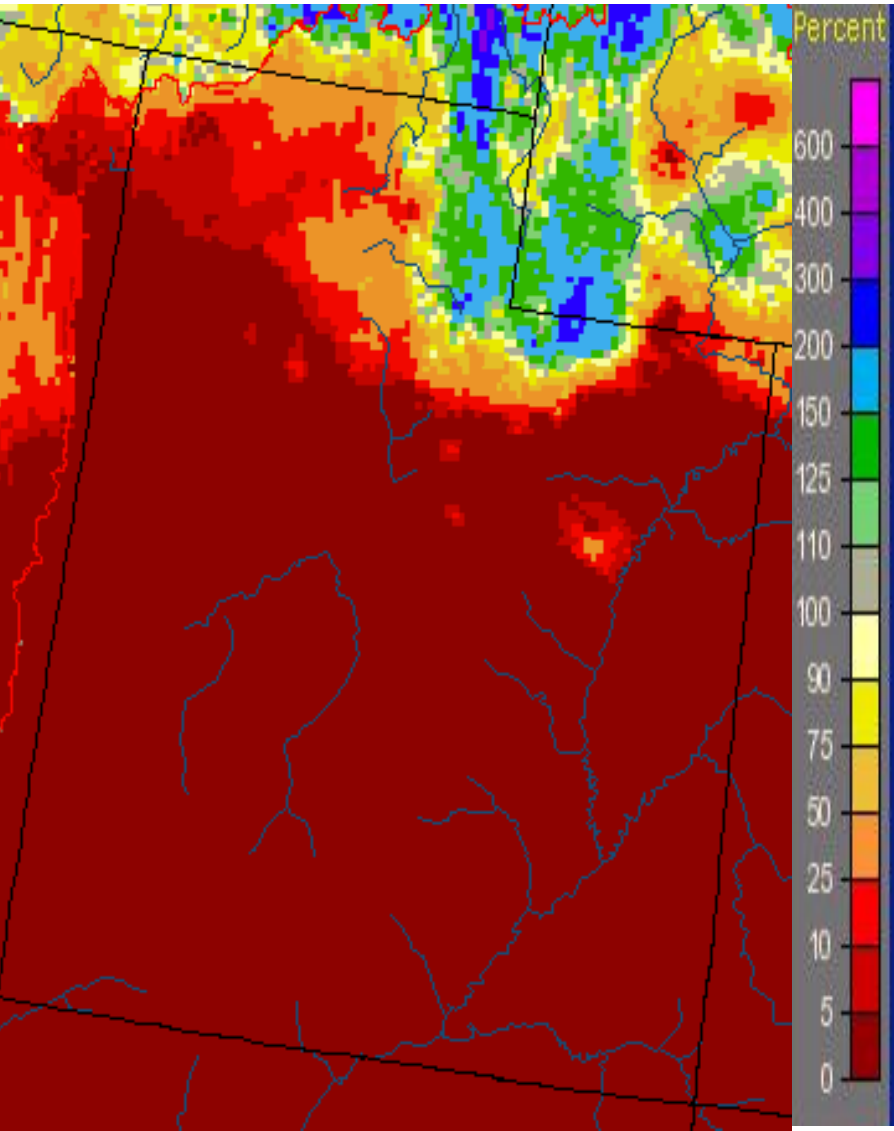
Monthly Min Temp Deviation for January 2015

(Averaged by Hydrologic Unit)



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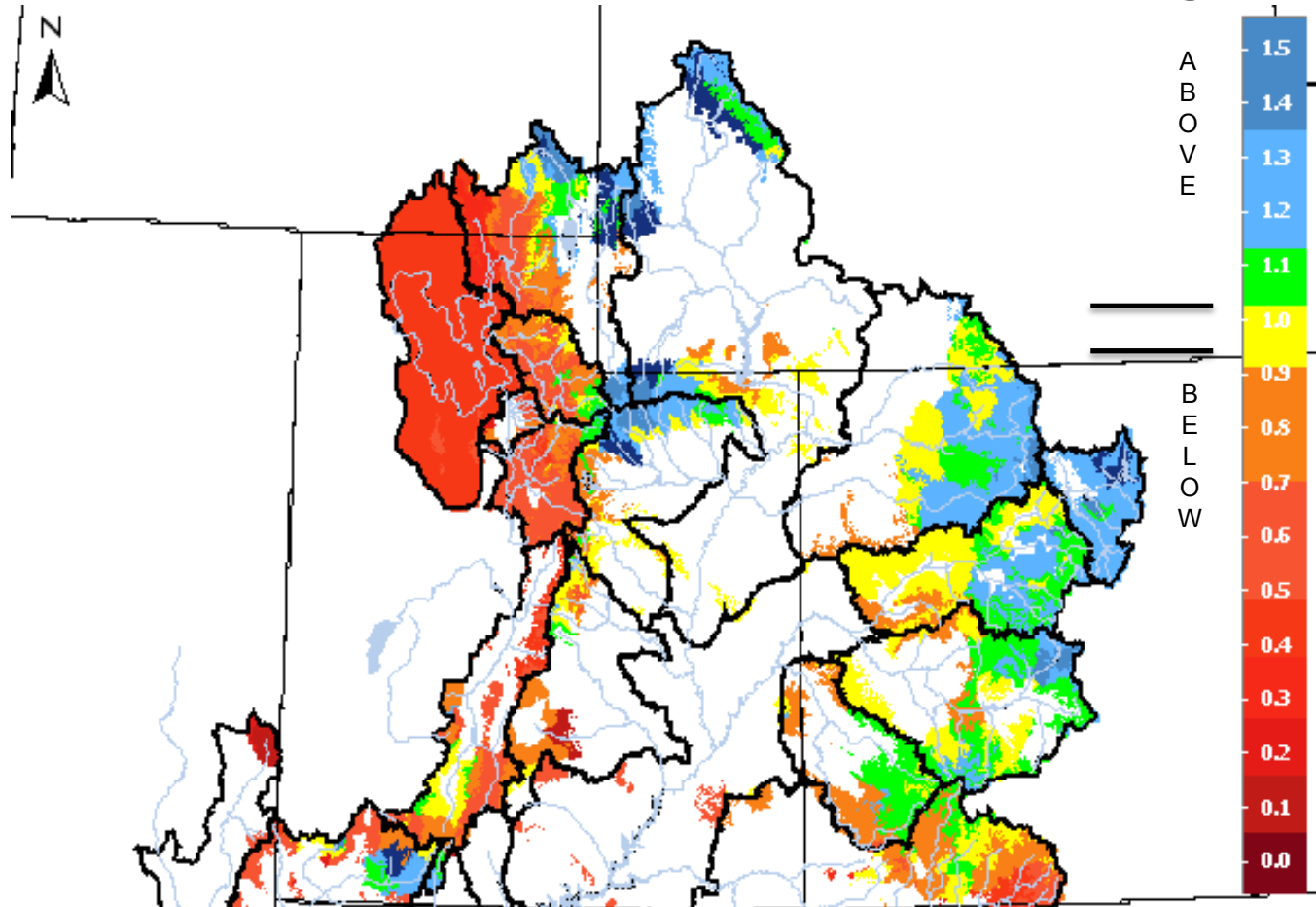
February Precipitation/Temperature



SLC February Min/Max Temperatures

Last 7 days % of Normal Precipitation

Forecast Drivers: Soil Moisture Entering Winter



How will this affect water supply forecasts?

Positive (+):

Green above Fontenelle

Upper Colorado/Yampa/Gunnison

Uinta Range (Bear, Provo, Duchesne)

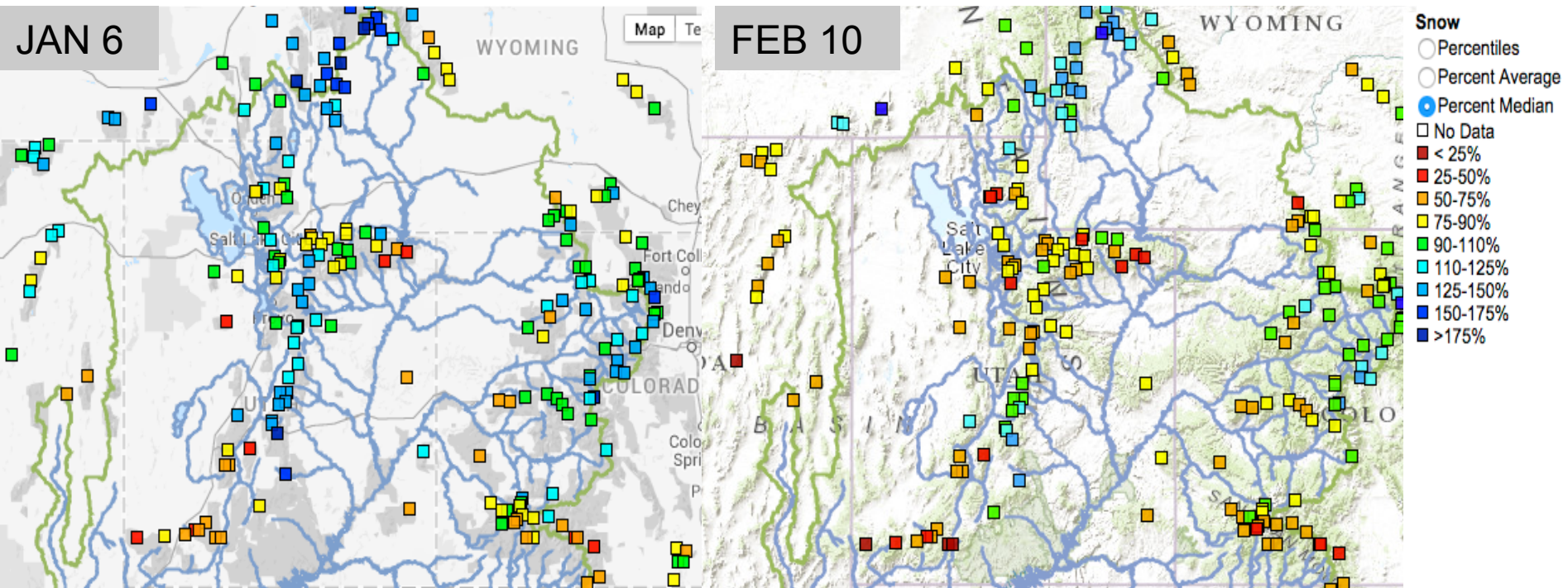
Negative (-):

Northern Great Basin (Weber, Provo)

Sevier/Virgin

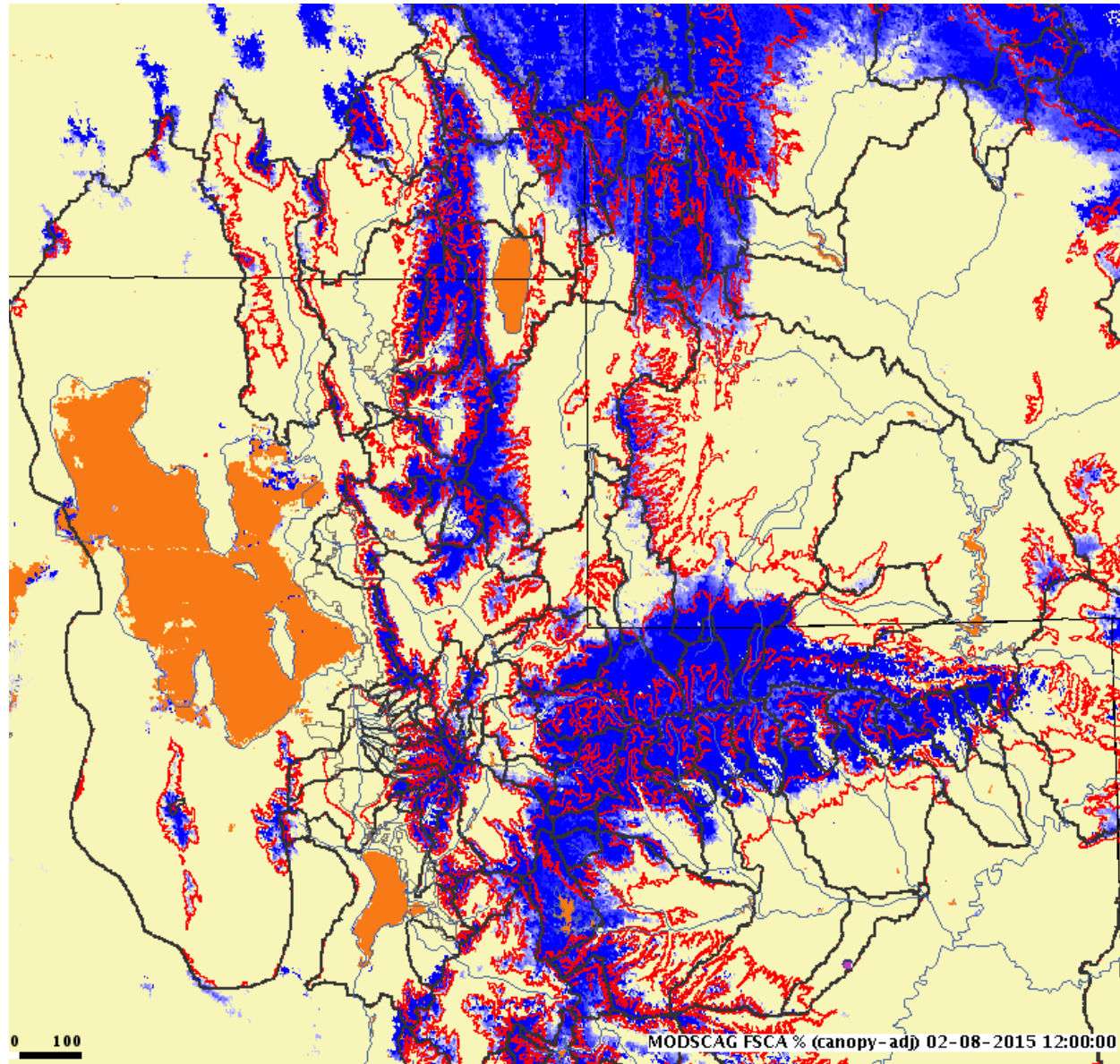
San Juan

Forecast Drivers: Snow Conditions



Forecast Drivers: Snow Conditions

Satellite Derived Snow Grid-2/9

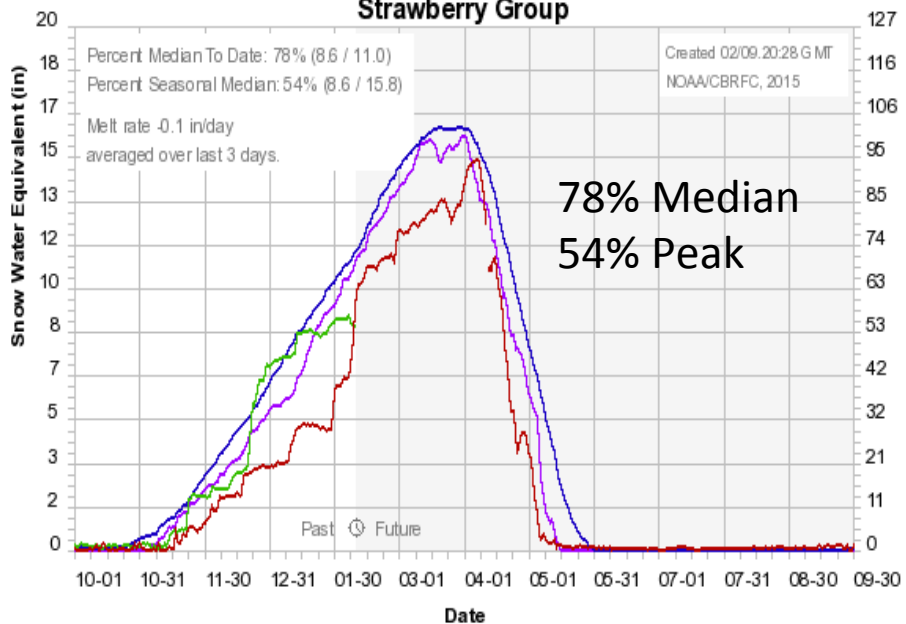


Yellow=Snow Free
Blue=Snow Covered

Limited low elevation snow

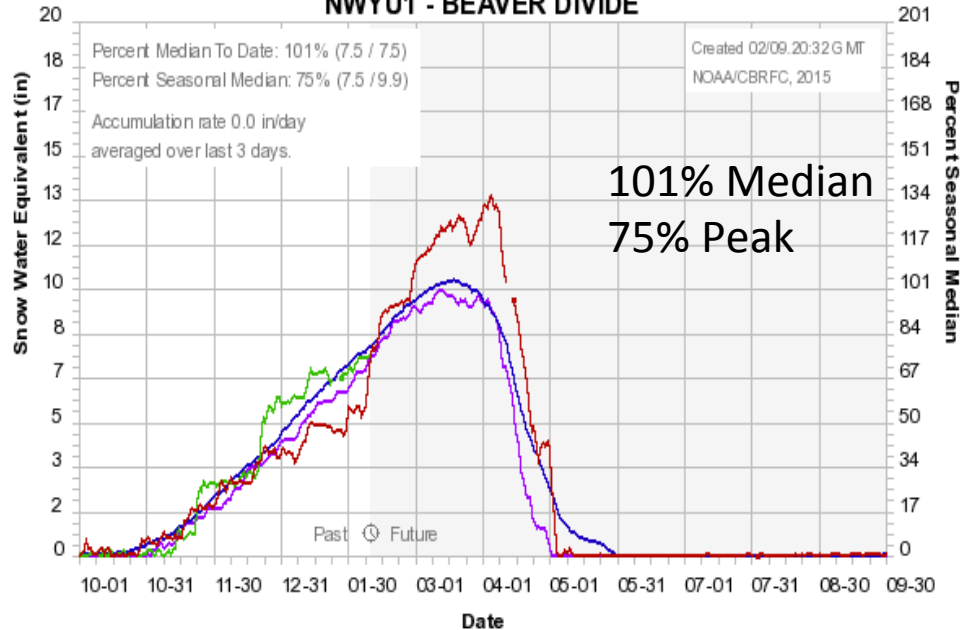
Colorado Basin River Forecast Center

Strawberry Group



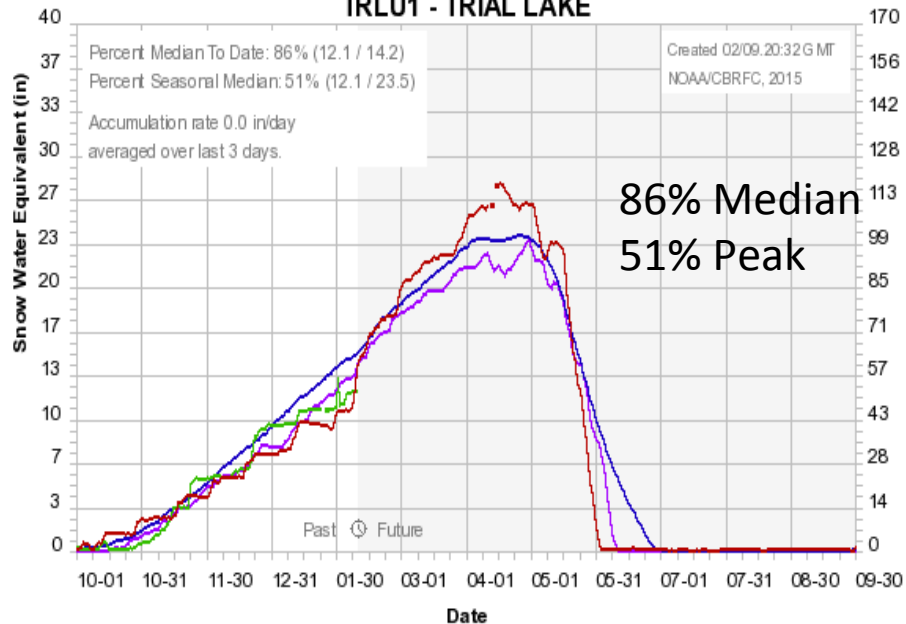
Colorado Basin River Forecast Center

NWYU1 - BEAVER DIVIDE



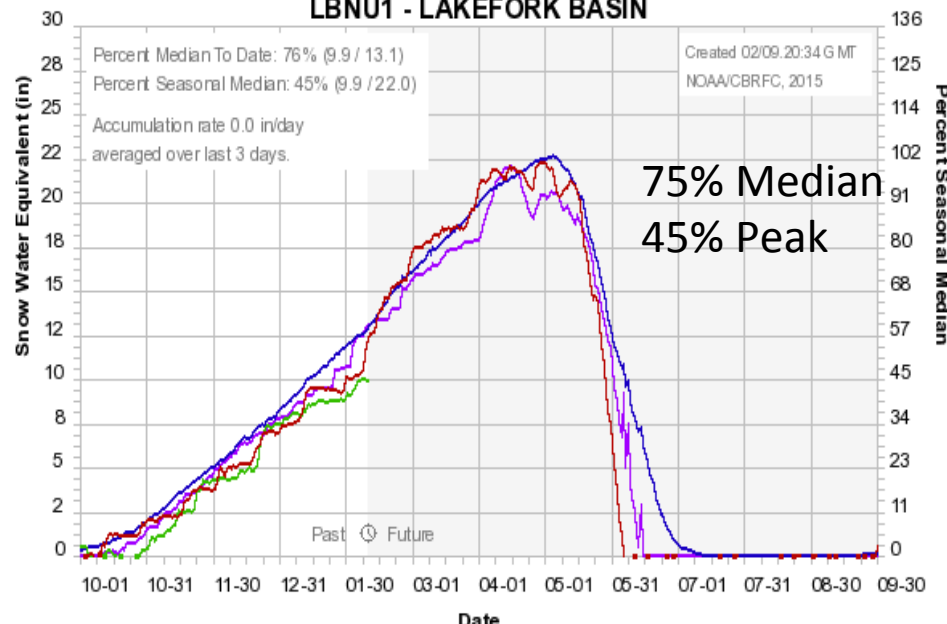
Colorado Basin River Forecast Center

TRLU1 - TRIAL LAKE

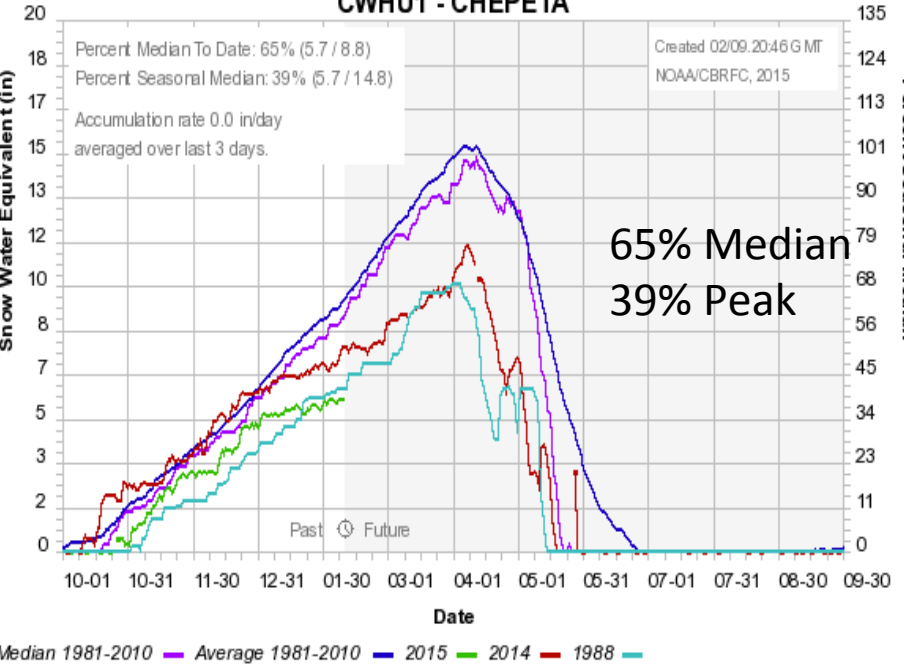


Colorado Basin River Forecast Center

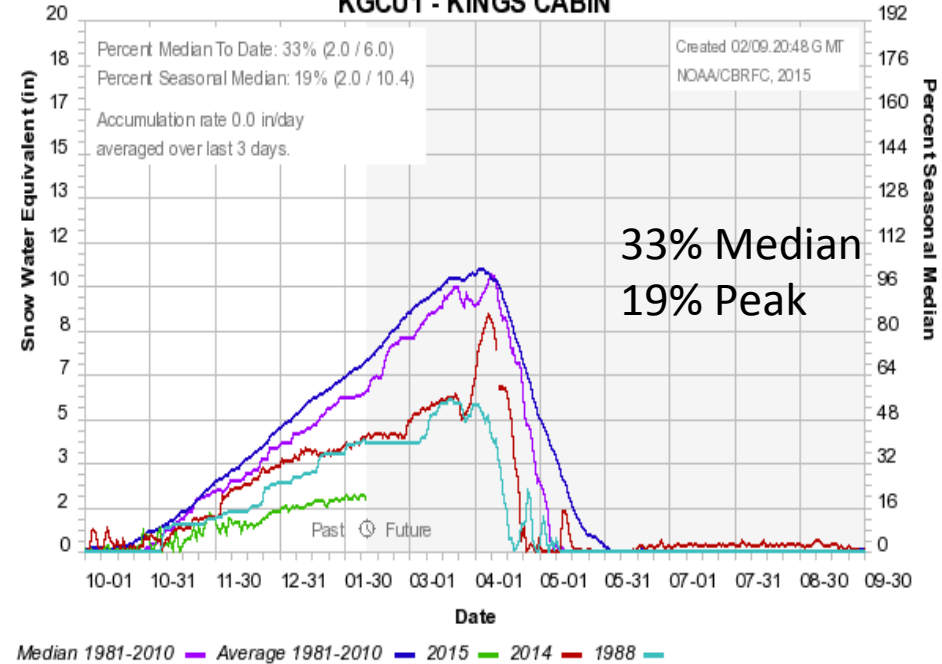
LBNU1 - LAKEFORK BASIN



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



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

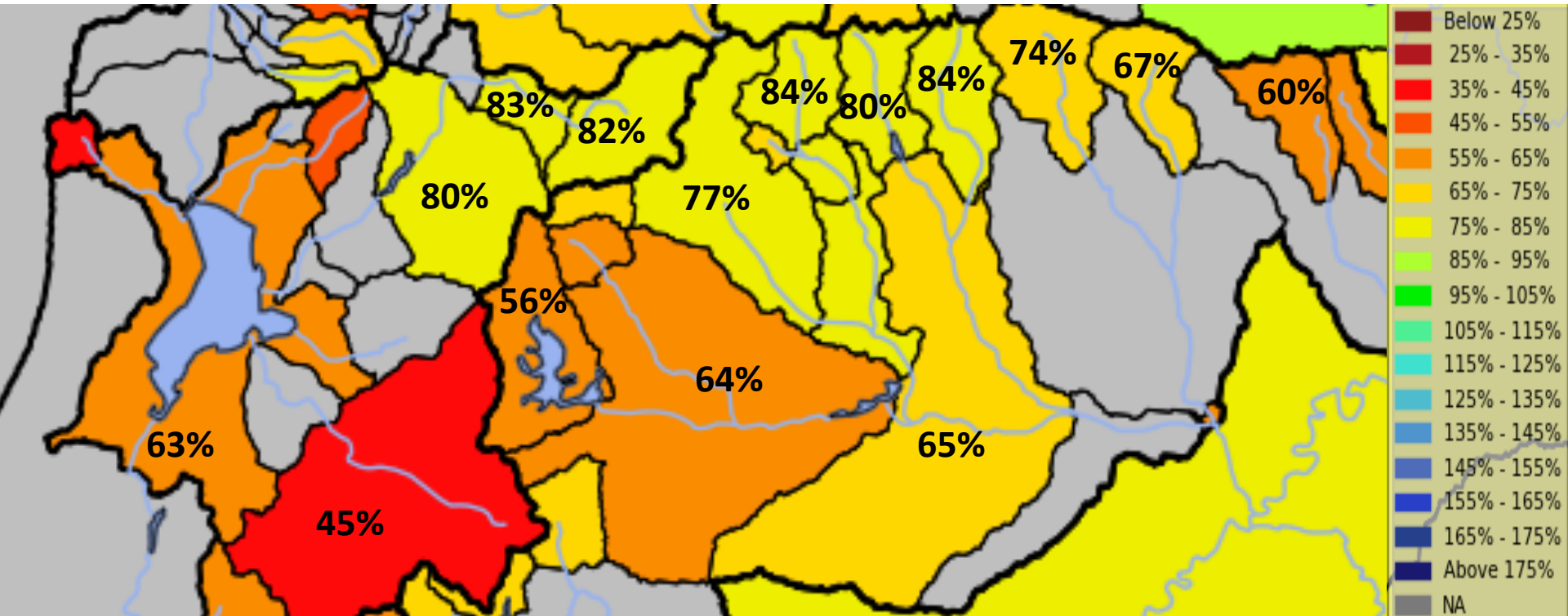


SNOTELS: Lowest on record for 2/9/15

- Chepeta
- Mosby Mountain
- Trout Creek
- Kings Cabin

February 1st Water Supply Forecasts

Duchesne and Provo River Basins



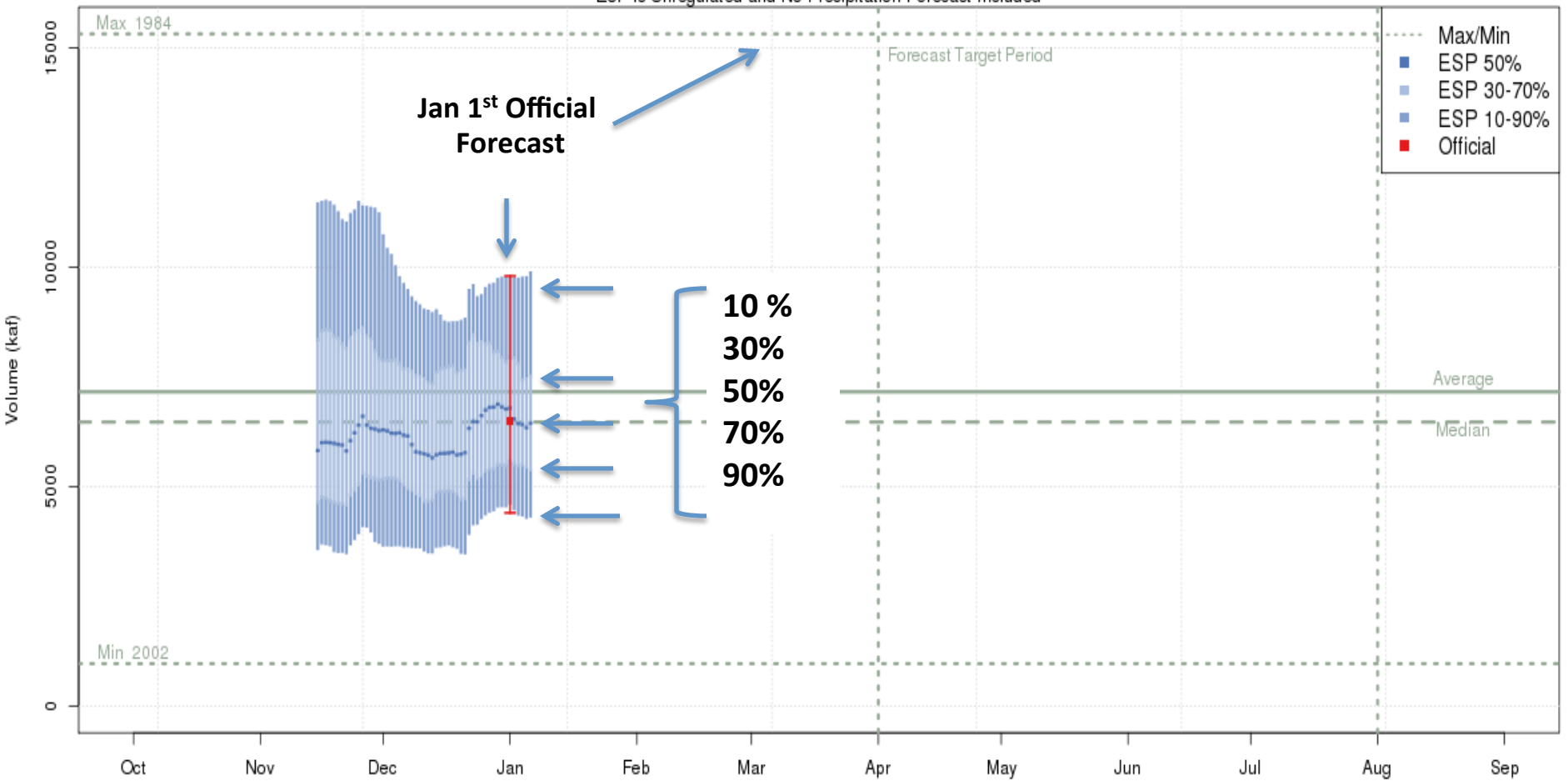
All Feb 1st April-July volume forecasts are below average

Forecasts:

Daily Ensemble Streamflow Prediction (ESP) Model Run & Official

Available at: www.cbrfc.noaa.gov Select: Water Supply Click: Point of Interest

Colorado - Lake Powell- Glen Cyn Dam- At (GLDA3)
2015-01-01 Apr-Jul Official 50% Forecast: 6500 kaf (91% of average)
ESP is Unregulated and No Precipitation Forecast Included



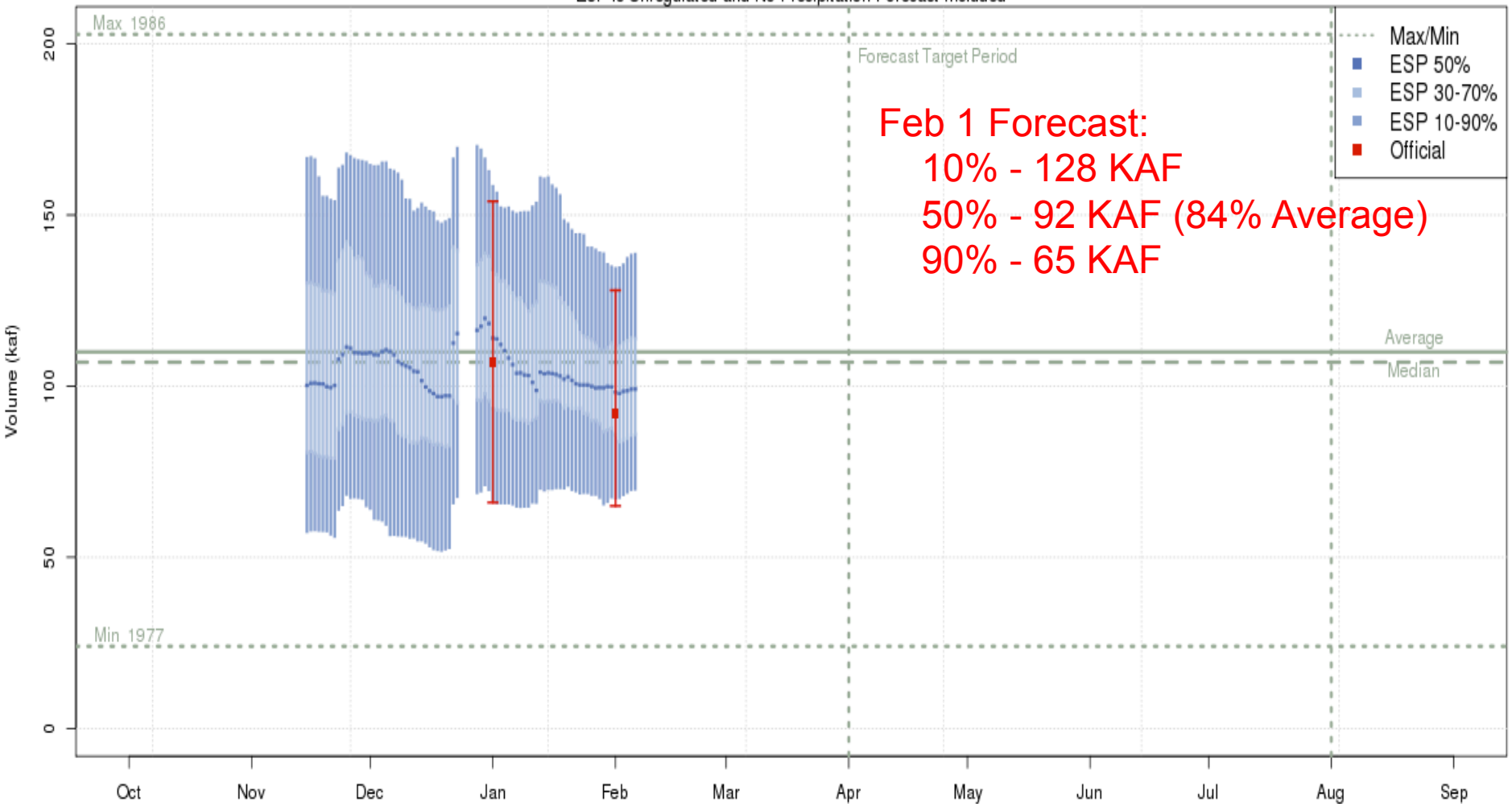
The latest (2015-01-06) 50% ESP forecast is 6445 kaf.
Plot Created 2015-01-06 16:12:28, NOAA / NWS / CBRFC

Forecasts: Provo nr Hailstone

Provo - Hailstone- Nr (PVHU1)

2015-02-01 Apr-Jul Official 50% Forecast: 92 kaf (84% of average)

ESP is Unregulated and No Precipitation Forecast Included

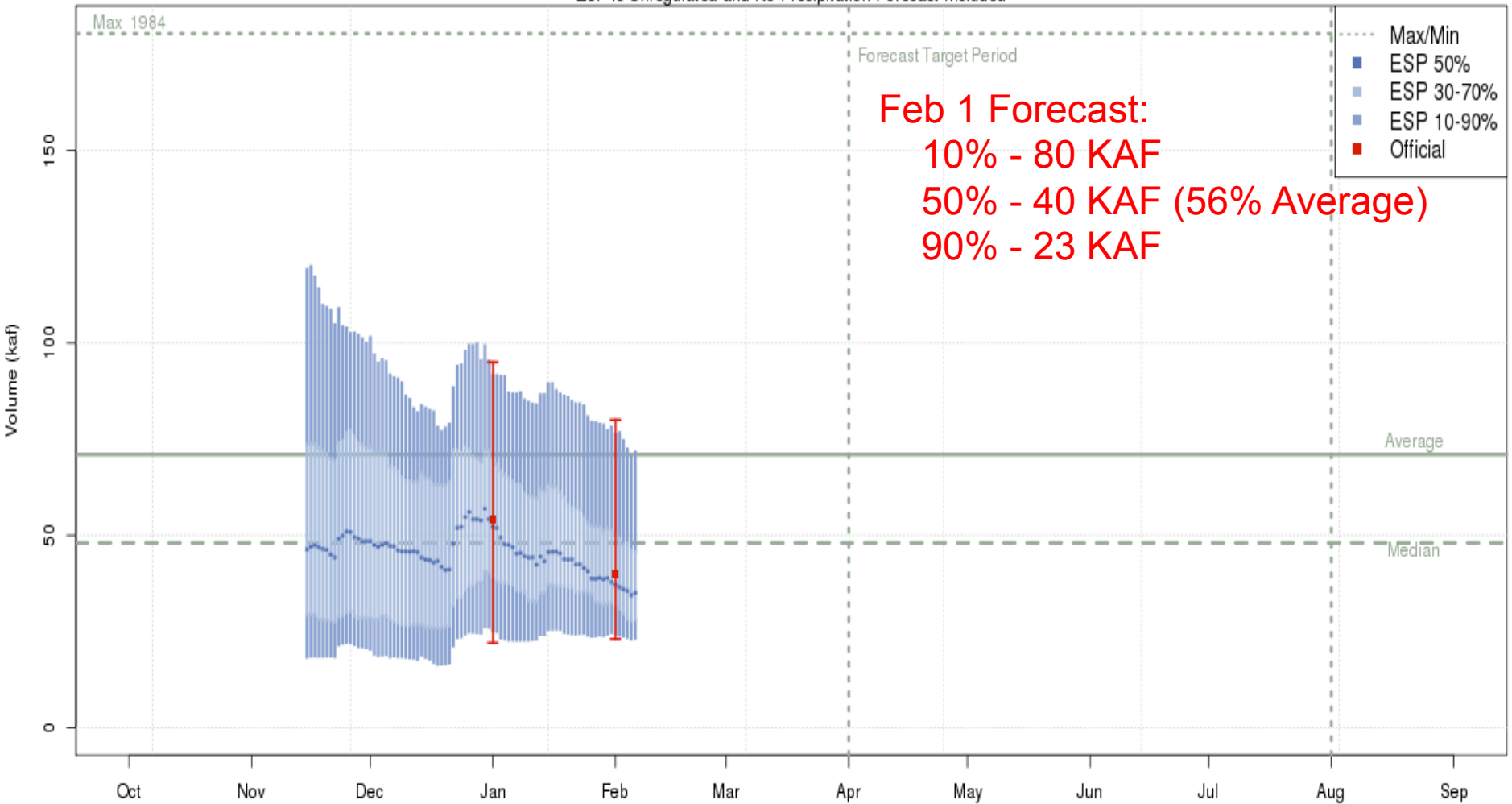


The latest (2015-02-06) 50% ESP forecast is 99 kaf.

Plot Created 2015-02-09 13:13:49, NOAA / NWS / CBRFC

Forecasts: Strawberry nr Solider Springs

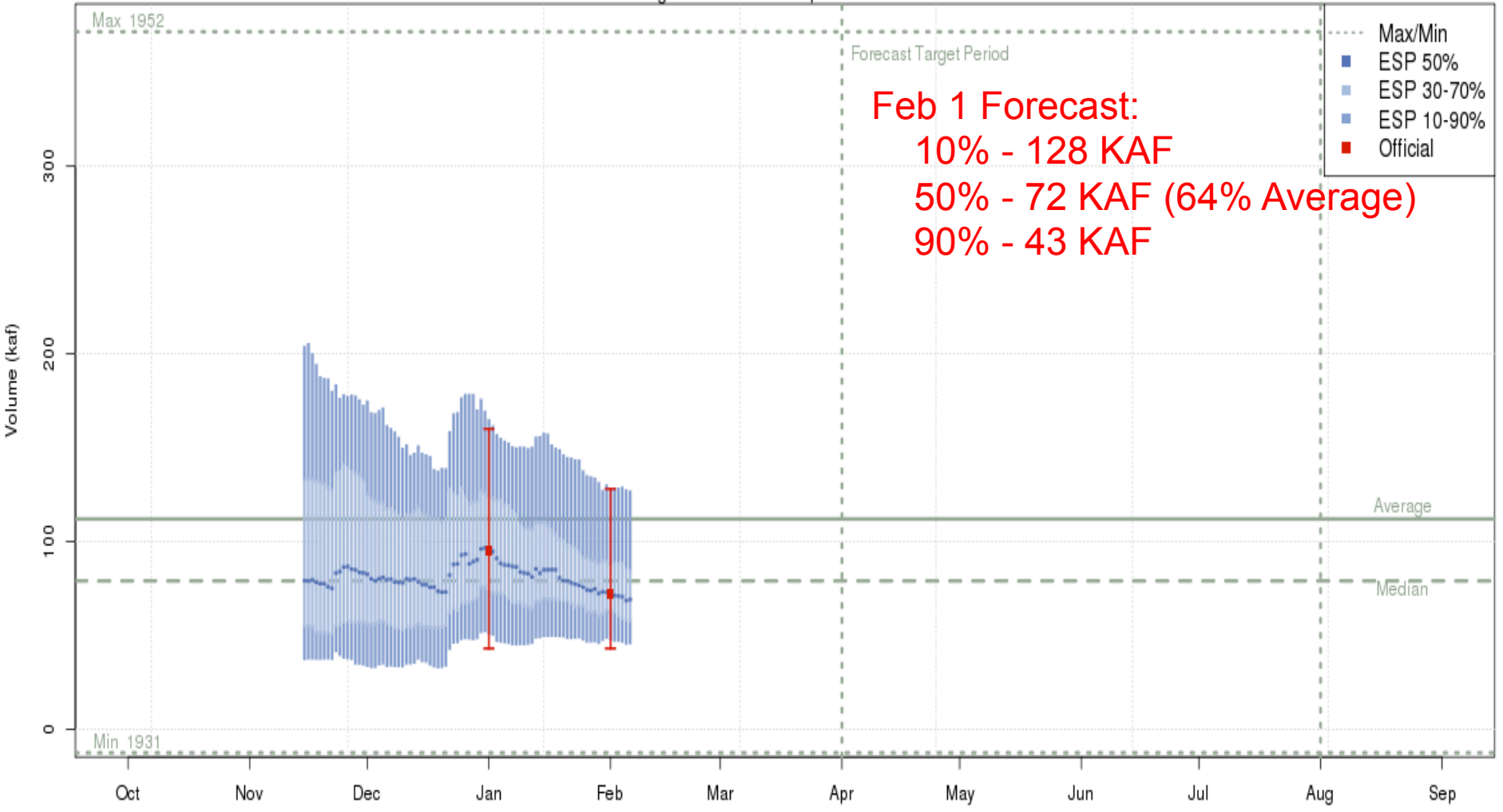
Strawberry - Solider Springs-nr - Strawberry Res (STIU1)
2015-02-01 Apr-Jul Official 50% Forecast: 40 kaf (56% of average)
ESP is Unregulated and No Precipitation Forecast Included



The latest (2015-02-06) 50% ESP forecast is 35 kaf.
Plot Created 2015-02-09 13:19:38, NOAA / NWS / CBRFC

Forecasts: Starvation Reservoir

Strawberry - Starvation Res- Duchesne- Nr (STAU1)
2015-02-01 Apr-Jul Official 50% Forecast: 72 kaf (64% of average)
ESP is Unregulated and No Precipitation Forecast Included

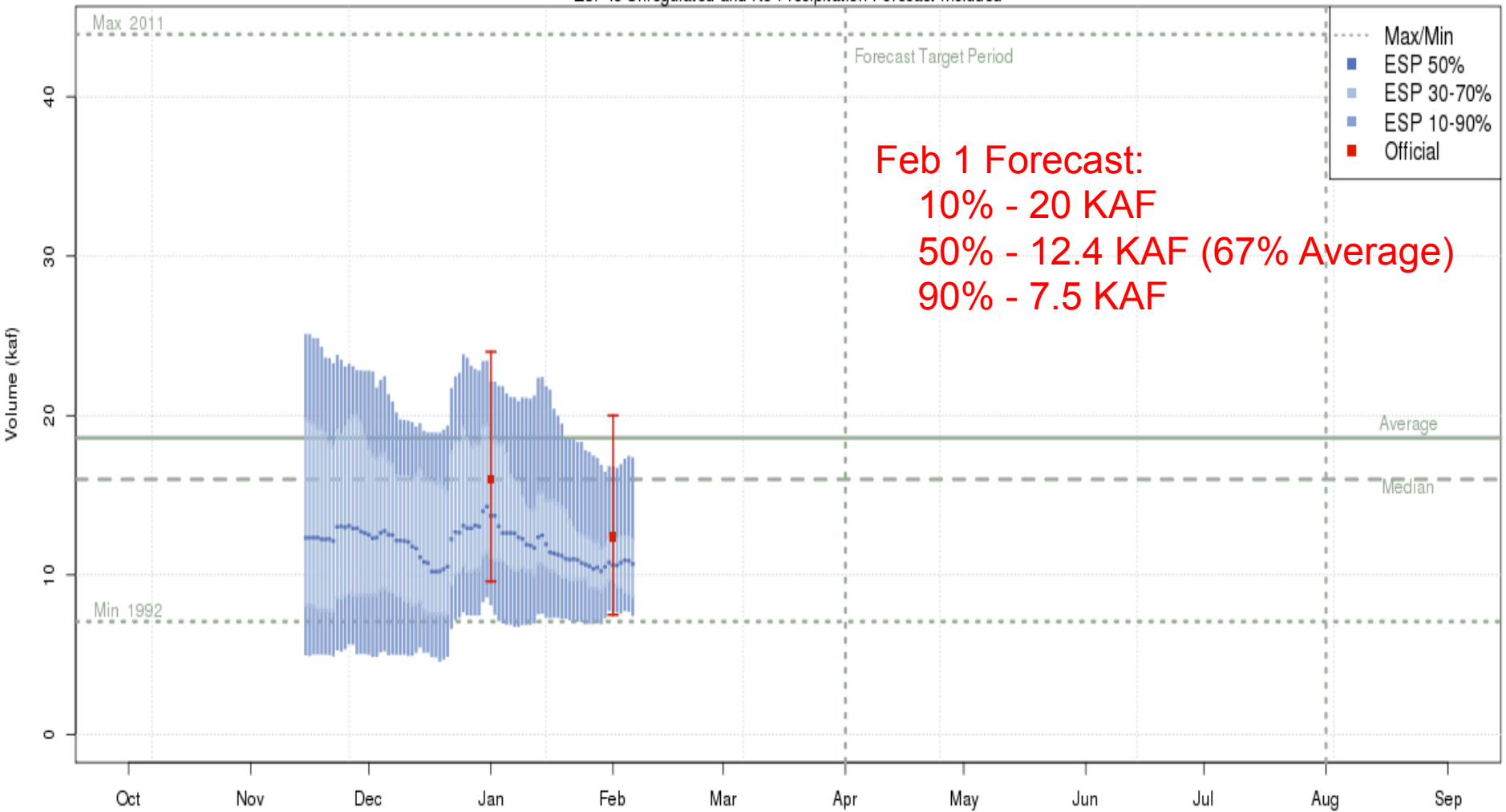


Feb 1 Forecast:
10% - 128 KAF
50% - 72 KAF (64% Average)
90% - 43 KAF

The latest (2015-02-06) 50% ESP forecast is 69 kaf.
Plot Created 2015-02-09 13:18:50, NOAA / NWS / CBRFC

Forecasts: West Fork below Vat

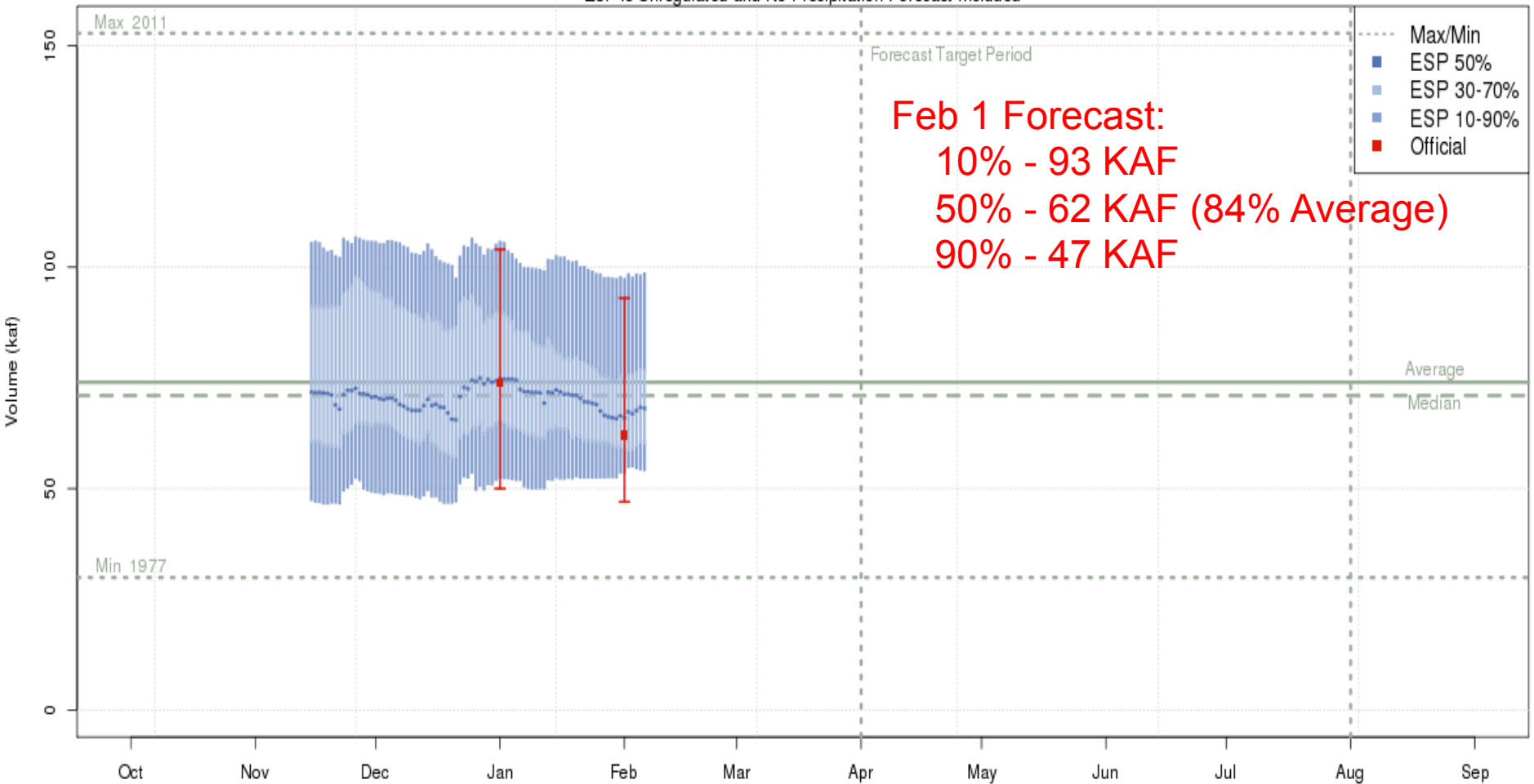
West Fork Duchesne - Vat Diversion- Blo (WFDU1)
2015-02-01 Apr-Jul Official 50% Forecast: 12.4 kaf (67% of average)
ESP is Unregulated and No Precipitation Forecast Included



The latest (2015-02-06) 50% ESP forecast is 11 kaf.
Plot Created 2015-02-09 13:24:36, NOAA / NWS / CBRFC

Forecasts: Upper Stillwater Reservoir

Rock Ck - Upper Stillwater Res (USTU1)
2015-02-01 Apr-Jul Official 50% Forecast: 62 kaf (84% of average)
ESP is Unregulated and No Precipitation Forecast Included



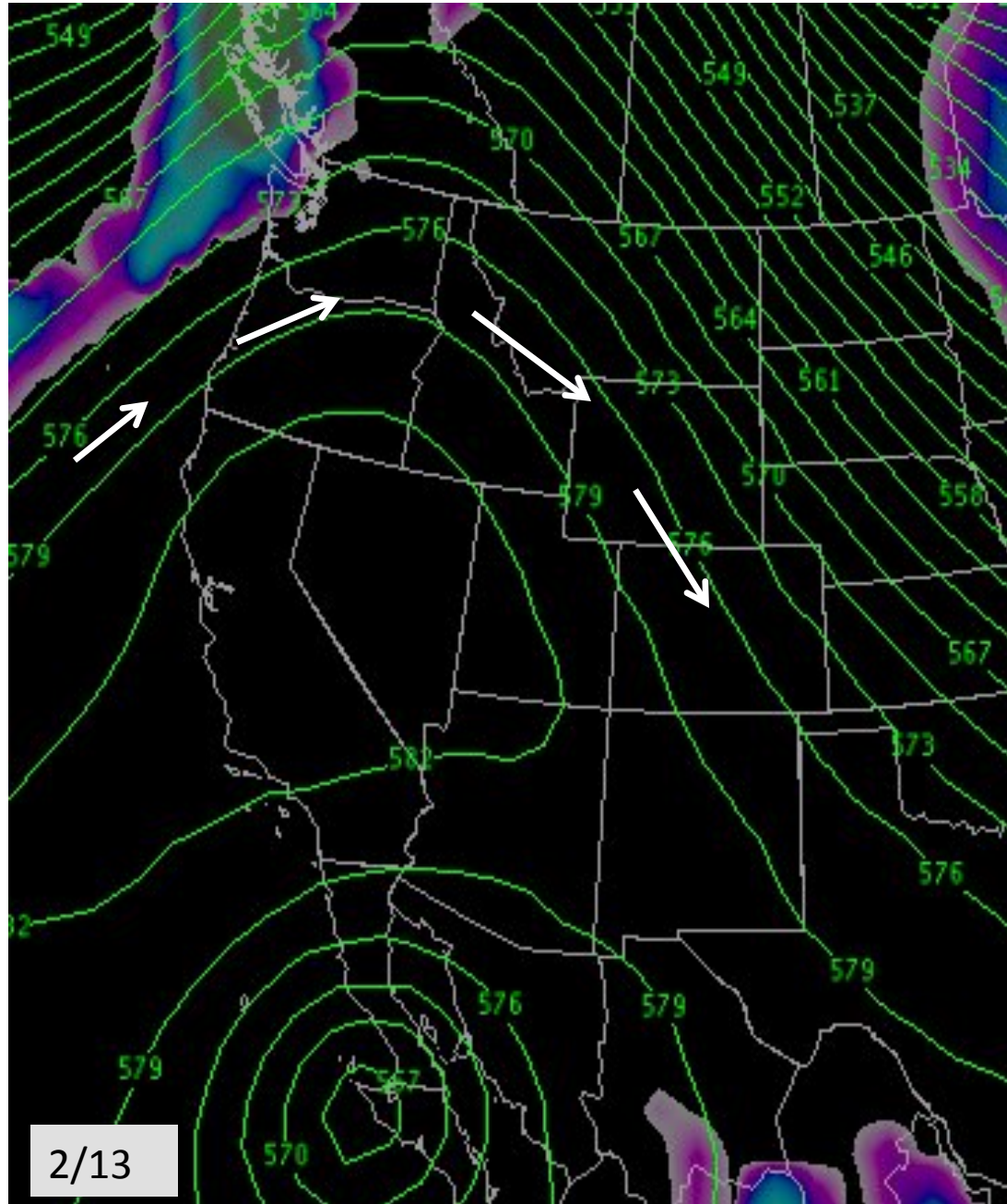
The latest (2015-02-06) 50% ESP forecast is 68 kaf.
Plot Created 2015-02-09 13:21:22, NOAA / NWS / CBRFC

Weather

Medium Range Weather
Forecast Model

Ridge of High Pressure
through the Weekend

More dry and warm
conditions

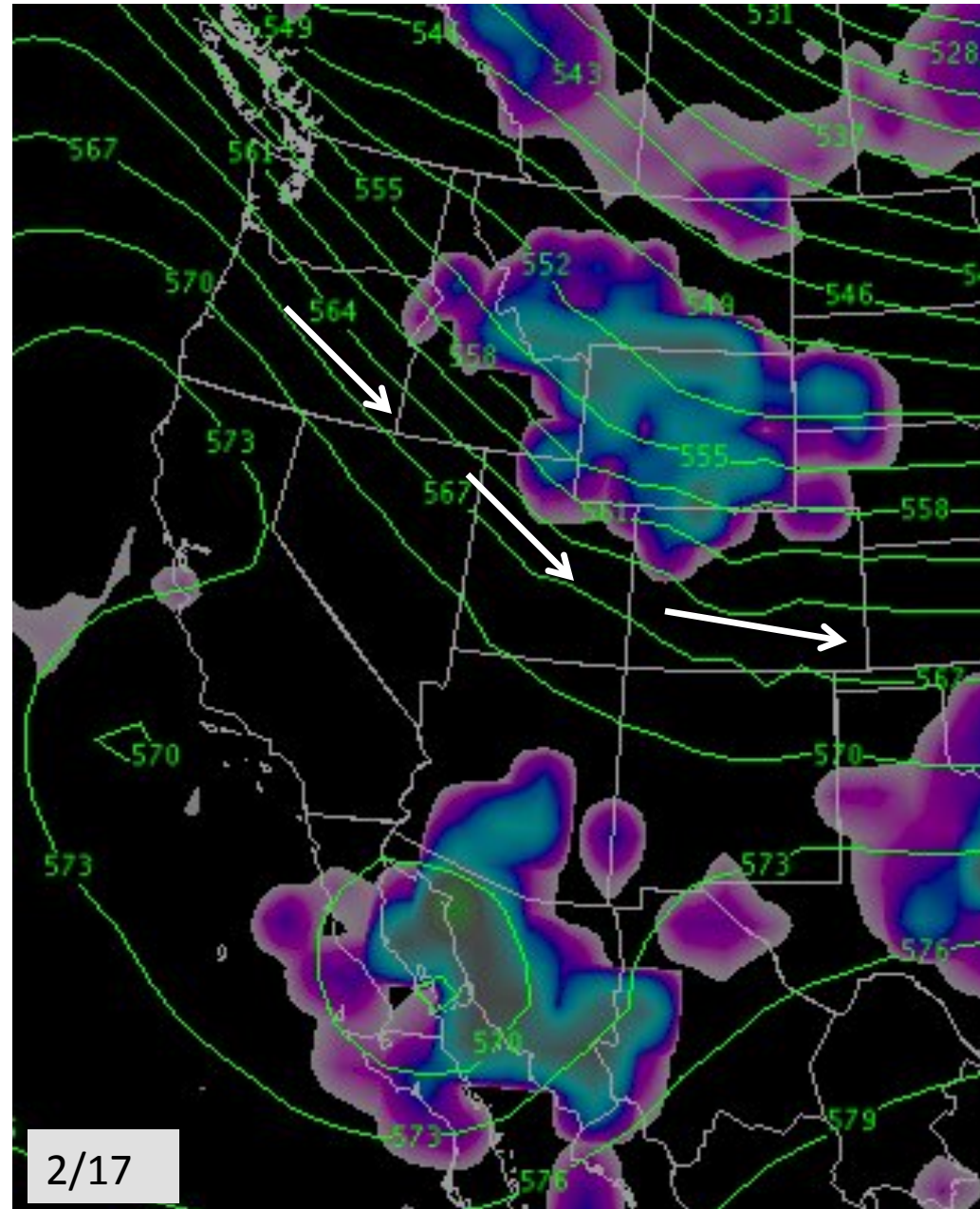


Weather

Medium Range Weather Forecast Model

Ridge shifts west early next
week

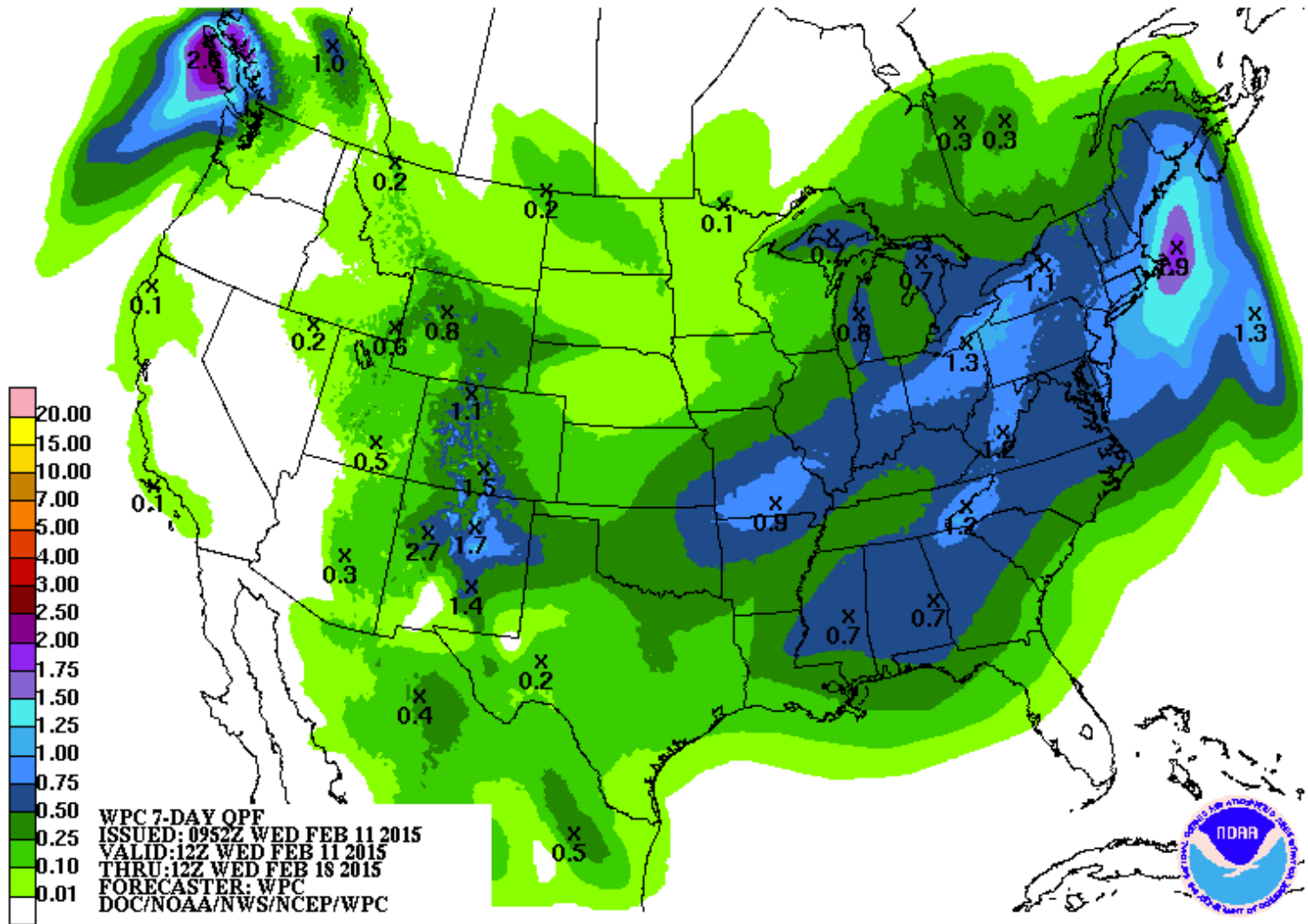
Possibility for active weather
next week



Quantitative Precipitation Forecast

Weather Prediction Center (WPC)

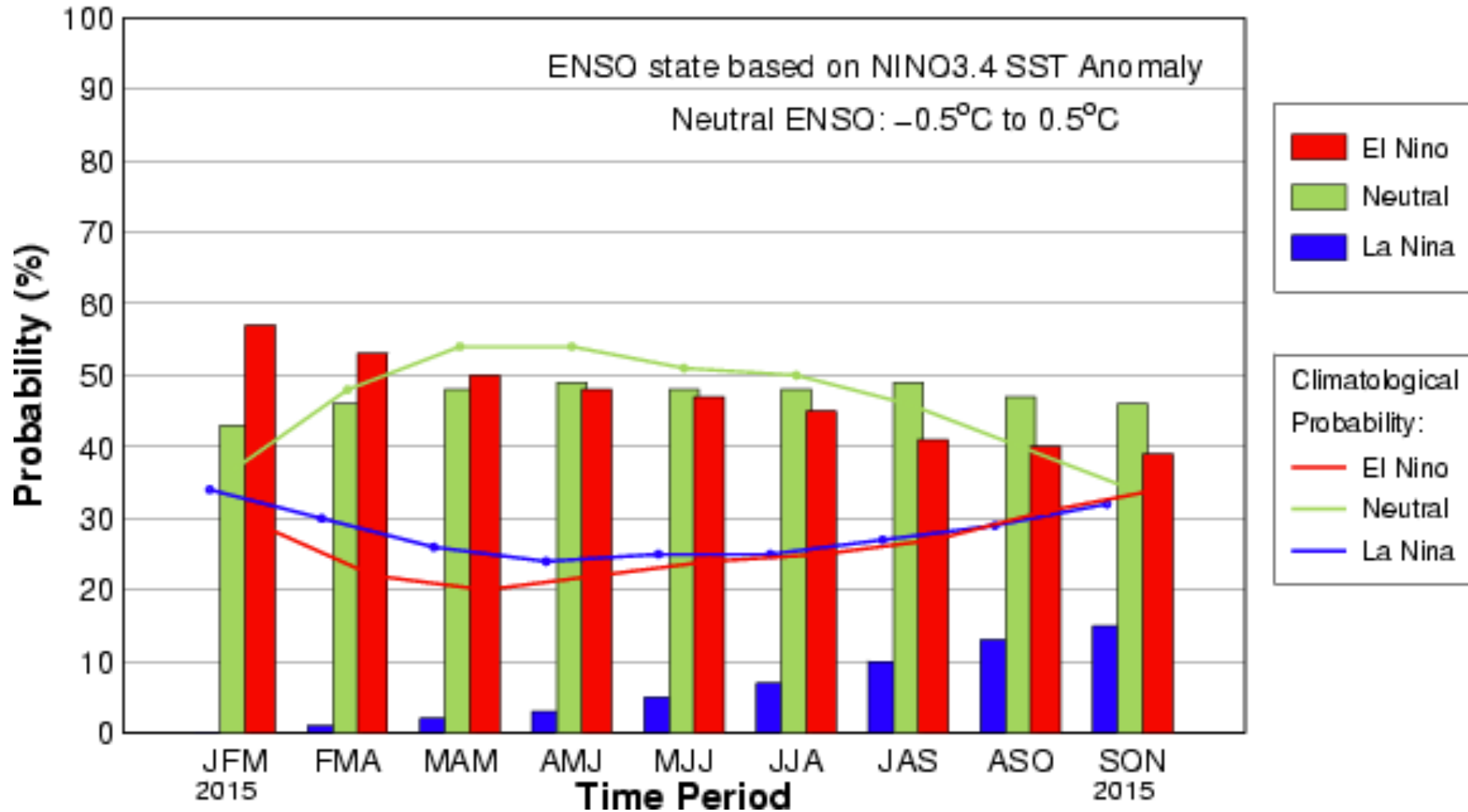
7 Day Total February 11-18



Long Range Weather

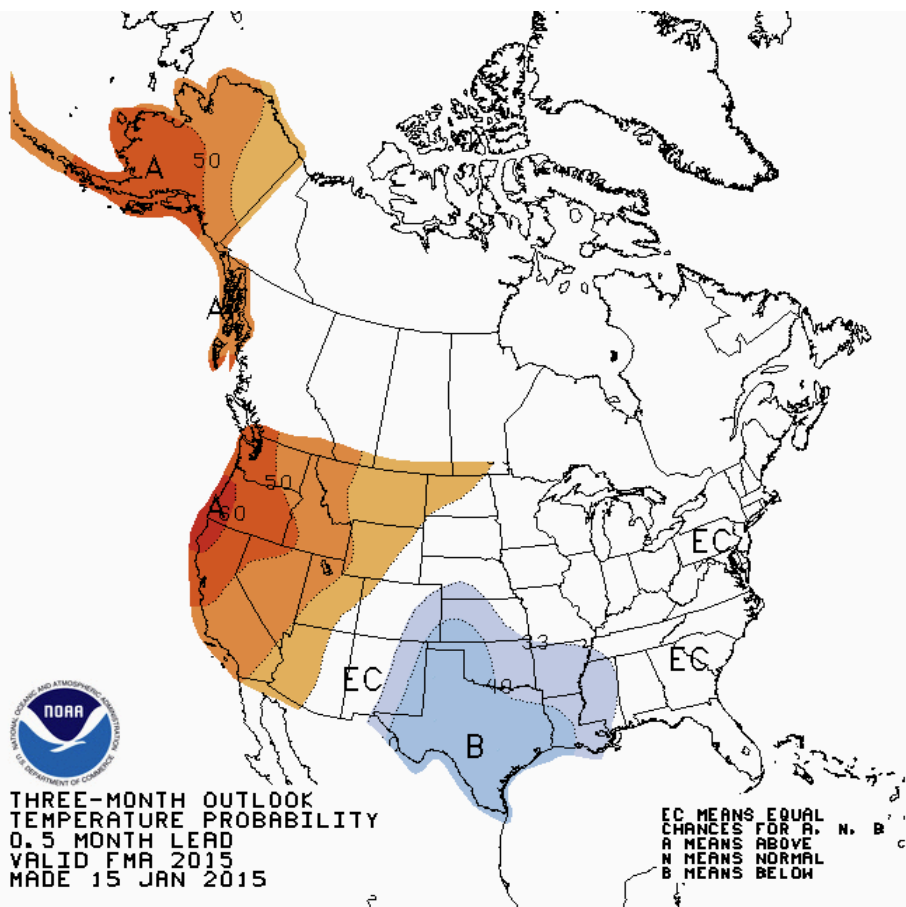
**A 50-60% chance of weak El Nino conditions for February-March
Neutral conditions likely through the summer**

Early-Feb CPC/IRI Consensus Probabilistic ENSO Forecast

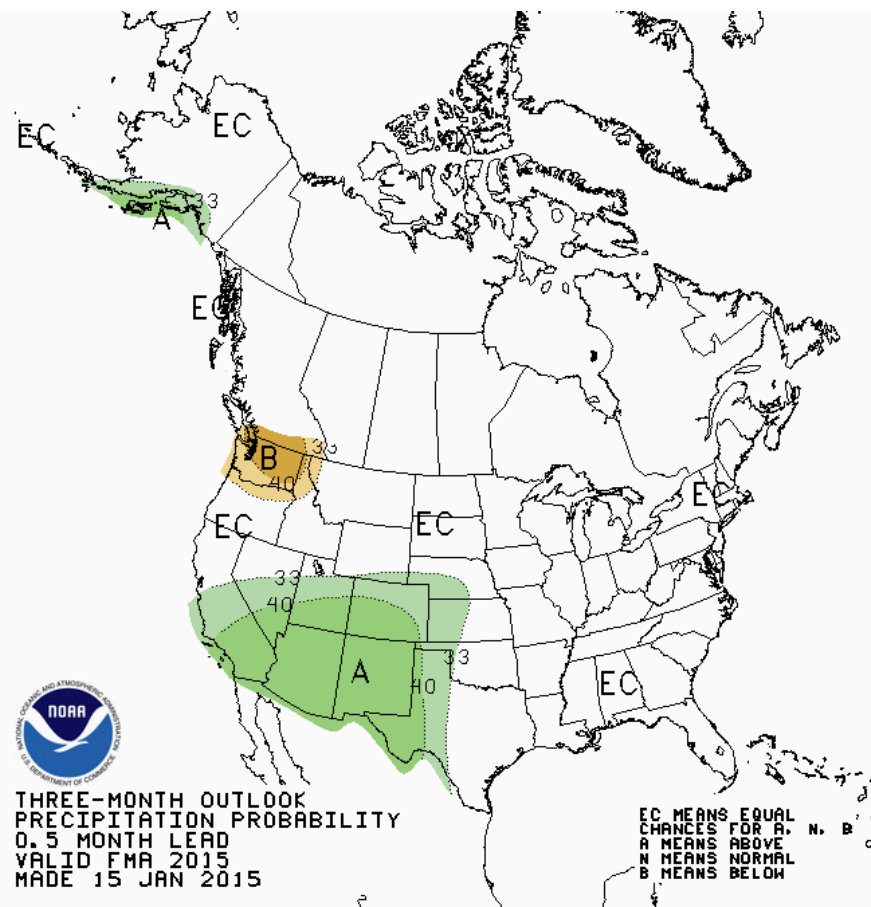


Long Range Weather

90 Day Outlooks (Feb-Apr)



Temperature



Precipitation



February Summary



Soil Moisture Impacts

- Positive in high elevation basin such as Upper Stillwater, Lake Fork
- Negative lower elevation basins (Strawberry, Starvation, Great Basin)

Snow

- Below normal conditions
- Record low snow in Eastern Uintas
- Limited low elevation snow left

Forecasts

- Below average forecasts
- Daily ESP guidance shows decreases since Feb 1

Weather

- Warm and dry conditions through the weekend
- Possibility for unsettled weather next week

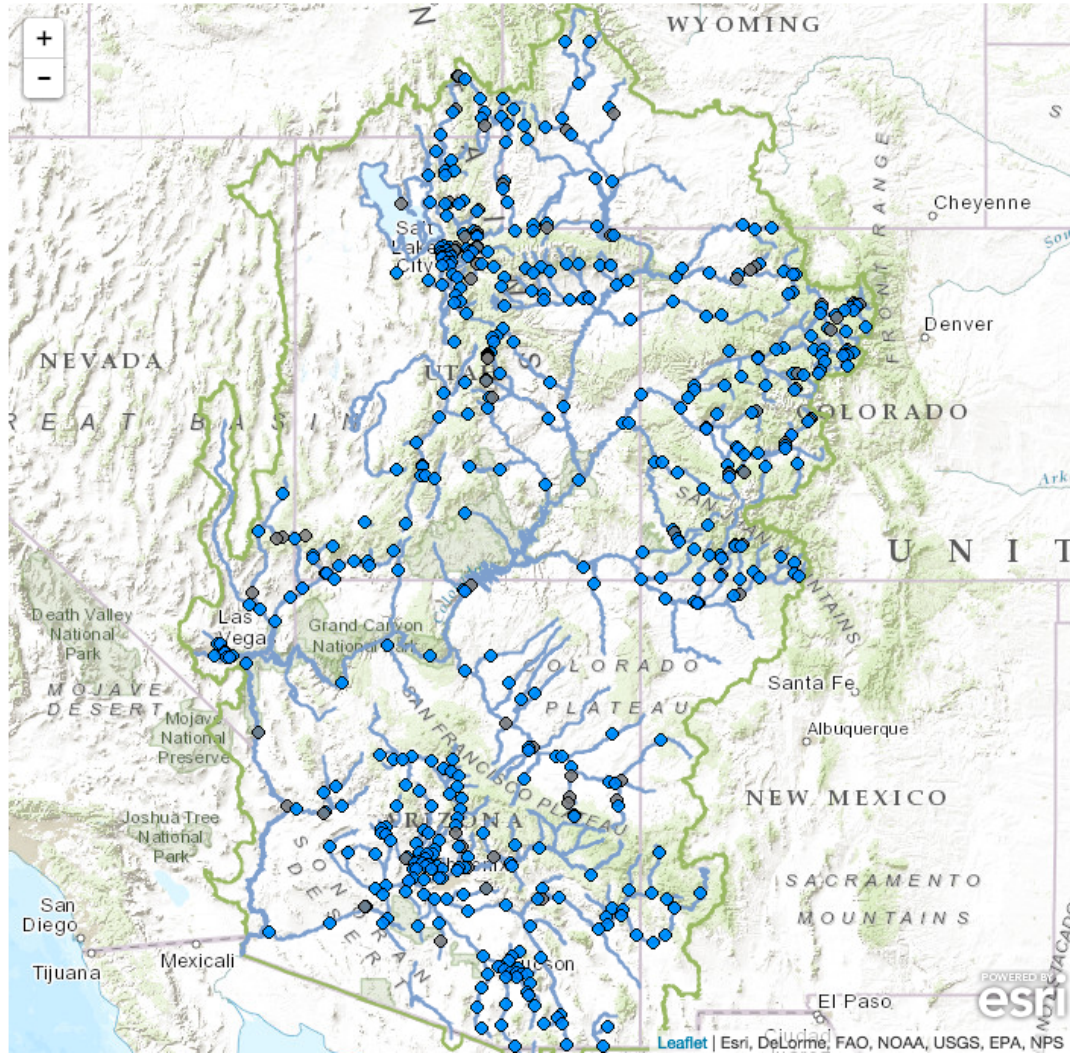
Website Updates

News

Water Supply Webinar February 5, 1pm MST. [Read More...](#)
CBRFC presentation are posted here. [Read More...](#)
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Conditions Map

[Help](#)



River Conditions

Data Updated: Thu, 05 Feb 2015 11:20:01 -0700 [Help](#)

Show [Hide Other Types](#)

- Data
- Forecast
- Reservoir
- Official Flood
- Active

- Not Available
- Normal
- Significant Rise
- Near Bankfull
- Above Bankfull
- Above Flood Stage
- Outlook (> 3 days)

[Snow Conditions](#)

[Water Supply Forecasts](#)

[Peak Flood Probability](#)

[Reservoir Conditions](#)

[Weather Conditions](#)

[Map Options](#)

[Search Points](#)

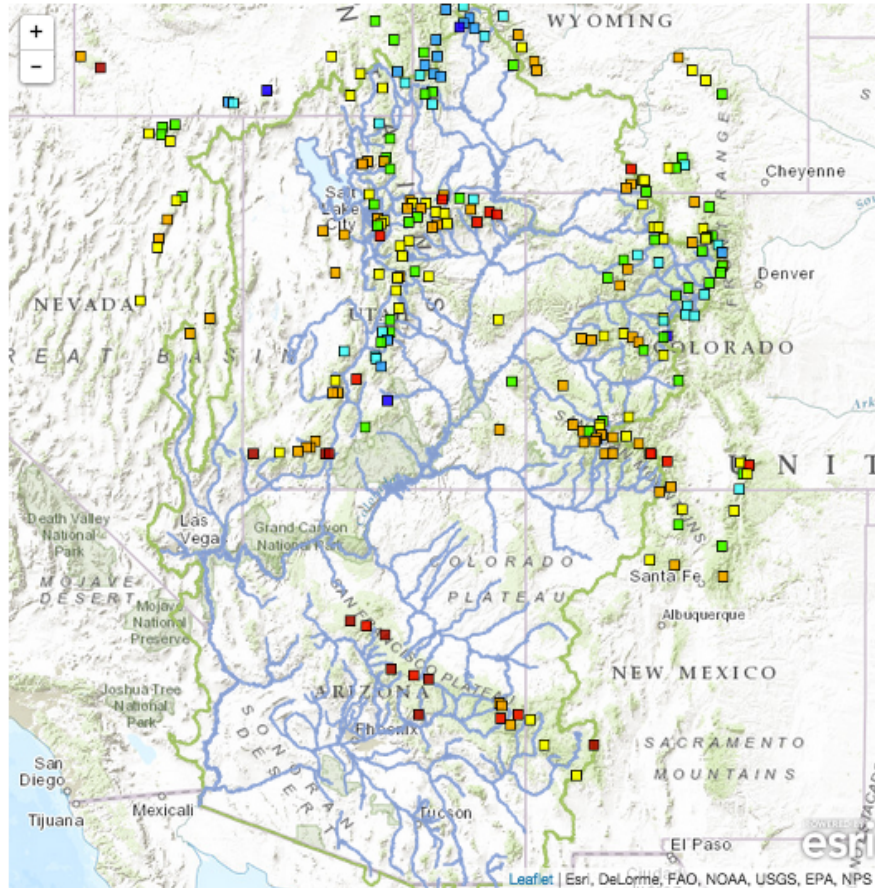


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Conditions Map

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Lat: 37.6 Lng: -110.5, Zoom: 6

[River Conditions](#)

[Snow Conditions](#)

[Points](#)

[Grids](#)

Data Updated: Wed, 04 Feb 2015 12:50:01 [Help](#)
-0700

Show [Hide Other Types](#)

- No Data
- No Average
- < 7000 ft
- 7000-8000 ft
- 8000-9000 ft
- 9000-10000 ft
- > 10000 ft

- Percentiles
- Percent Average
- Percent Median

- No Data
- < 25%
- 25-50%
- 50-75%
- 75-90%
- 90-110%
- 110-125%
- 125-150%
- 150-175%
- >175%

[Water Supply Forecasts](#)

[Peak Flood Probability](#)

[Reservoir Conditions](#)

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NATIONAL WEATHER SERVICE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

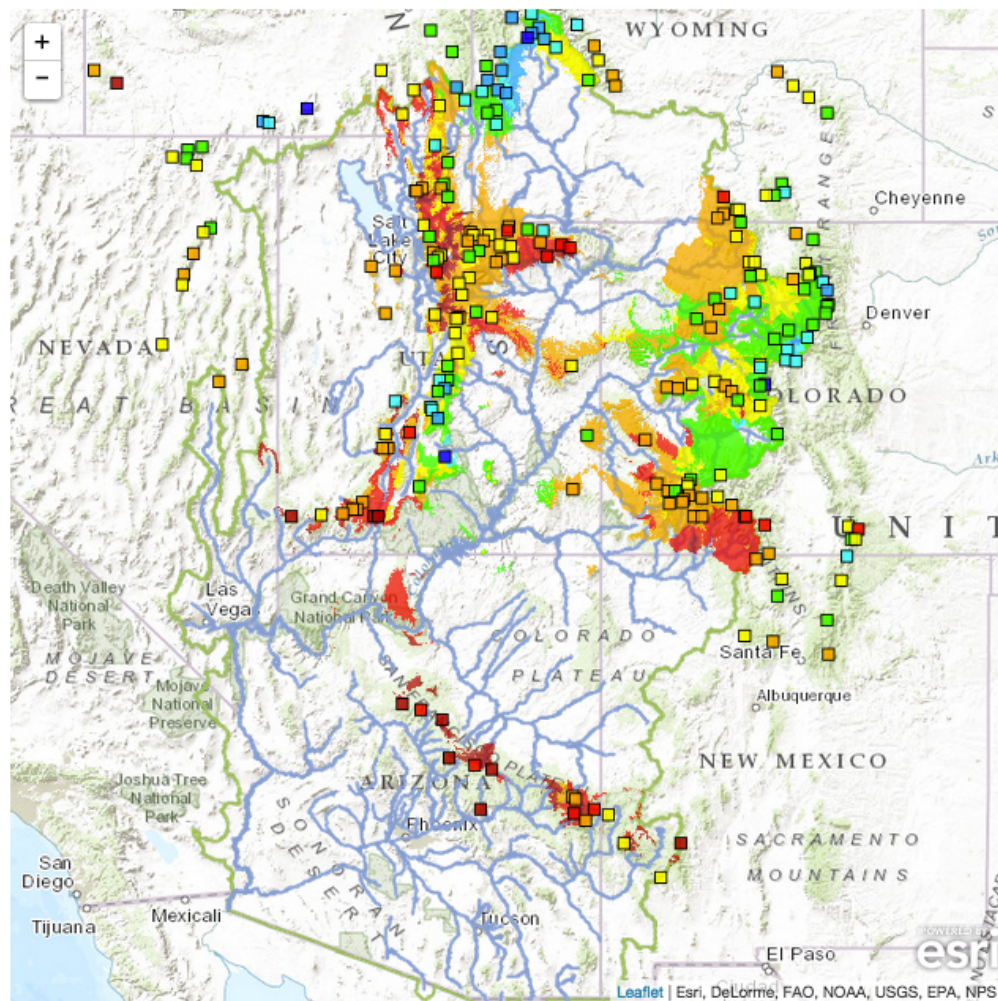


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- [SNOW](#)
- [WATER SUPPLY](#)
- [RESERVOIRS](#)
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Conditions Map

[Help](#)

Lat: 37.6 Lng: -110.5, Zoom: 6

Leaflet | Esri, DeLorme, FAO, NOAA, USGS, EPA, NPS

[River Conditions](#)[Snow Conditions](#)[Points](#)[Grids](#)

- Modeled SWE 2015-02-03
- Percent Average
- Percent Average Above 2 in SWE

- No Data
- < 25%
- 25-50%
- 50-75%
- 75-90%
- 90-110%
- 110-125%
- 125-150%
- 150-175%
- >175%

[Water Supply Forecasts](#)[Peak Flood Probability](#)[Reservoir Conditions](#)[Base Map Options](#)[Boundary Display Options](#)[Zoom Areas](#)[Search Points](#)



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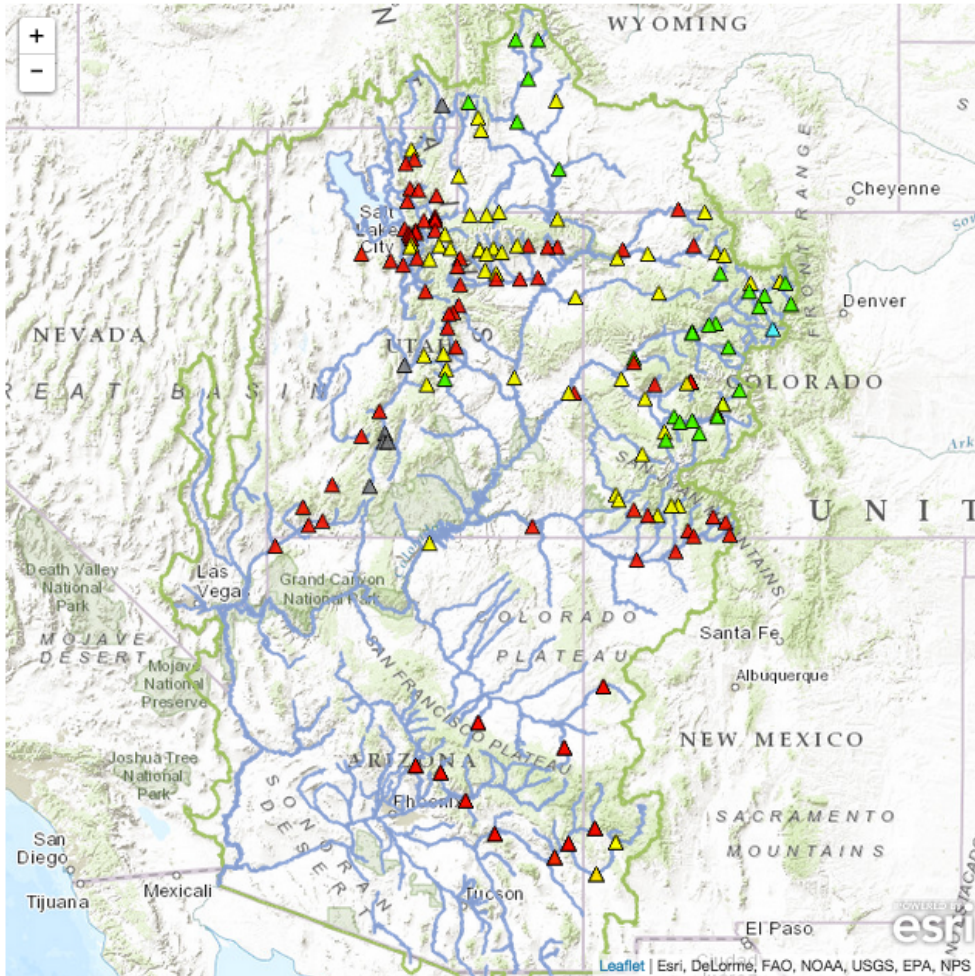
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Conditions Map

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Lat: 37.6 Lng: -110.5, Zoom: 6

[River Conditions](#)

[Snow Conditions](#)

Water Supply Forecasts

Official Forecast Date: 2015-2-1

[Help](#)

ESP Run Date: 2015-02-03

Show [Hide Other Types](#)

- Official Percent Average
- Official Percent Median
- ESP Percent Average
- ESP Percent Median

- ▲ < 70%
- ▲ 70-90%
- ▲ 90-110%
- ▲ 110-130%
- ▲ > 130%
- ▲ Regulated
- ▲ No Forecast

Offices

- CBRFC
- WGRFC
- ABRFC

[Peak Flood Probability](#)

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Leaflet | Esri, DeLorme, FAO, NOAA, USGS, EPA, NPS

Discussion

- CBRFC on Social Media!



- Forecast discussion
- Operations discussion
- 2014 Observed Peaks
- Next briefing date?
 - March 9,10,11?