

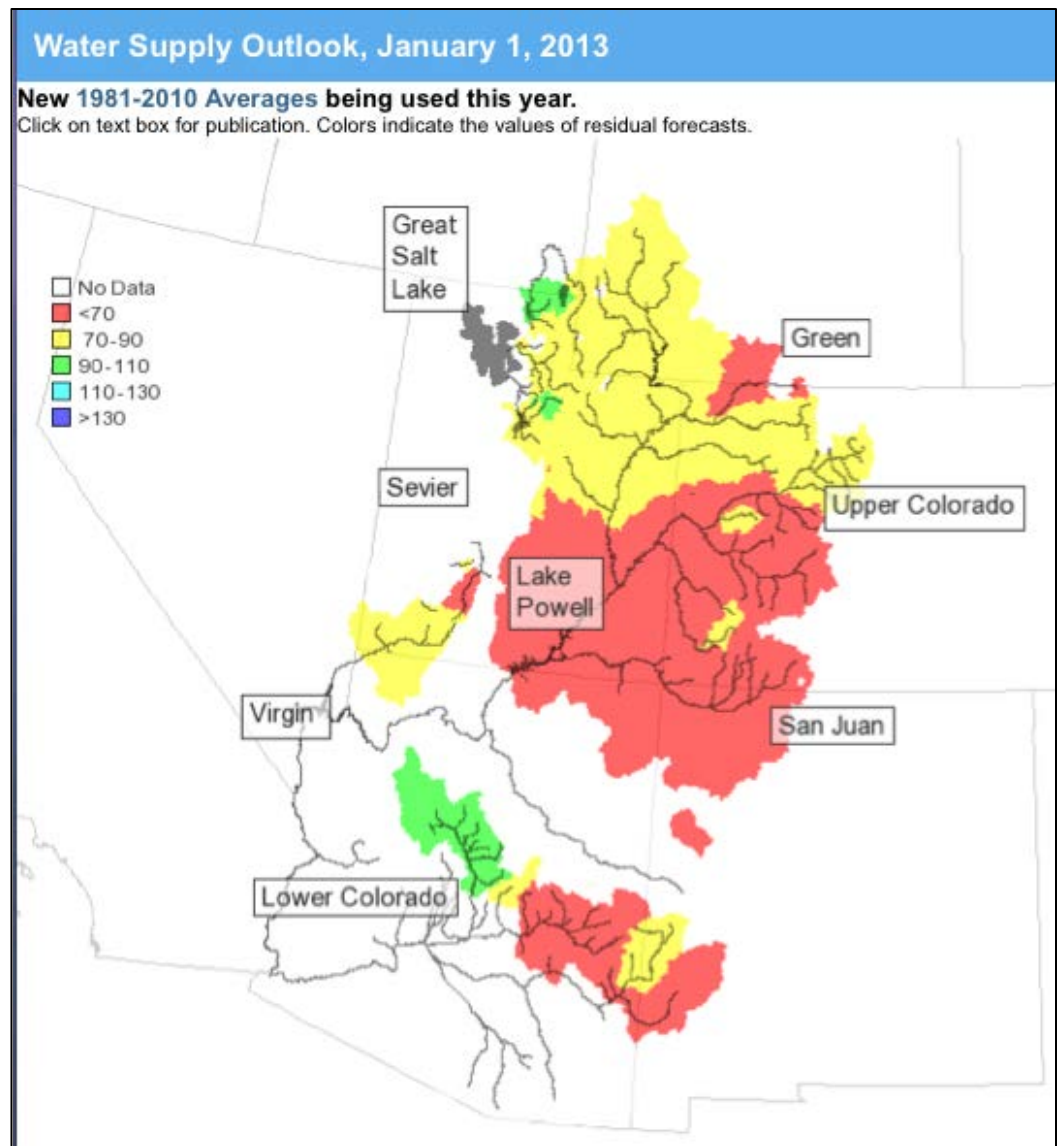
CBRFC
January 2013
Water Supply Webinar

11am, January 8, 2013

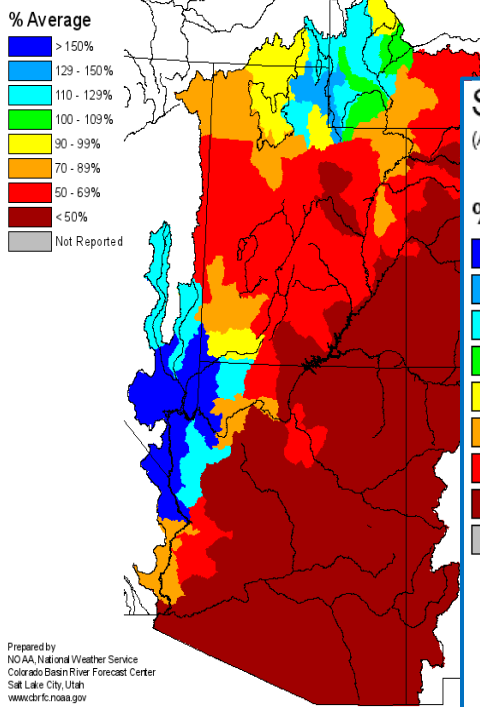
Ashley Nielson

Outline

- December Weather Review
- Snow States
- Water Supply Forecasts

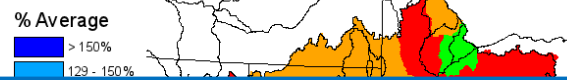


Monthly Precipitation for October 2012
(Averaged by Hydrologic Unit)

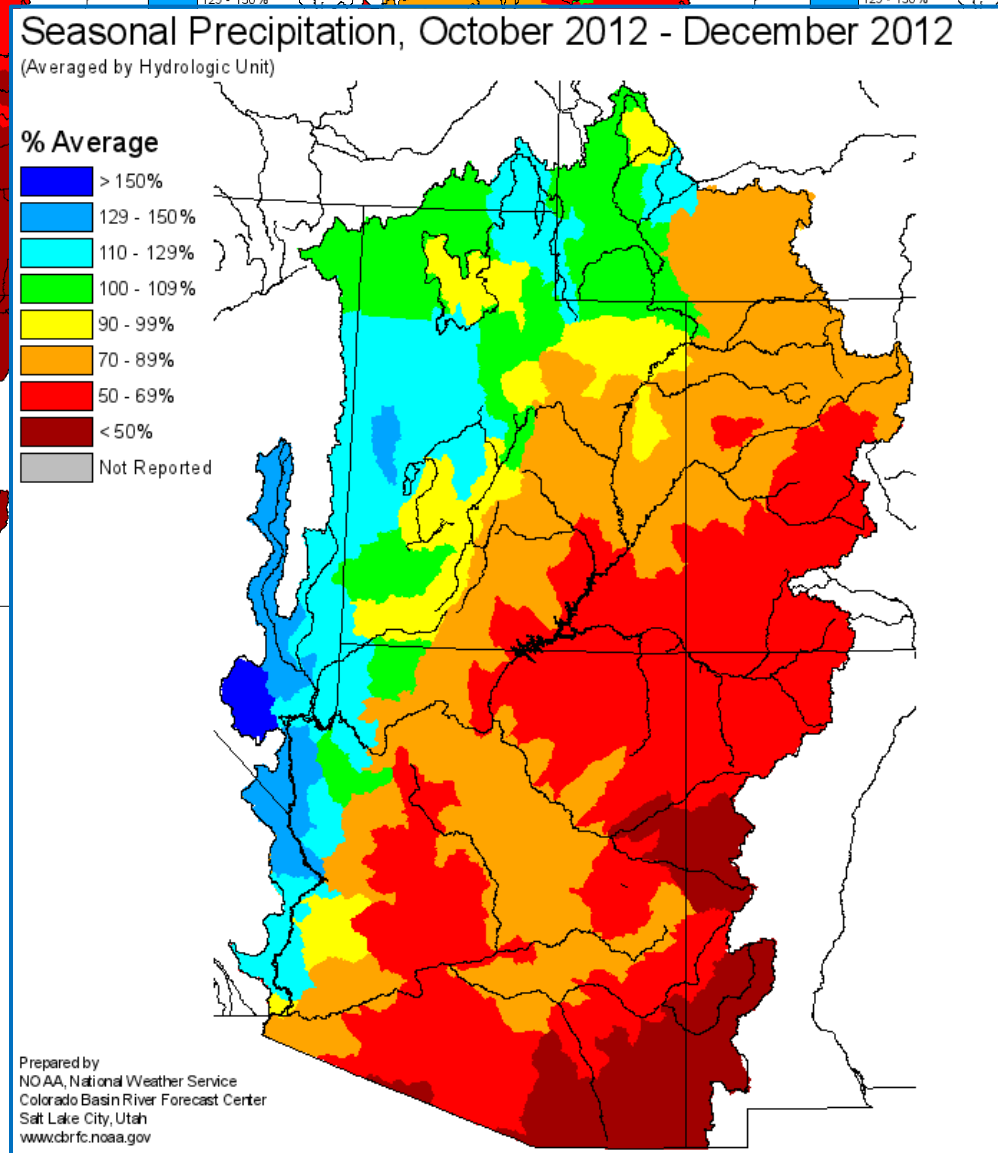
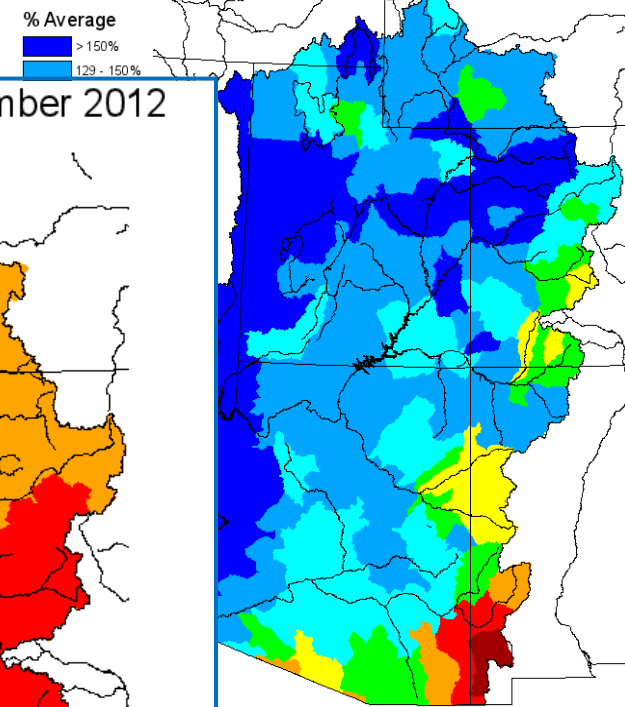


Prepared by
NOAA, National Weather Service
Colorado Basin River Forecast Center
Salt Lake City, Utah
www.cbrfc.noaa.gov

Monthly Precipitation for November 2012
(Averaged by Hydrologic Unit)

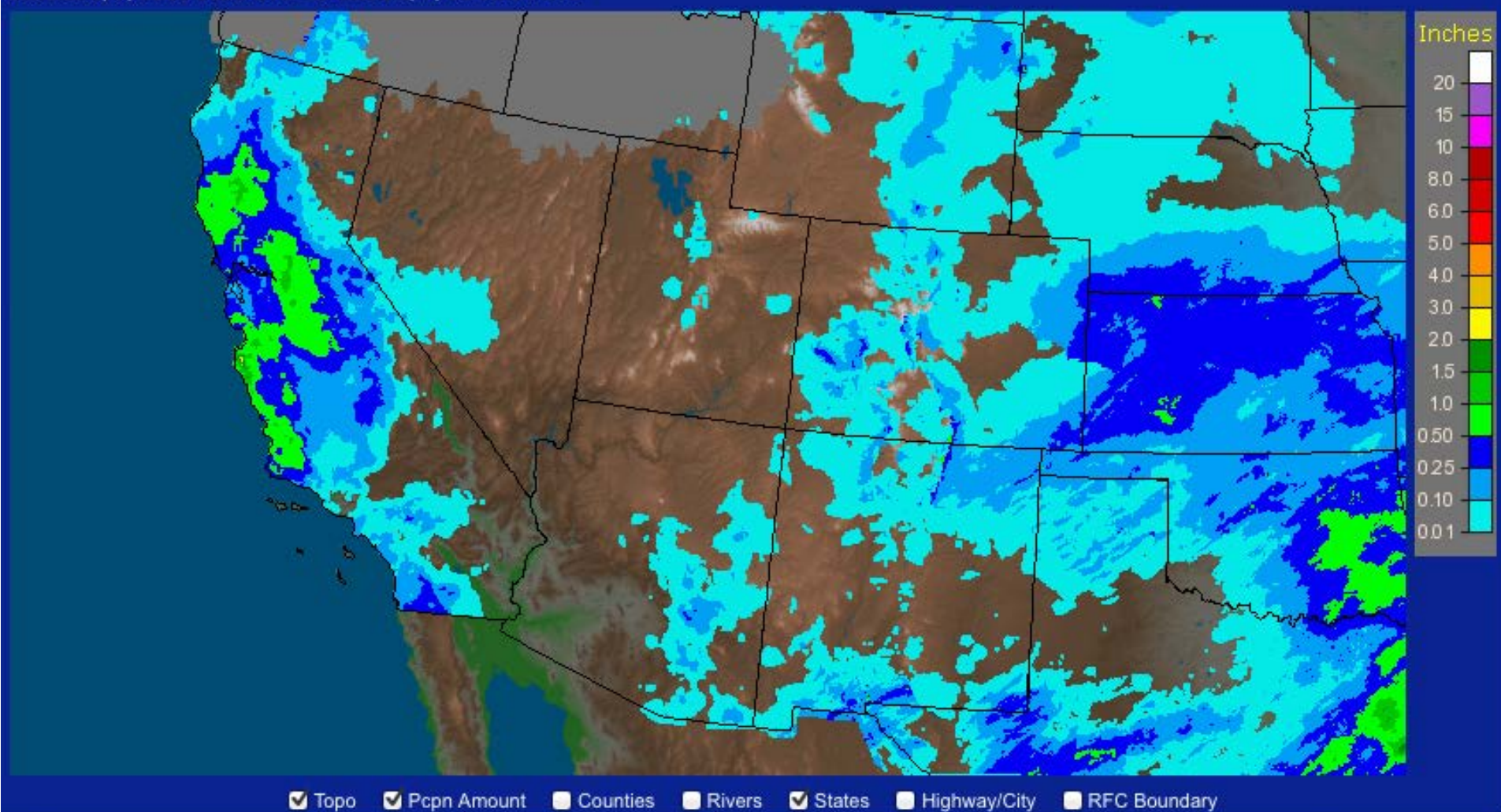


Monthly Precipitation for December 2012
(Averaged by Hydrologic Unit)



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

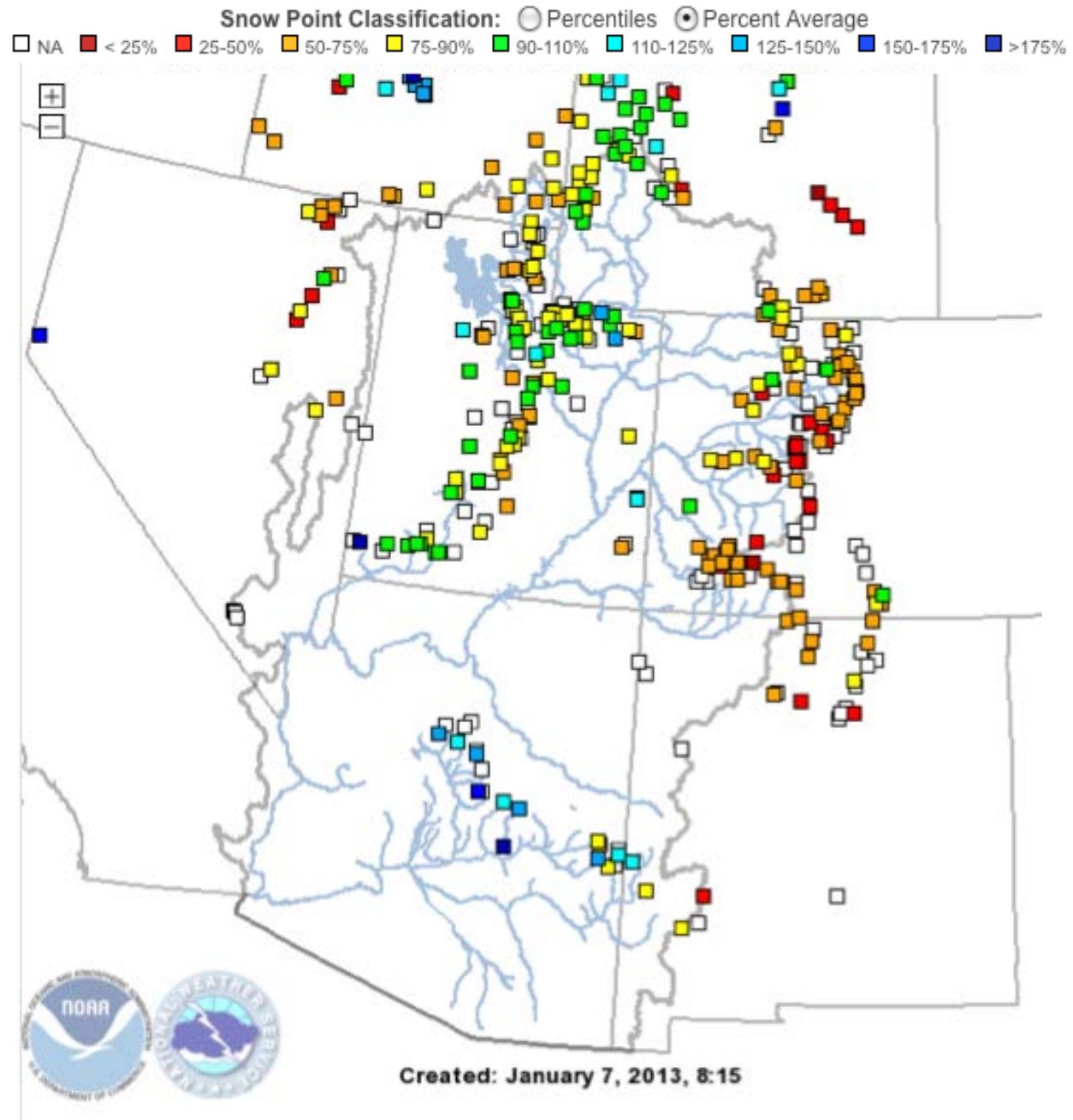
Colorado Basin RFC Salt Lake City, UT: Current 7-Day Observed Precipitation
Valid at 1/7/2013 1200 UTC - Created 1/7/13 15:54 UTC



Web Reference: water.weather.gov/precip

Snow

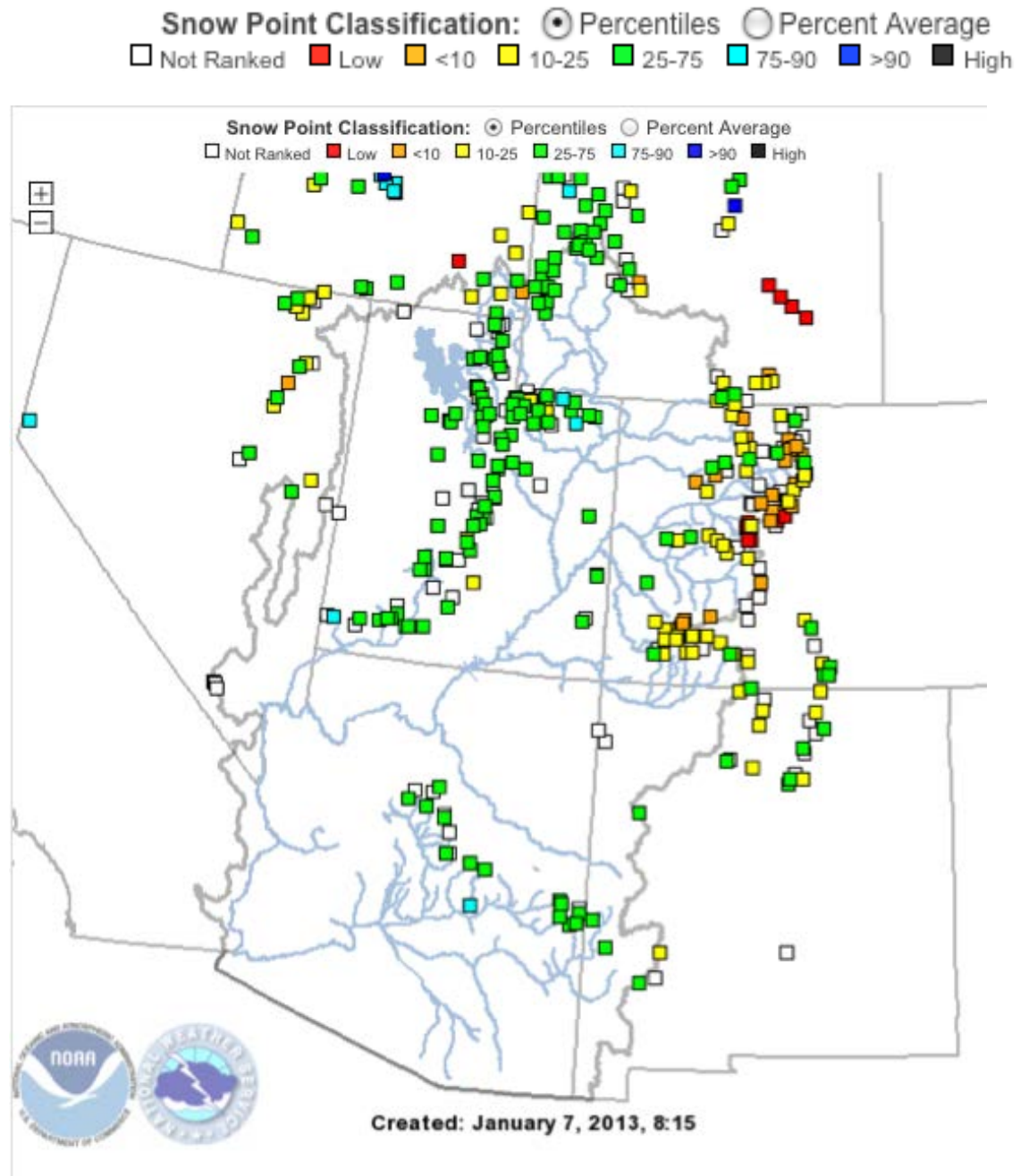
January 7, 2013



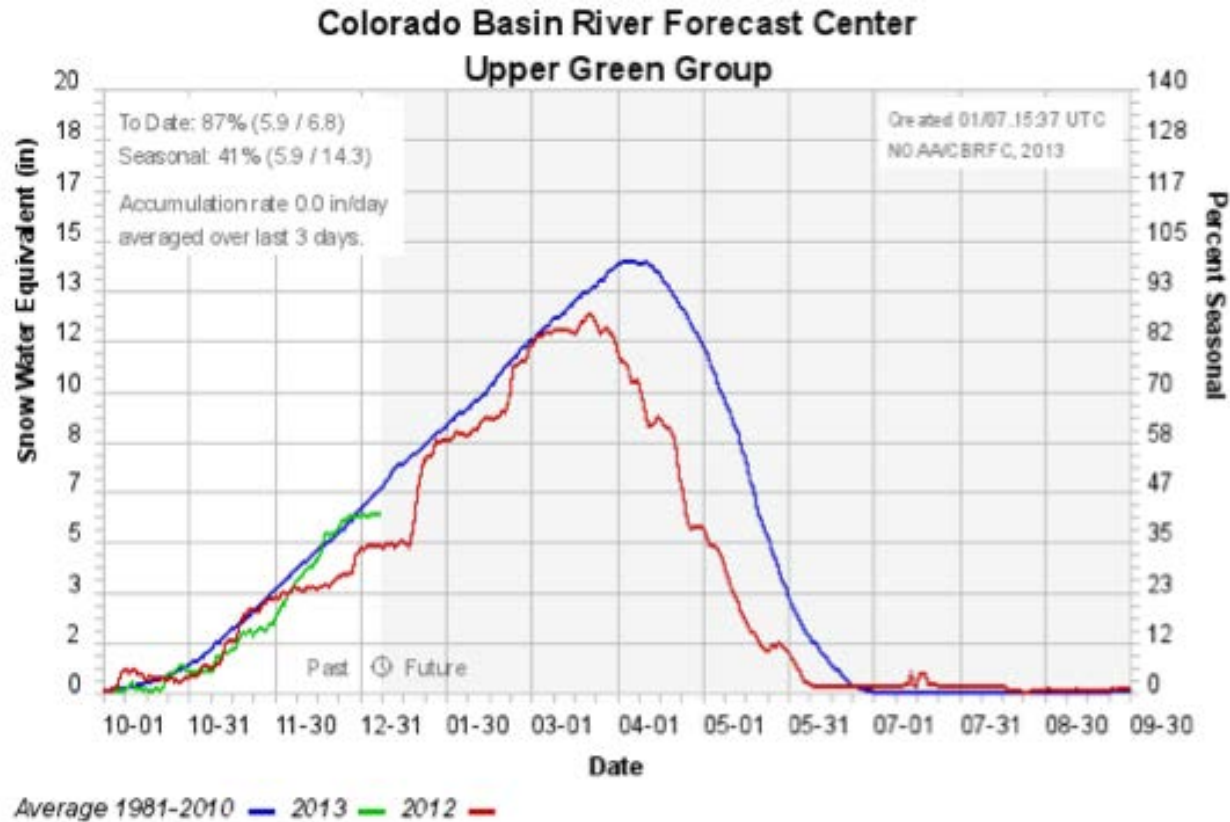
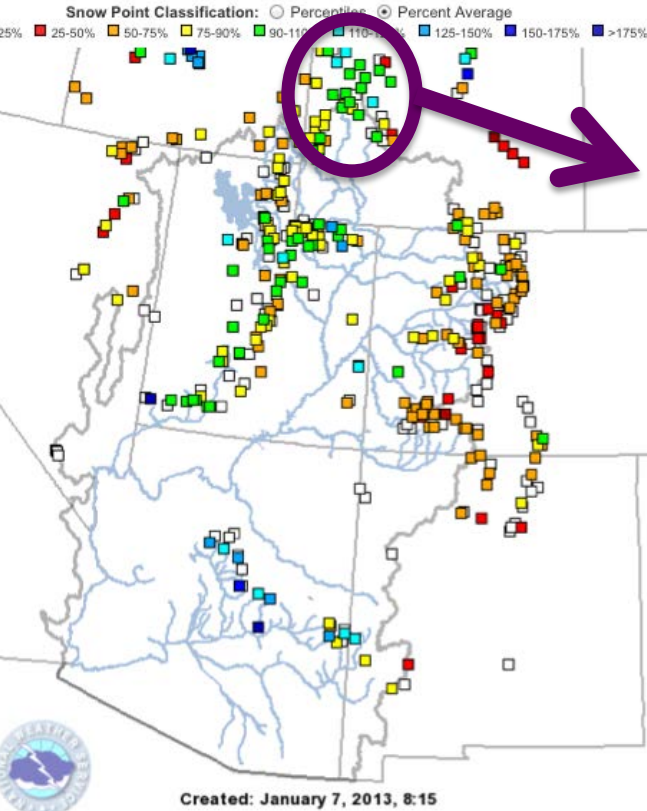
Web Reference: <http://www.cbrfc.noaa.gov/gmap/cmap2.php?con=snow>

Snow

January 7, 2013

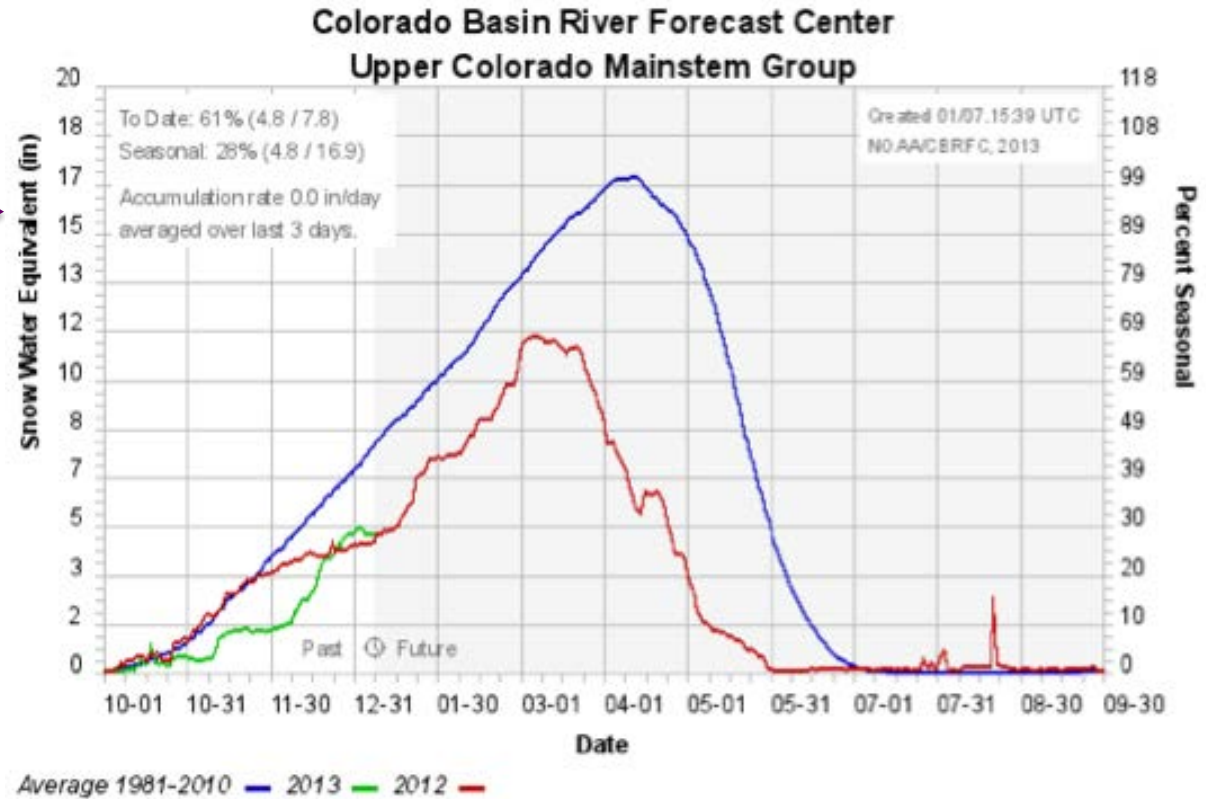
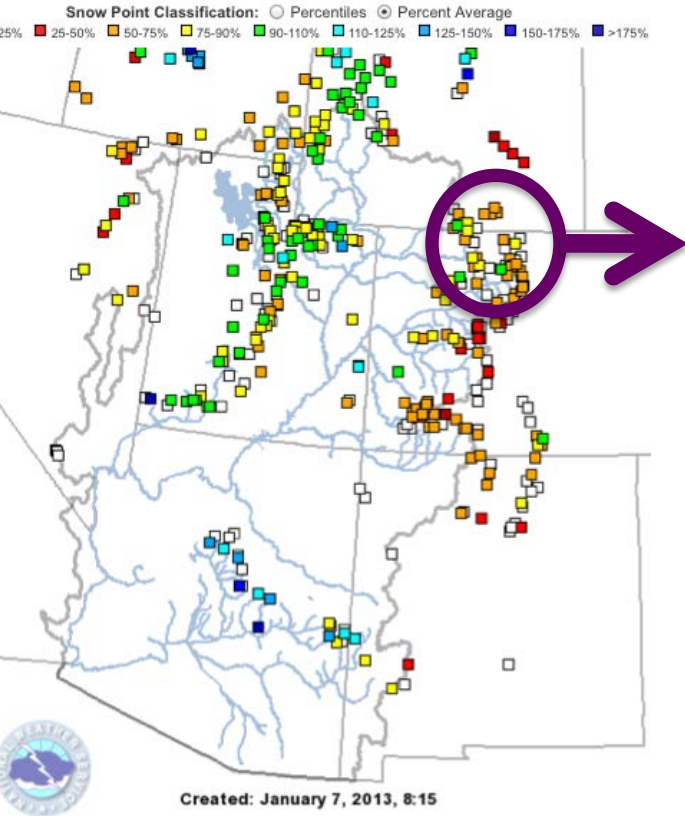


Snow: Upper Green Basin (above Flaming Gorge)

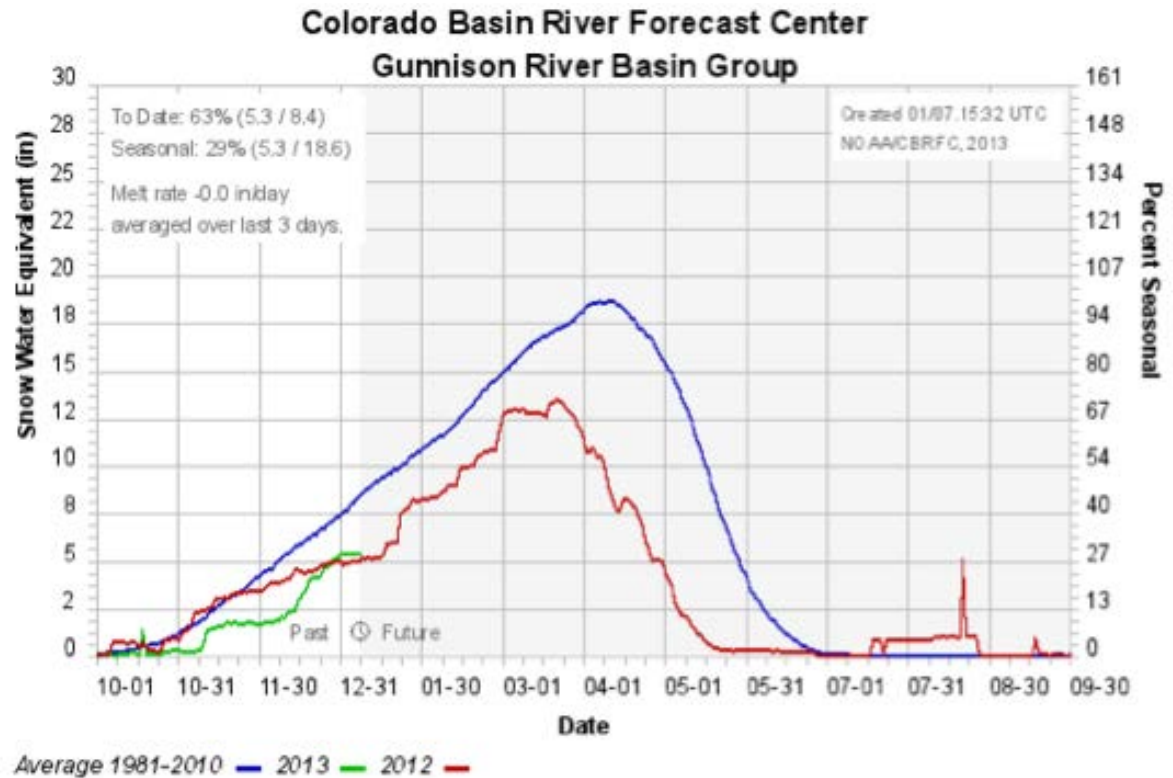
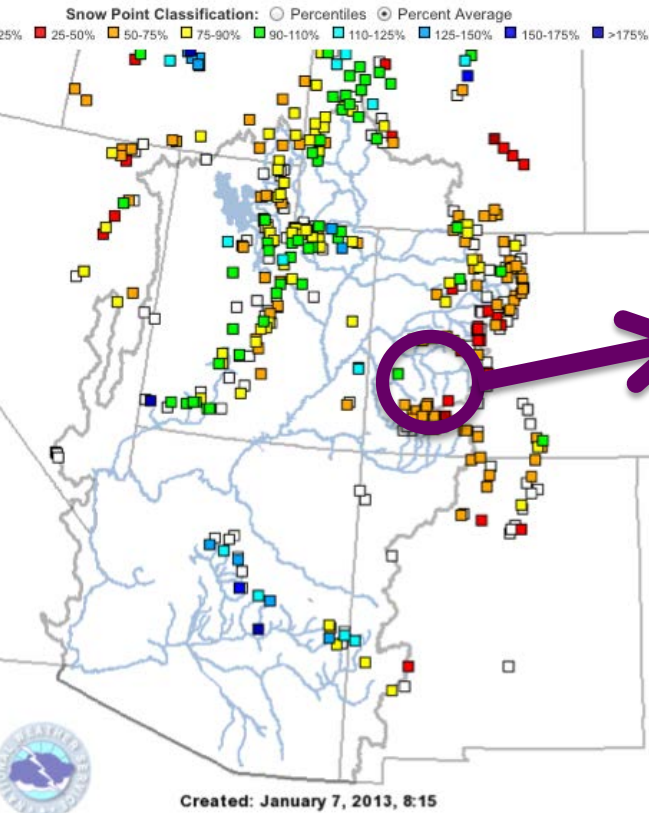


Web Reference: <http://www.cbrfc.noaa.gov/station/sweplot/snowgroup.php>

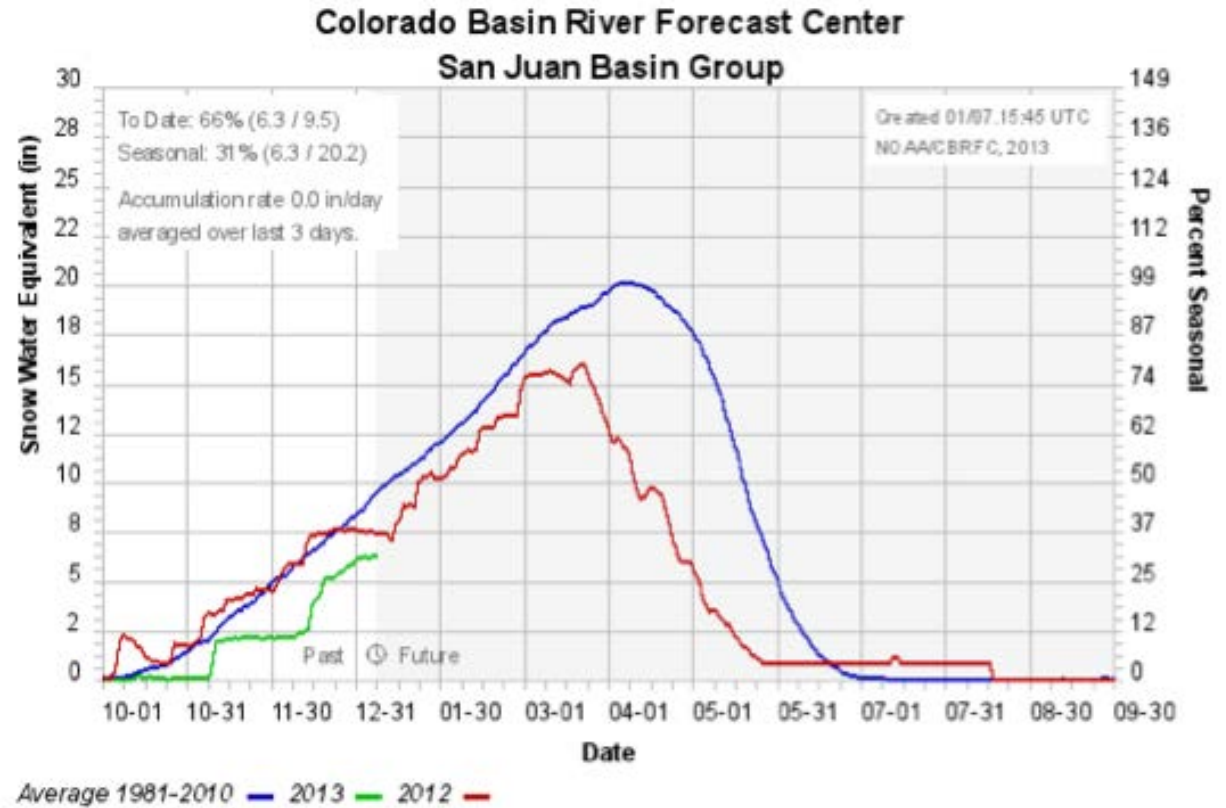
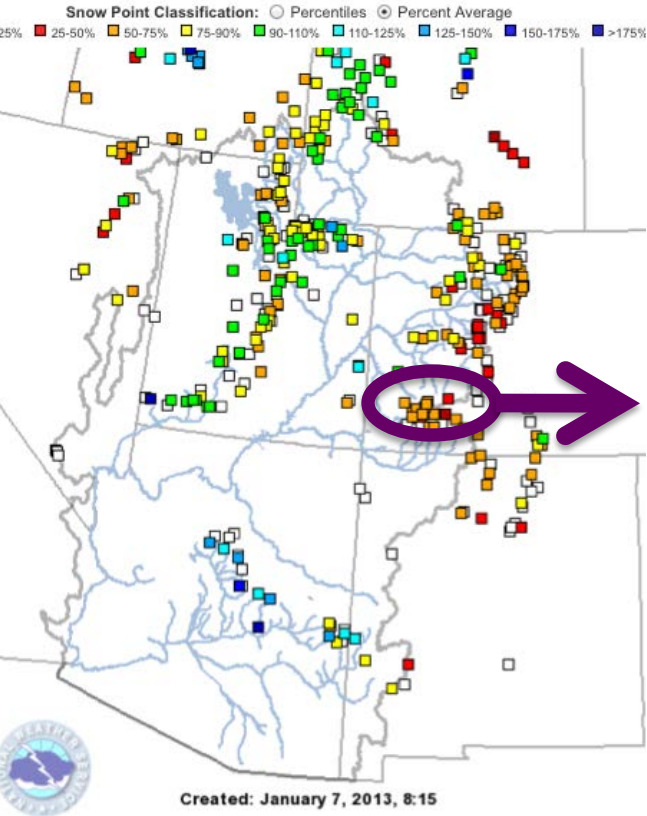
Snow: Colorado Mainstem (above Cameo)



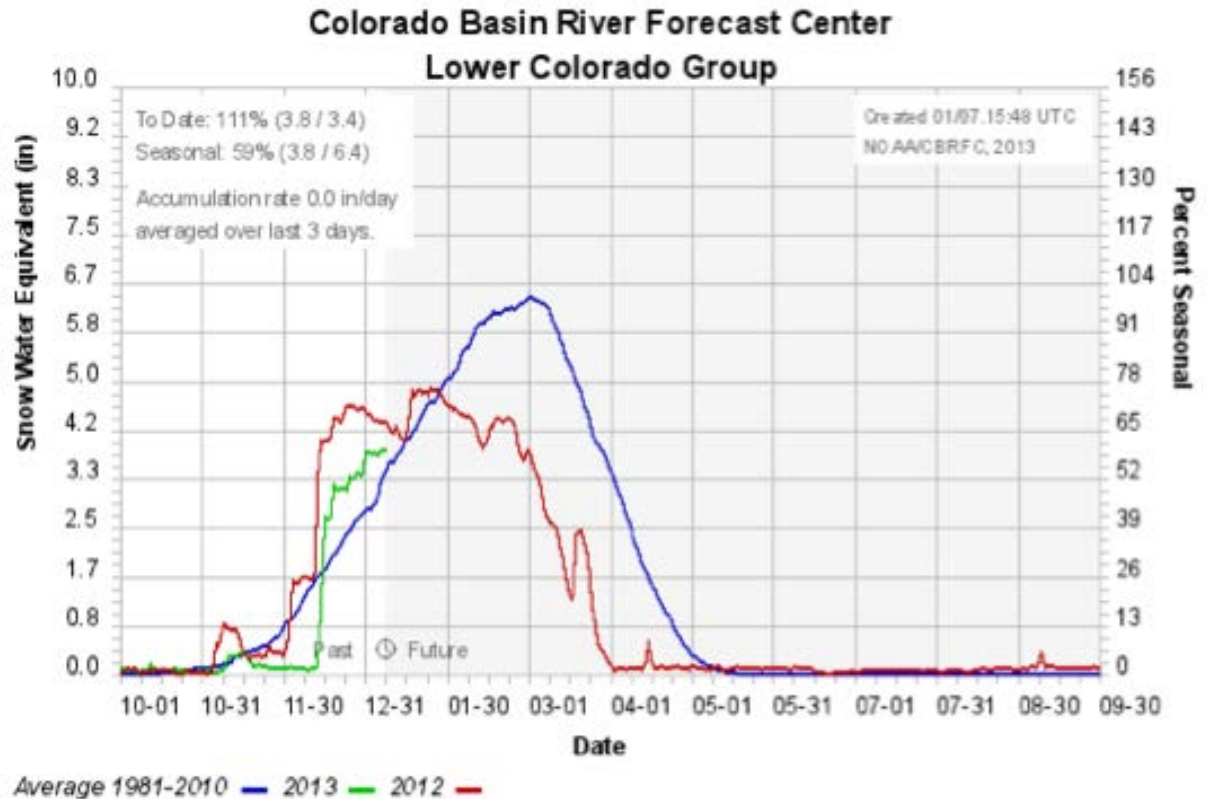
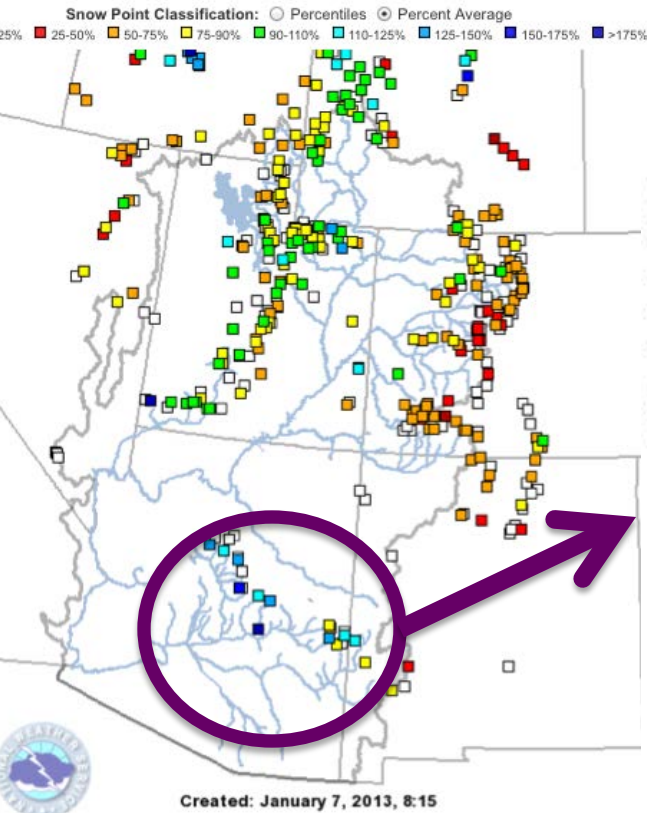
Snow: Gunnison Basin



Snow: San Juan Basin

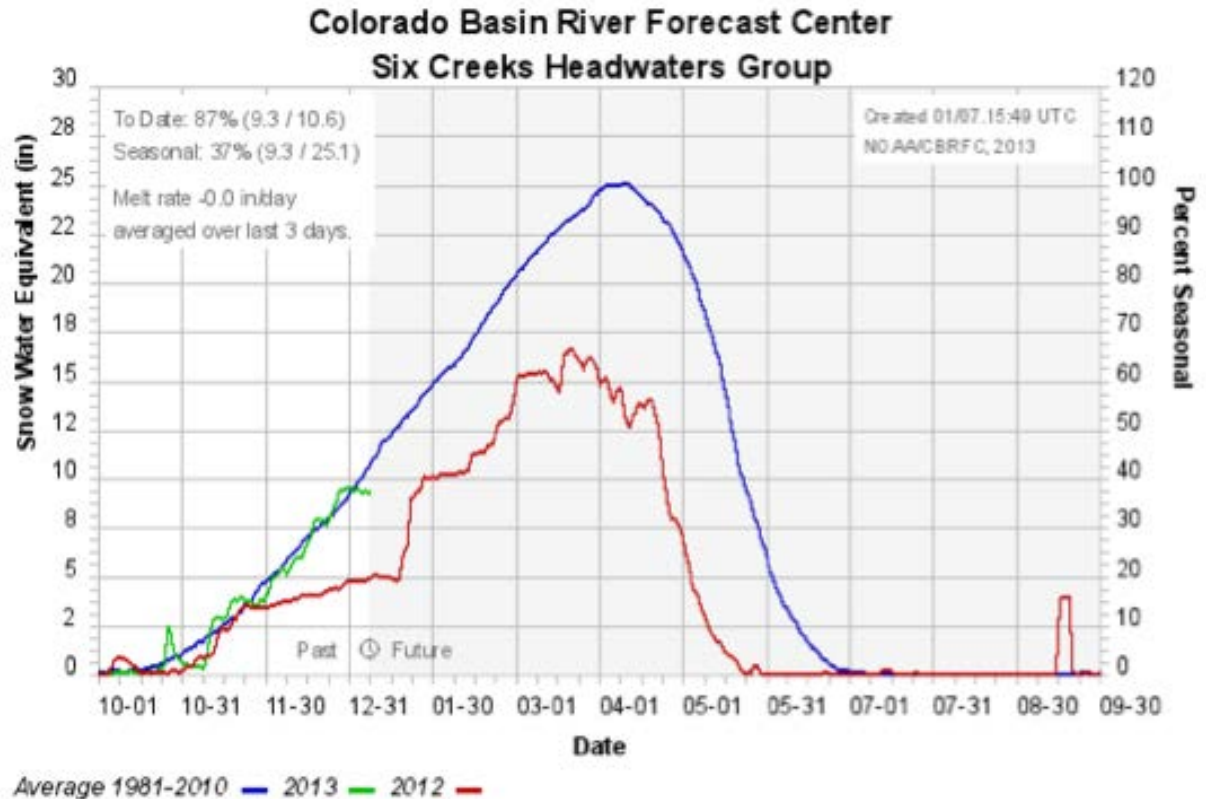
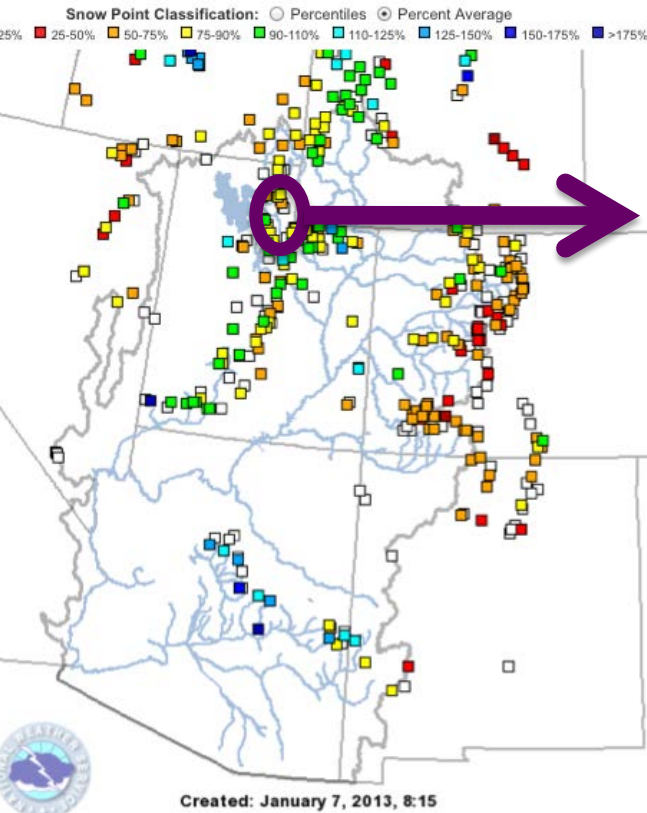


Snow: Lower Colorado

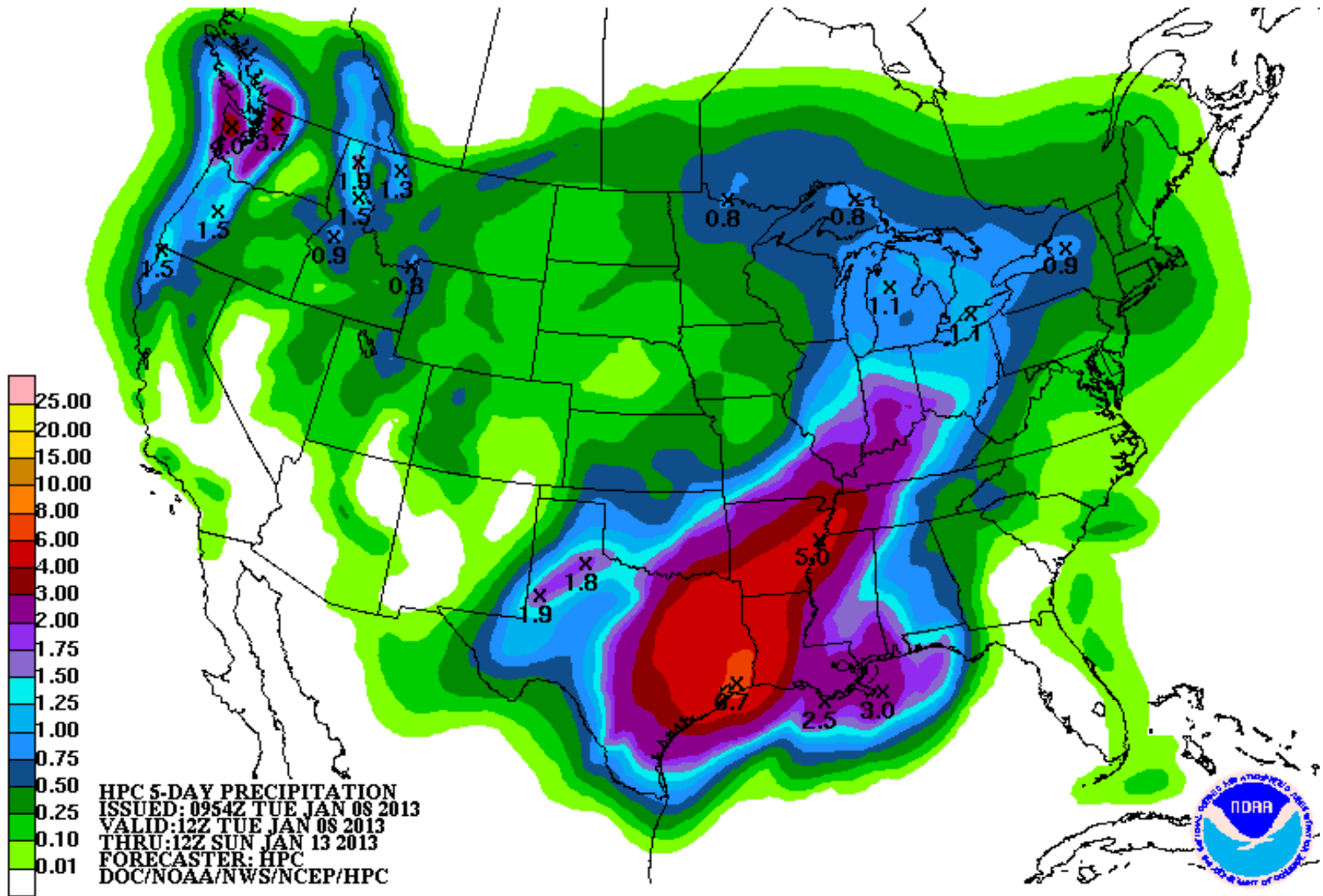


Snow:

Six Creeks in Salt Lake County

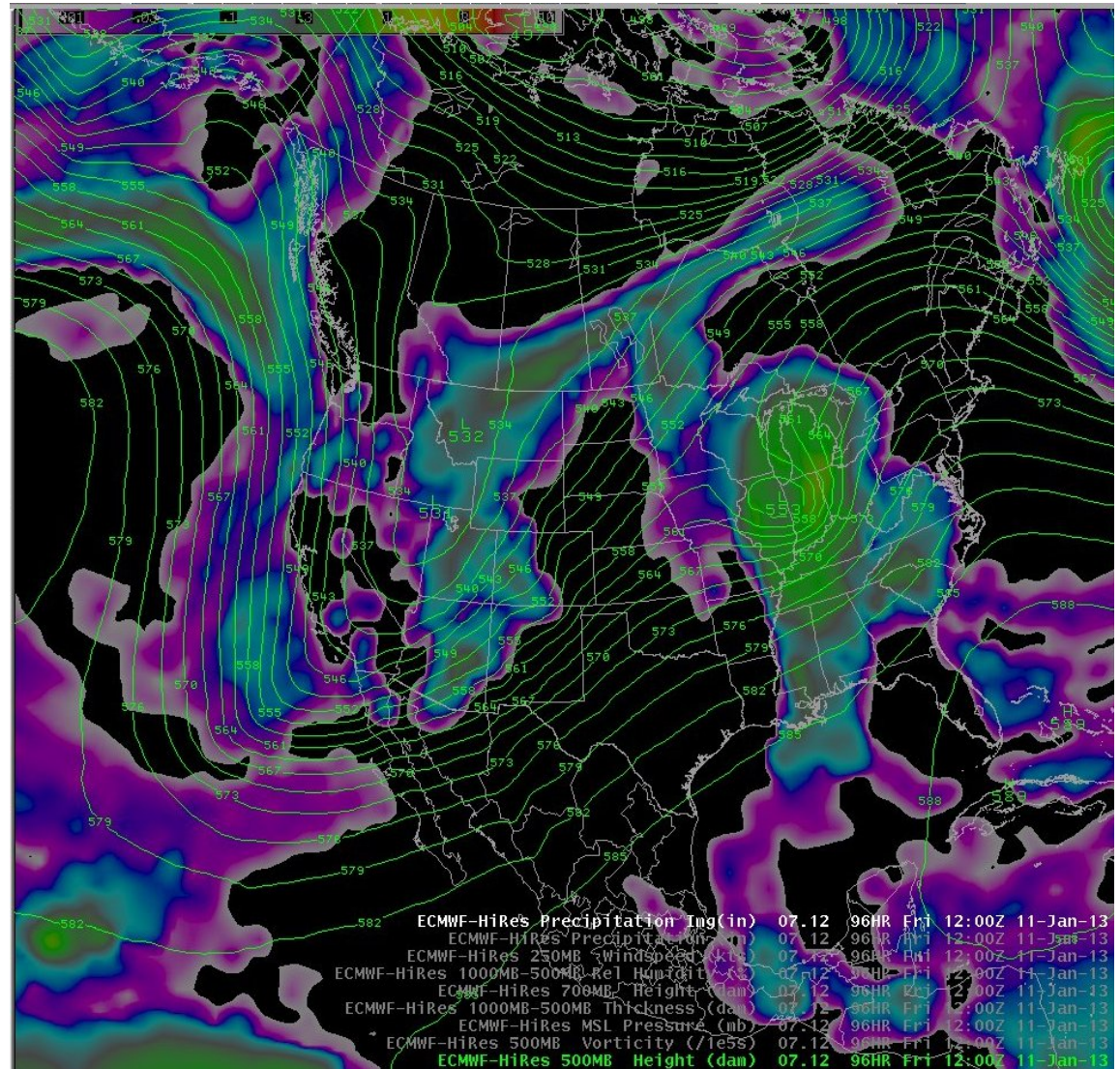


Forecast Precipitation

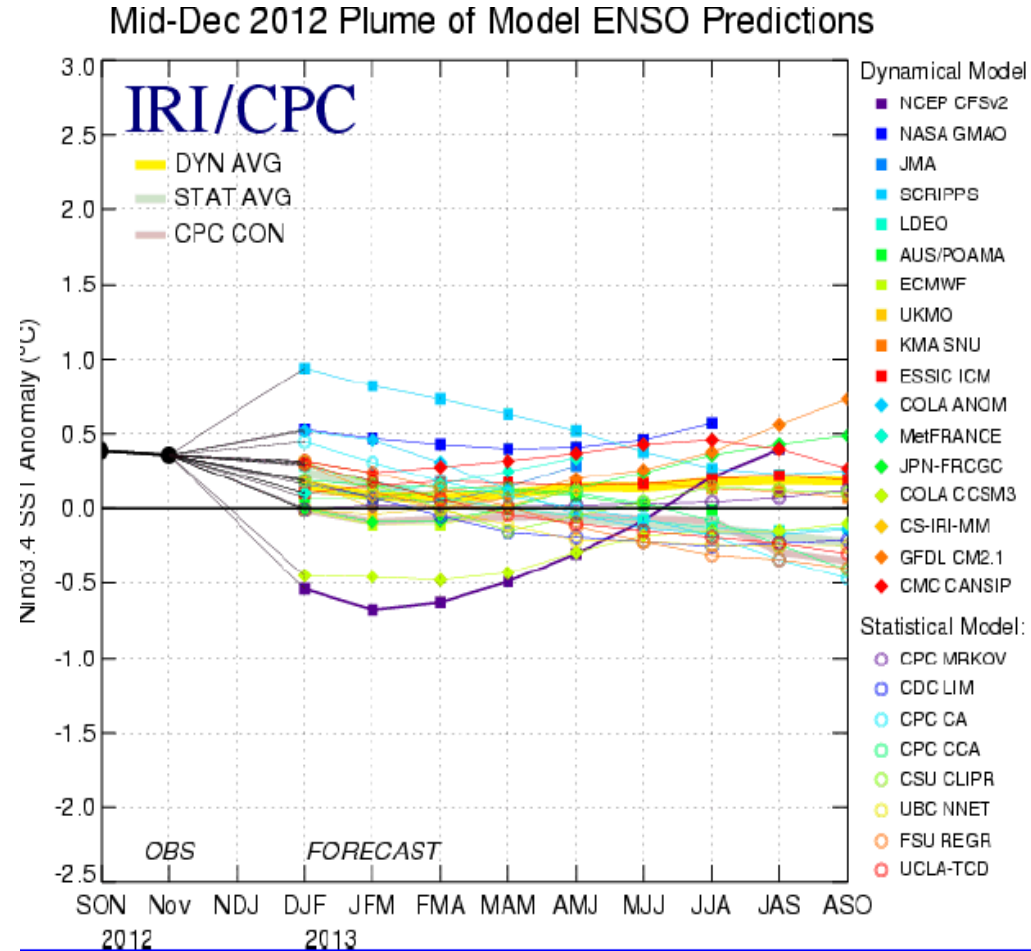
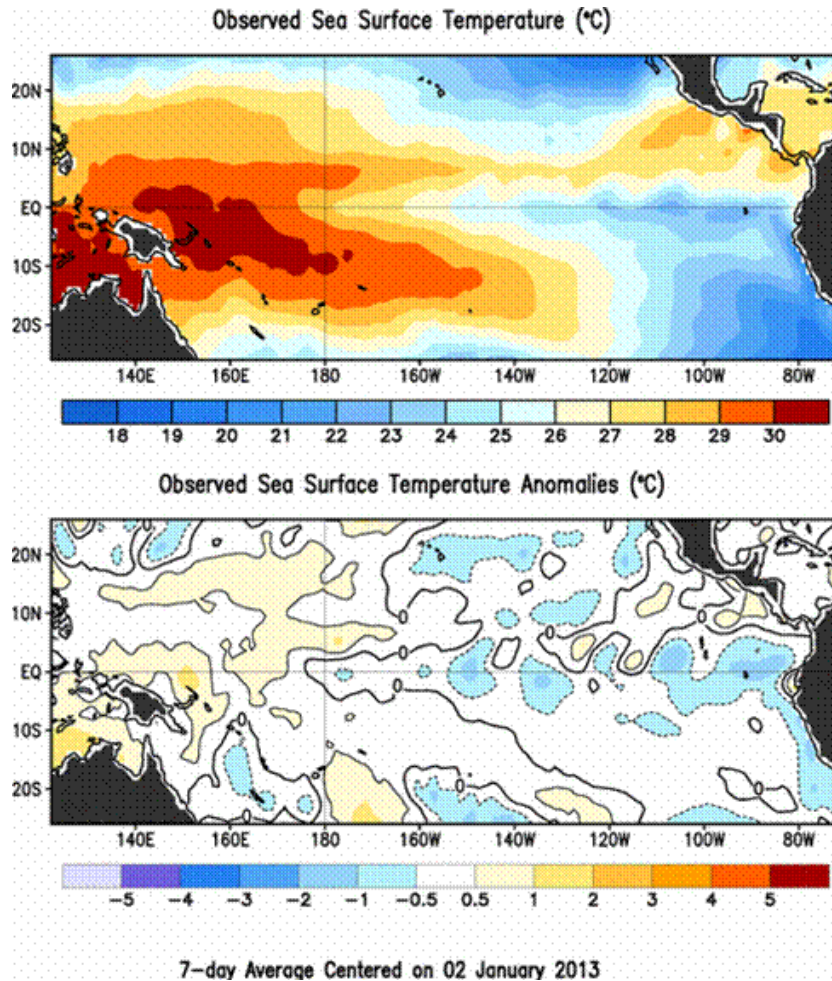


Forecast Precipitation

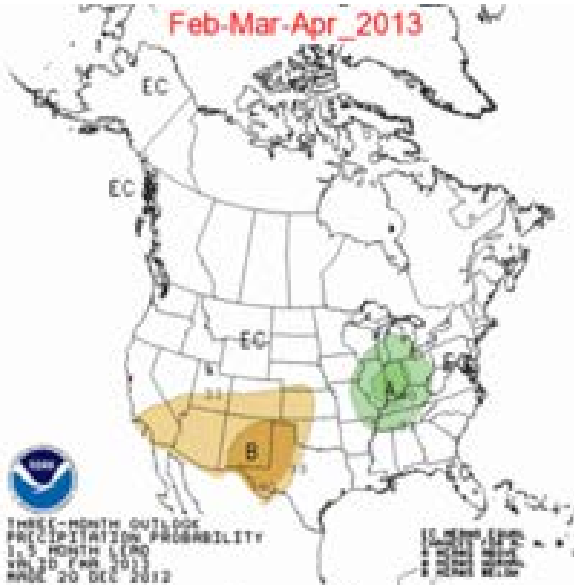
- Cold upper level trough for Thursday/Friday. Expect cold temperatures and widespread precipitation
- Trough slow to exit keeping chance of snow and cold temperatures through the weekend



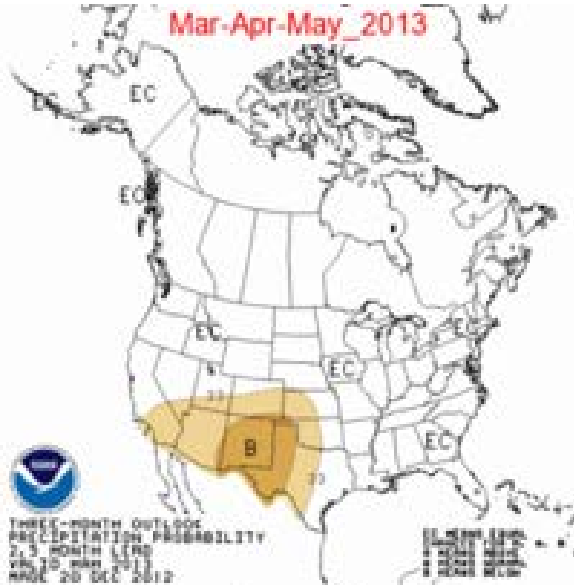
ENSO Update: Neutral Conditions



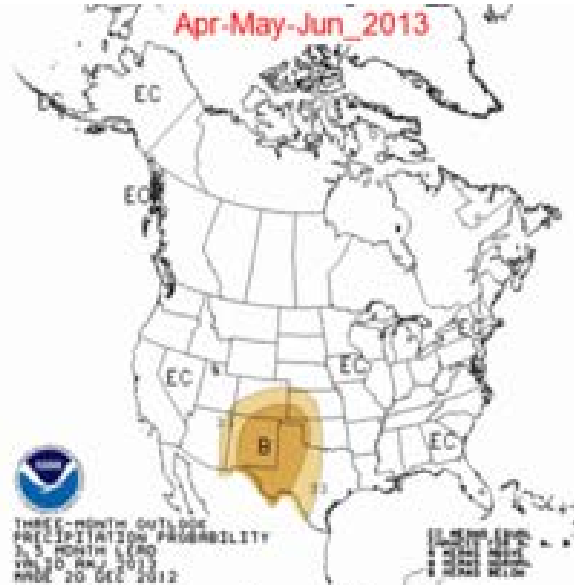
Feb-Mar-Apr_2013



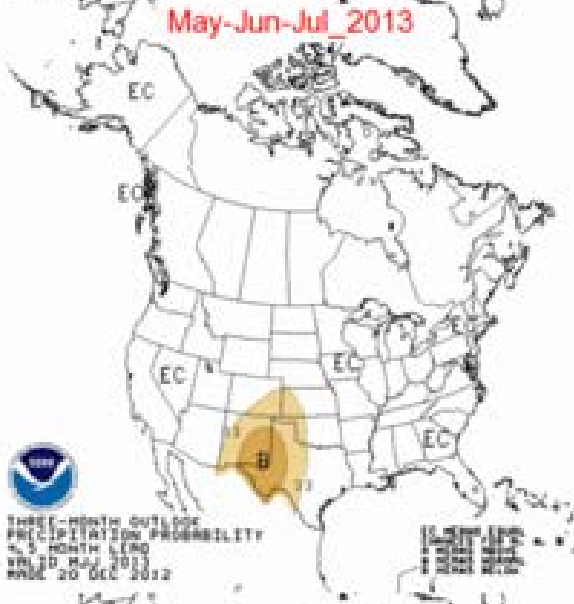
Mar-Apr-May_2013



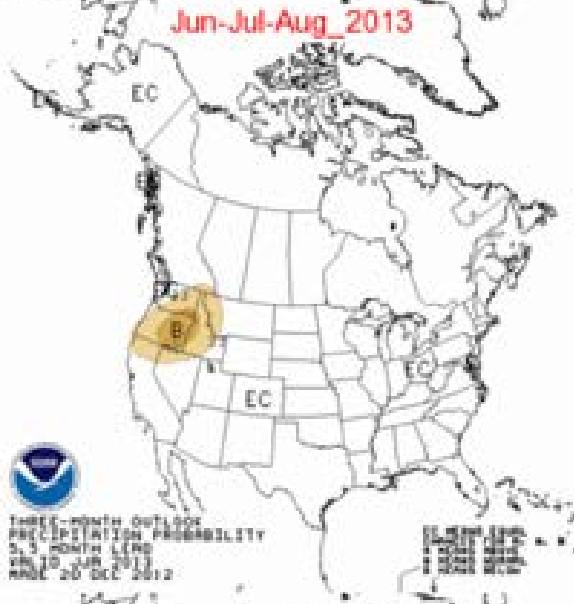
Apr-May-Jun_2013



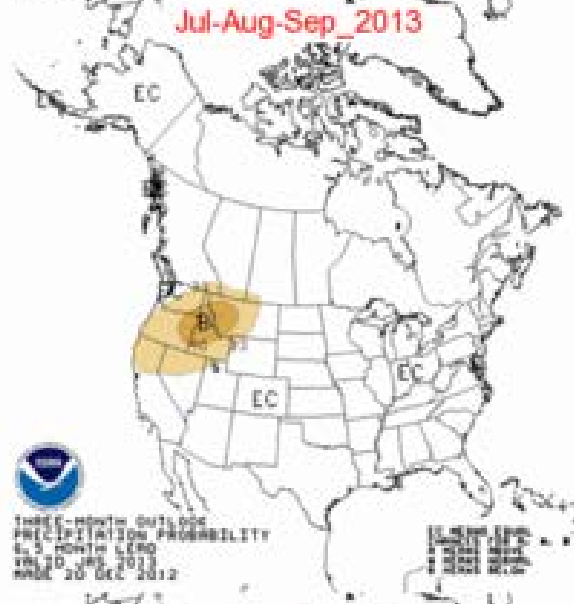
May-Jun-Jul_2013



Jun-Jul-Aug_2013

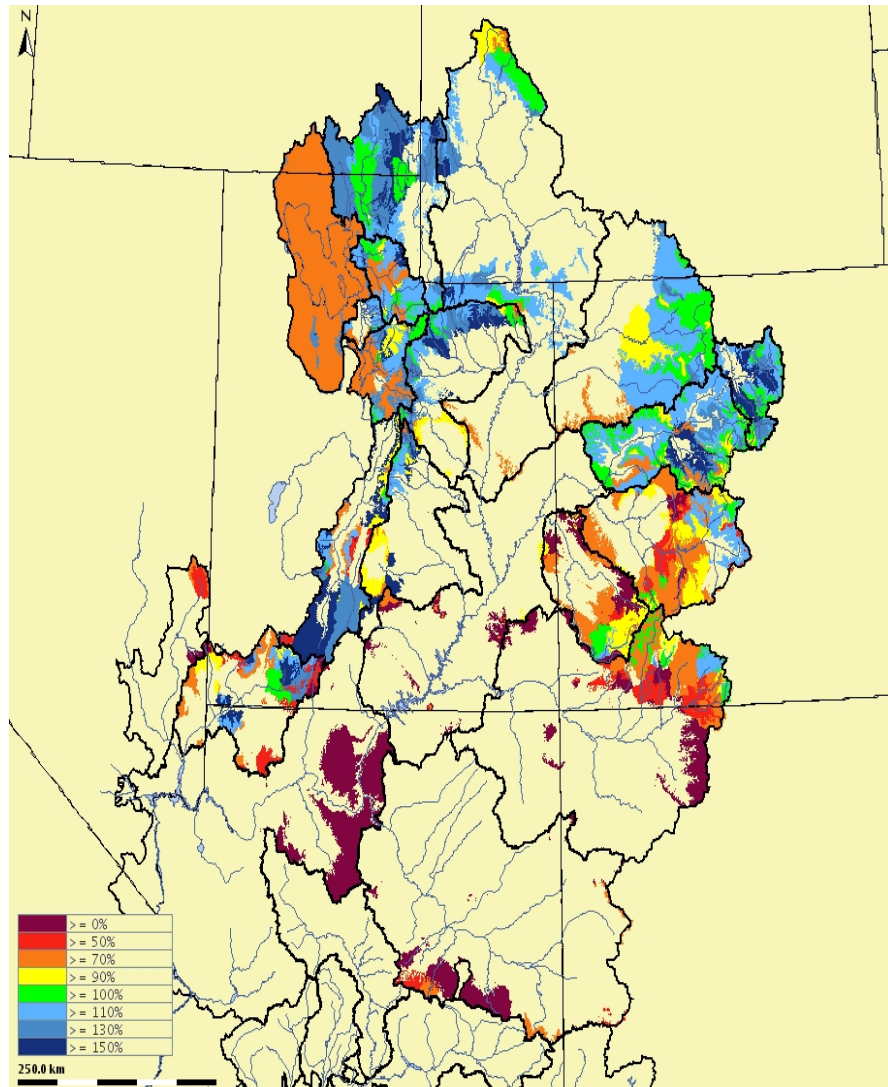


Jul-Aug-Sep_2013

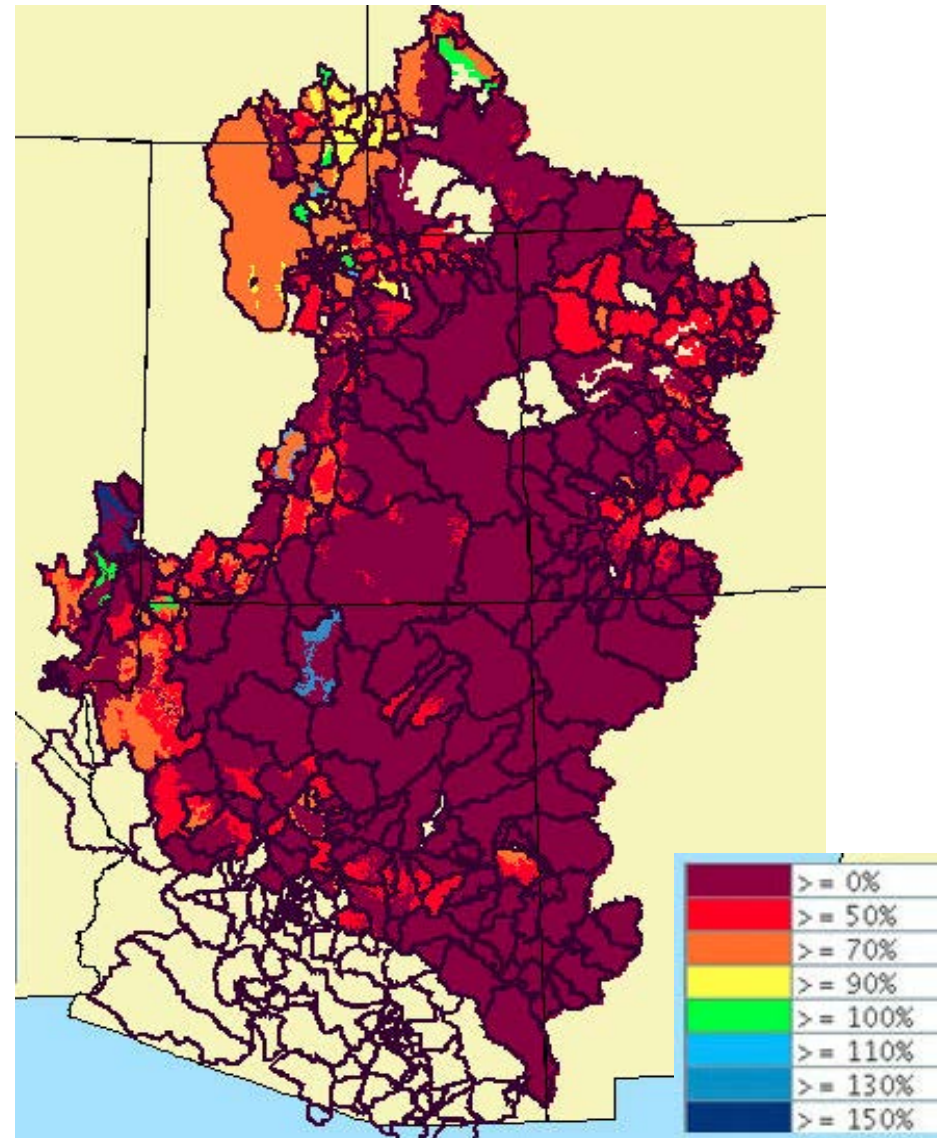


Modeled Soil Moisture

December 2011



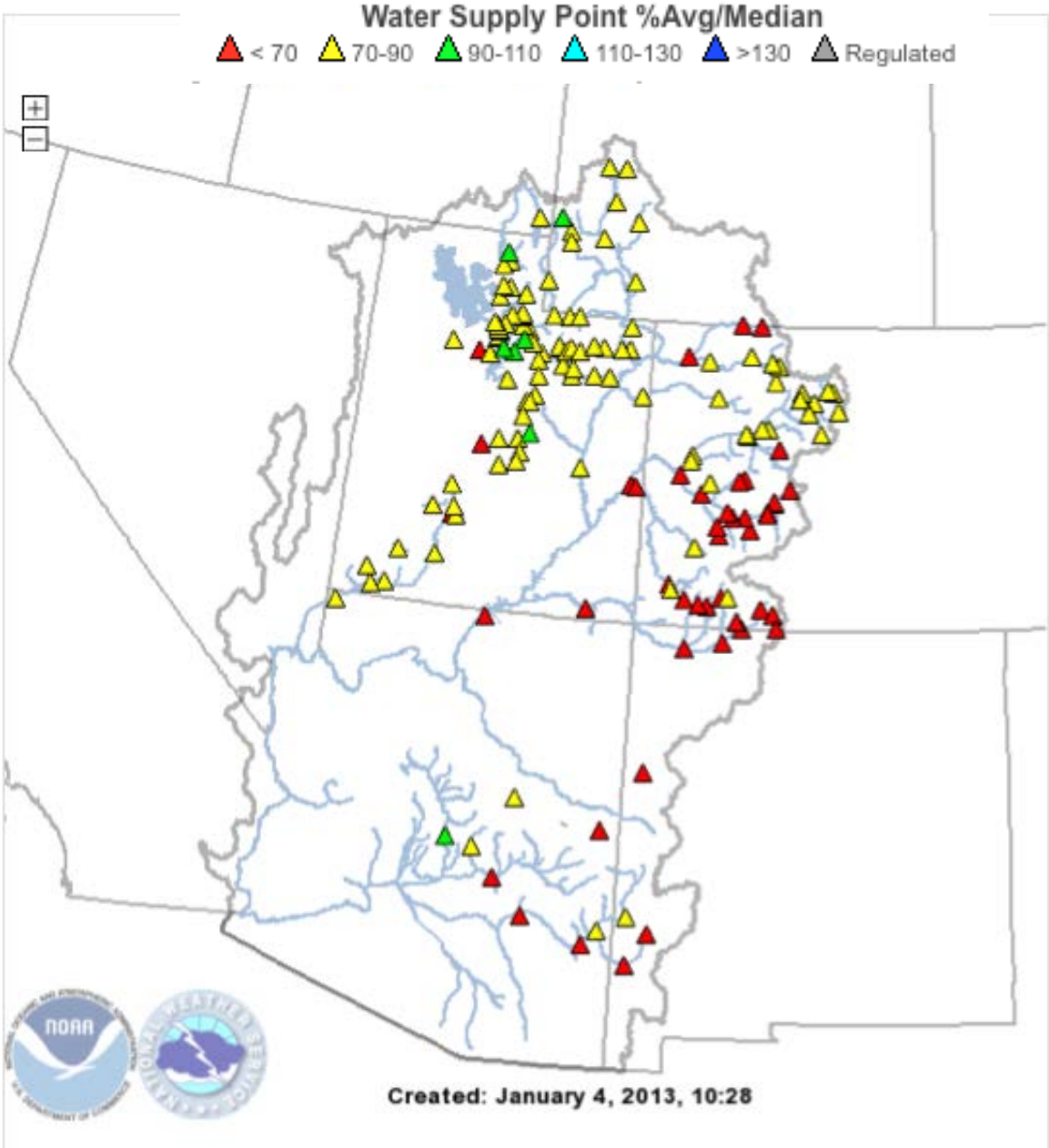
December 2012



January 1, 2013
Water Supply Forecasts

Highlights:
• Below average/median forecasts nearly everywhere

- Major factors:
 - Dry soil moisture conditions
 - Low snow in upper Colorado Basin.
 - Near normal snow in Great Basin and parts of the Green



Seasonal Water Supply Forecast ?

Forecast Period: Apr-Jul

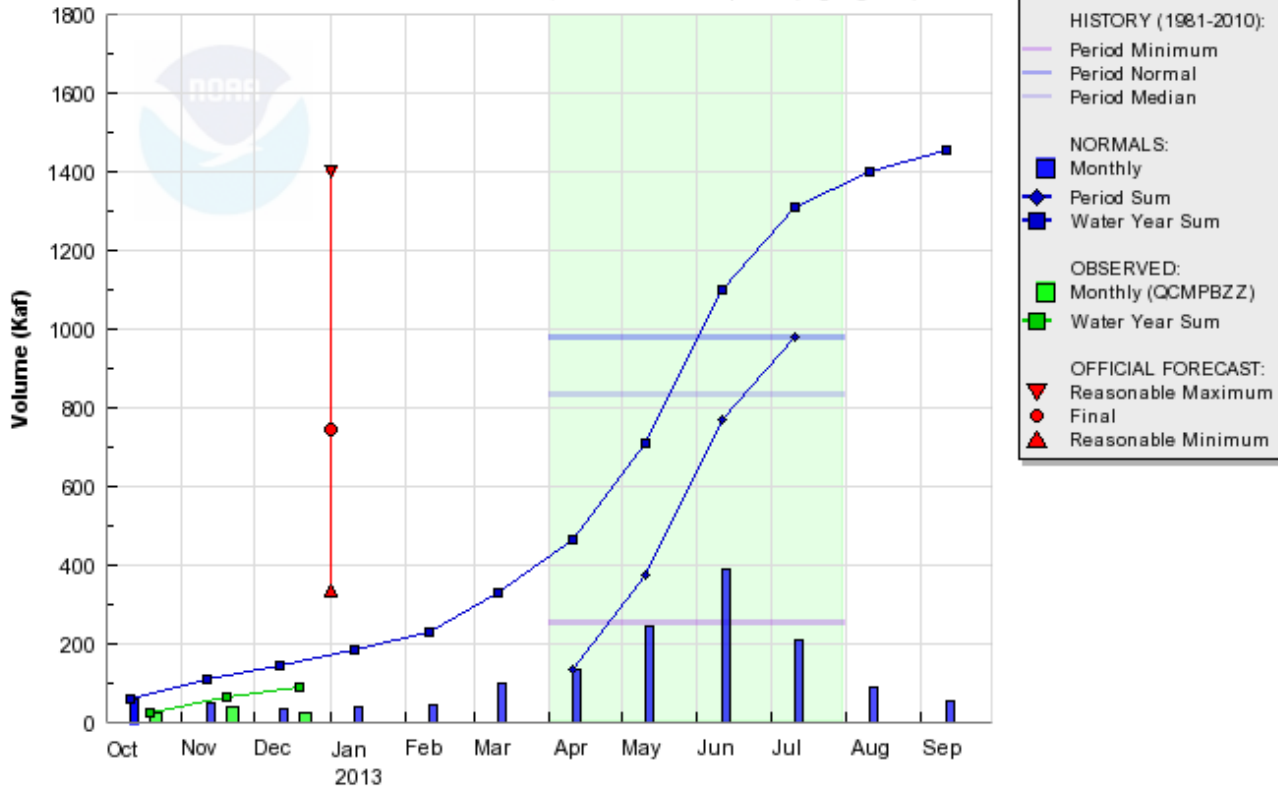
<h2>745 kaf</h2> <p>50% Exceedence (Official Forecast)</p>		<h2>89%</h2> <p>of Historical Median</p>	<h2>76%</h2> <p>of Historical Mean</p>
<h2>335 kaf</h2> <p>90% Exceedence</p>	<h2>1400 kaf</h2> <p>10% Exceedence</p>	<h2>51st of 72</h2> <p>Official Historical Flows</p>	

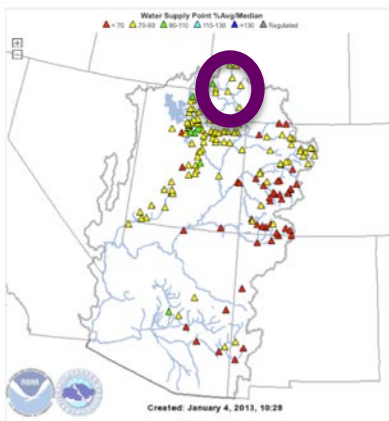
Forecast Issued: Jan 1 2013

[View Water Supply Forecast Plot](#)

GREEN - FLAMING GORGE RES, FLAMING GORGE DAM, AT (GPN11)

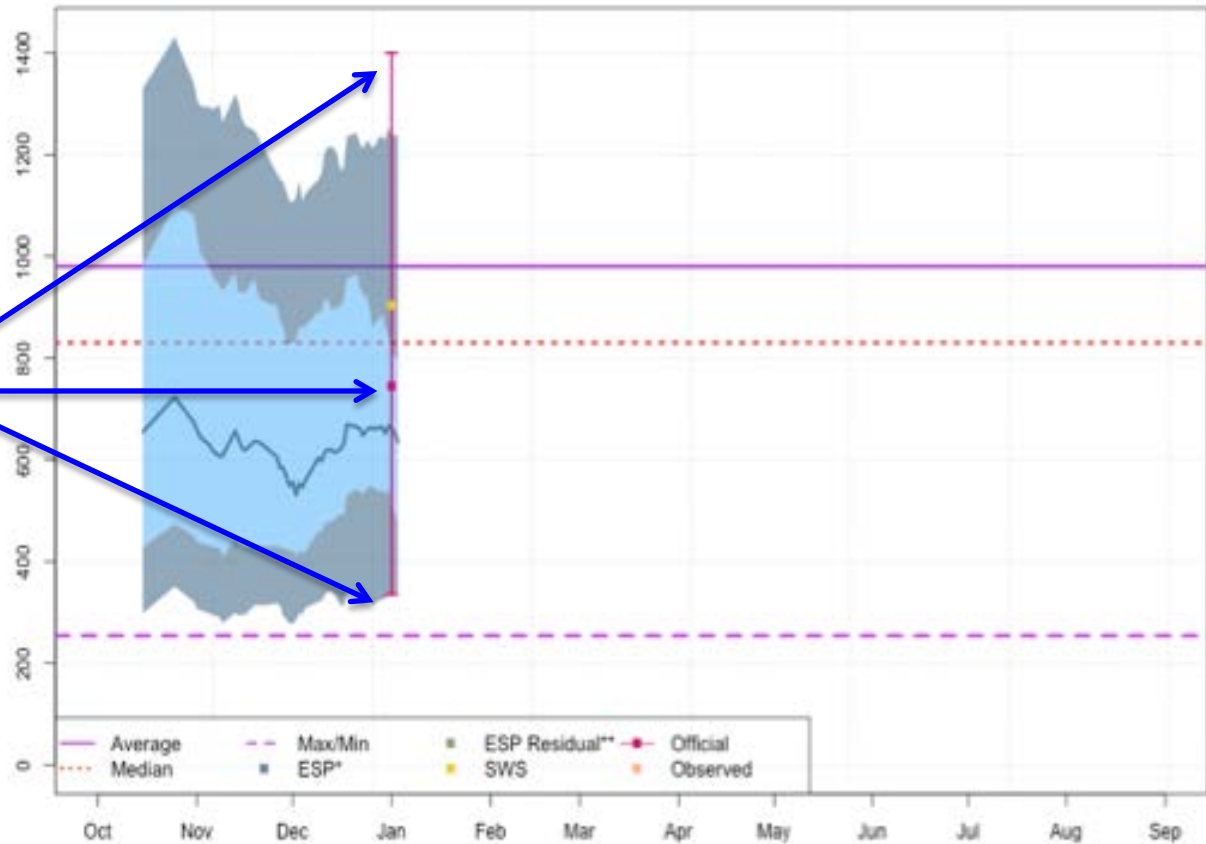
Water Year 2013, Forecast Period Apr-Jul (highlighted)





X Green - Flaming Gorge Res Flaming Gorge Dam At
 Plot Data Maps Verification Gage

GRNU1, Green - Flaming Gorge Res- Flaming Gorge Dam- At, 2013 WY, 0 Days, empirical



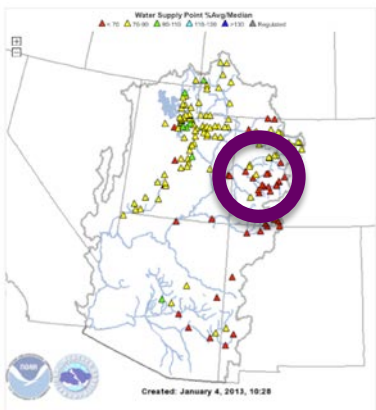
X More info
 Green - Flaming Gorge Res Flaming Gorge Dam At
 GRNU1

Official Forecast Date: 2013-01-01
 Official Min (90%): 335 kaf
 Official MP (50%): **745 kaf**
 Official Max (10%): 1400 kaf
 Official Percent Avg: **76%**
 Official Percent Med: **90%**

Average: 980 kaf
 Median: 830 kaf

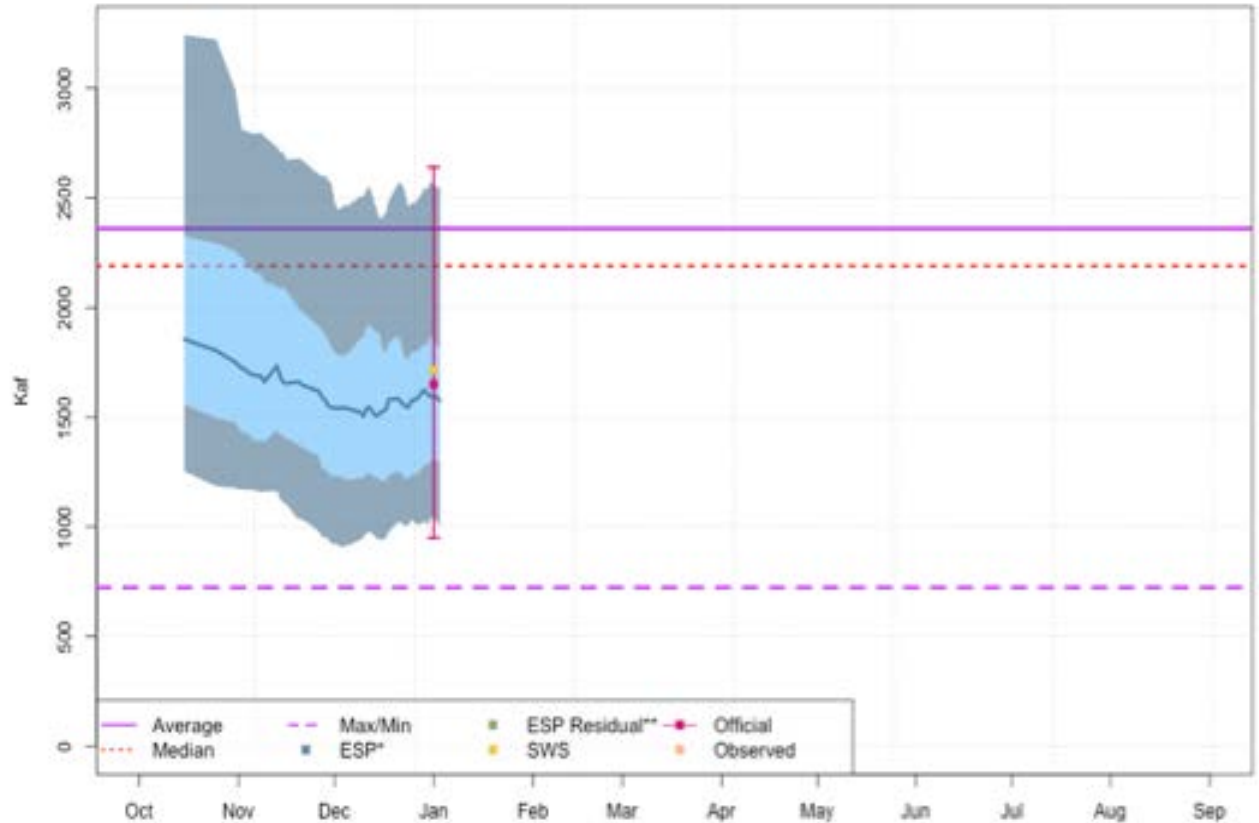
ESP Min (90%): 336 kaf
 ESP Min (70%): 446 kaf
 ESP MP (50%): **601 kaf**
 ESP Min (30%): 732 kaf
 ESP Max (10%): 1216 kaf

ESP Percent Average: **61%**
 ESP Percent Median: **72%**
 ESP Date: 2013-01-07



Colorado - Cameo Nr
 Plot Data Maps Verification Gage

CAMC2, Colorado - Cameo- Nr, 2013 WY, 0 Days, empirical



Max 4503 1984, Min 723.6 2002, Created 2013-01-04 10:35:41, CBRFC / NWS / NOAA
 *Exceedance forecast shading is 50%, 30-70%, and 10-90%. **Residual forecasts include observed (when available).

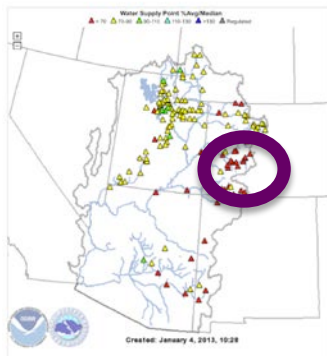
More info
 Colorado - Cameo Nr
 CAMC2

Official Forecast Date: 2013-01-01
 Official Min (90%): 950 kaf
 Official MP (50%): **1650 kaf**
 Official Max (10%): 2640 kaf
 Official Percent Avg: **70%**
 Official Percent Med: **75%**

Average: 2360 kaf
 Median: 2190 kaf

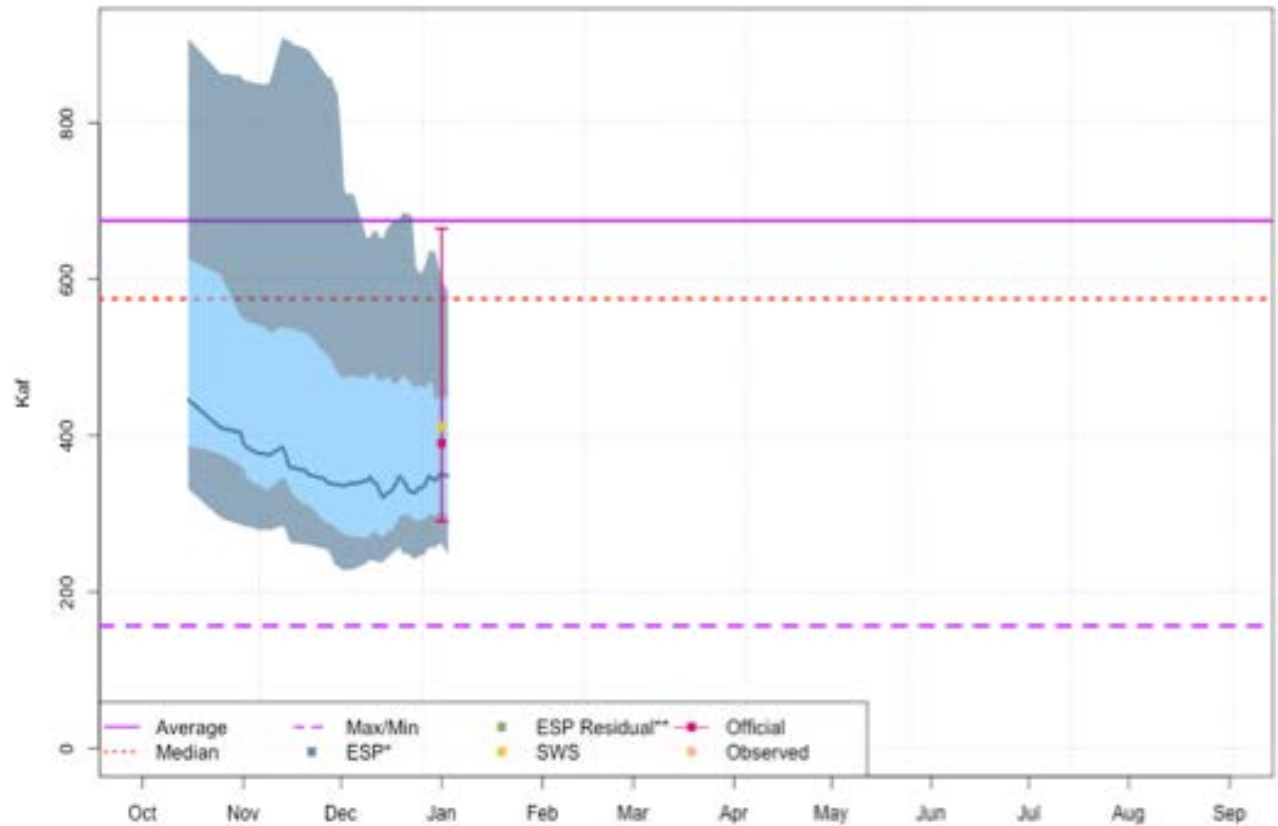
ESP Min (90%): 945 kaf
 ESP Min (70%): 1254 kaf
 ESP MP (50%): **1515 kaf**
 ESP Min (30%): 1757 kaf
 ESP Max (10%): 2427 kaf

ESP Percent Average: **64%**
 ESP Percent Median: **69%**
 ESP Date: 2013-01-07



X Gunnison - Blue Mesa Res
 Plot Data Maps Verification Gage

BMDC2, Gunnison - Blue Mesa Res, 2013 WY, 0 Days, empirical



X More info

Gunnison - Blue Mesa Res
 BMDC2

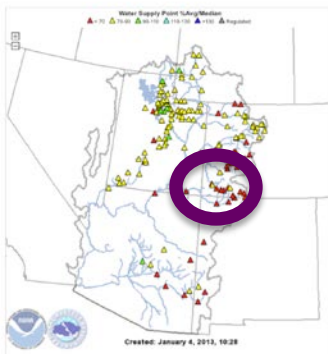
Official Forecast Date: 2013-01-01
 Official Min (90%): 290 kaf
 Official MP (50%): **390 kaf**
 Official Max (10%): 665 kaf
 Official Percent Avg: **58%**
 Official Percent Med: **68%**

Average: 675 kaf
 Median: 575 kaf

ESP Min (90%): 237 kaf
 ESP Min (70%): 282 kaf
 ESP MP (50%): **330 kaf**
 ESP Min (30%): 423 kaf
 ESP Max (10%): 530 kaf
 ESP Percent Average: **49%**
 ESP Percent Median: **57%**

ESP Date: 2013-01-07

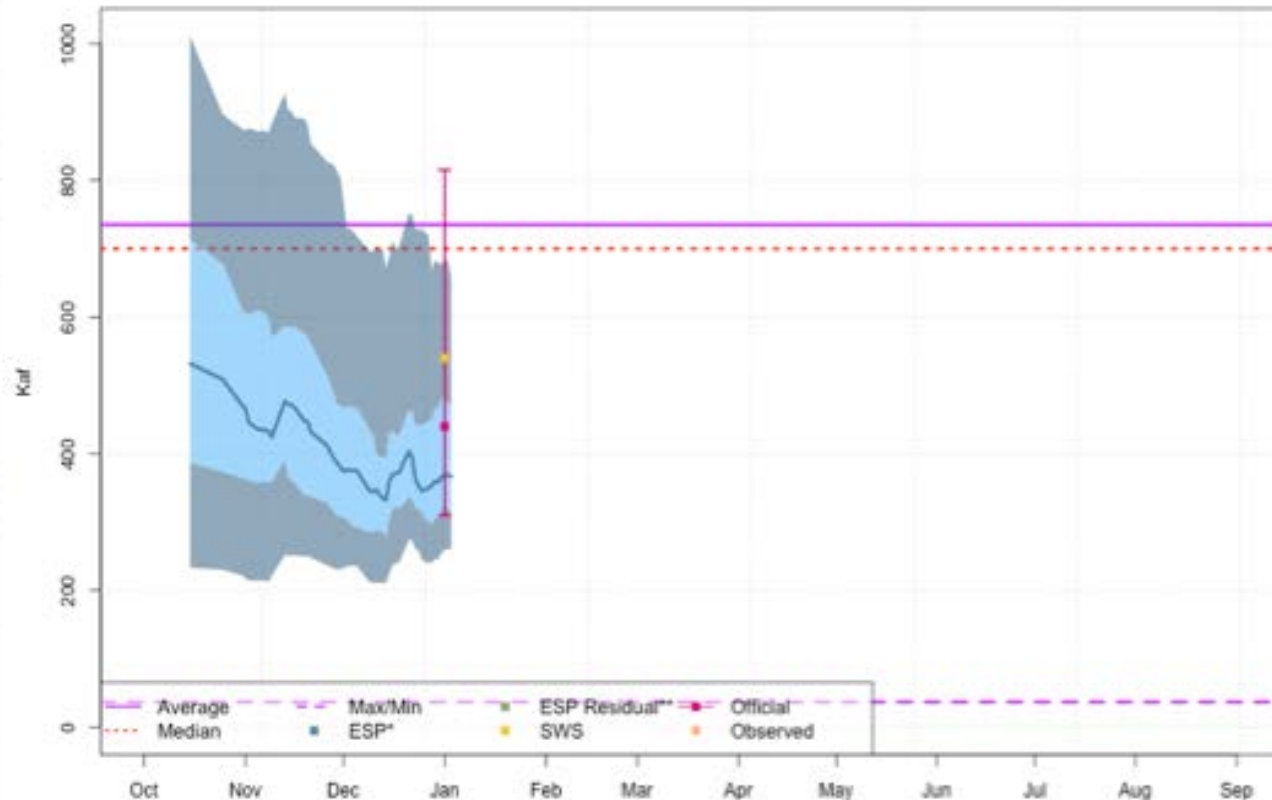
Max 1433 1984, Min 156.6 2002, Created 2013-01-04 10:35:37, CBRFC / NWS / NOAA
 *Exceedance forecast shading is 50%, 30-70%, and 10-90%. **Residual forecasts include observed (when available).



San Juan - Navajo Res Archuleta Nr

Plot Data Maps Verification Gage

NVRN5, San Juan - Navajo Res- Archuleta- Nr, 2013 WY, 0 Days, empirical



Max 1776.8 1979, Min 36.7 2002, Created 2013-01-04 10:37:24, CBRFC / NWS / NOAA

*Exceedance forecast shading is 50%, 30-70%, and 10-90%. **Residual forecasts include observed (when available).

More info

San Juan - Navajo Res Archuleta Nr
NVRN5

Official Forecast Date: 2013-01-01

Official Min (90%): 310 kaf

Official MP (50%): **440 kaf**

Official Max (10%): 815 kaf

Official Percent Avg: **60%**

Official Percent Med: **63%**

Average: 735 kaf

Median: 700 kaf

ESP Min (90%): 228 kaf

ESP Min (70%): 284 kaf

ESP MP (50%): **339 kaf**

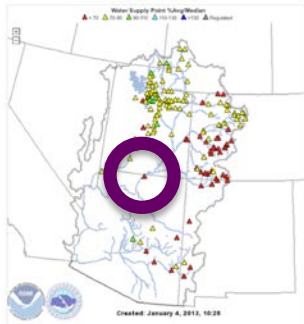
ESP Min (30%): 450 kaf

ESP Max (10%): 621 kaf

ESP Percent Average: **46%**

ESP Percent Median: **48%**

ESP Date: 2013-01-07



✕ Colorado - Lake Powell Glen Cyn Dam At
 Plot Data Maps Verification Gage

GLDA3, Colorado - Lake Powell- Glen Cyn Dam- At, 2013 WY, 0 Days, empirical

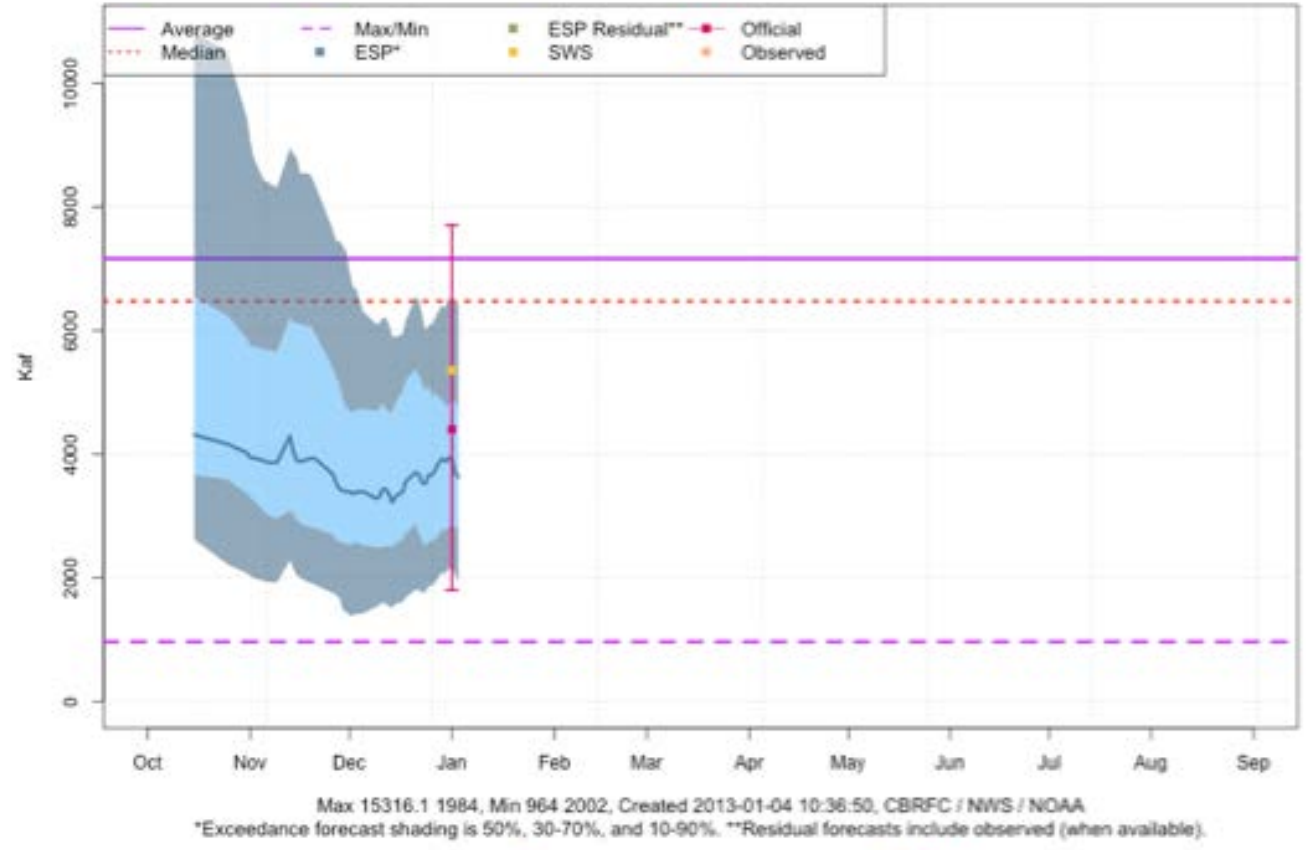
✕ More info
 Colorado - Lake Powell Glen Cyn Dam At
 GLDA3

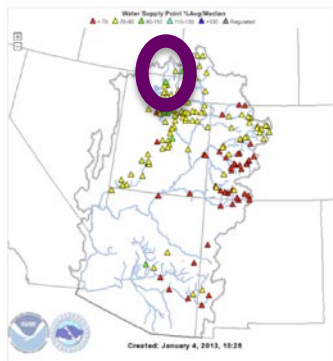
Official Forecast Date: 2013-01-01
 Official Min (90%): 1800 kaf
 Official MP (50%): **4400 kaf**
 Official Max (10%): 7700 kaf
 Official Percent Avg: **61%**
 Official Percent Med: **68%**

Average: 7160 kaf
 Median: 6470 kaf

ESP Min (90%): 1620 kaf
 ESP Min (70%): 2421 kaf
 ESP MP (50%): **3224 kaf**
 ESP Min (30%): 4127 kaf
 ESP Max (10%): 6092 kaf

ESP Percent Average: **45%**
 ESP Percent Median: **50%**
 ESP Date: 2013-01-06

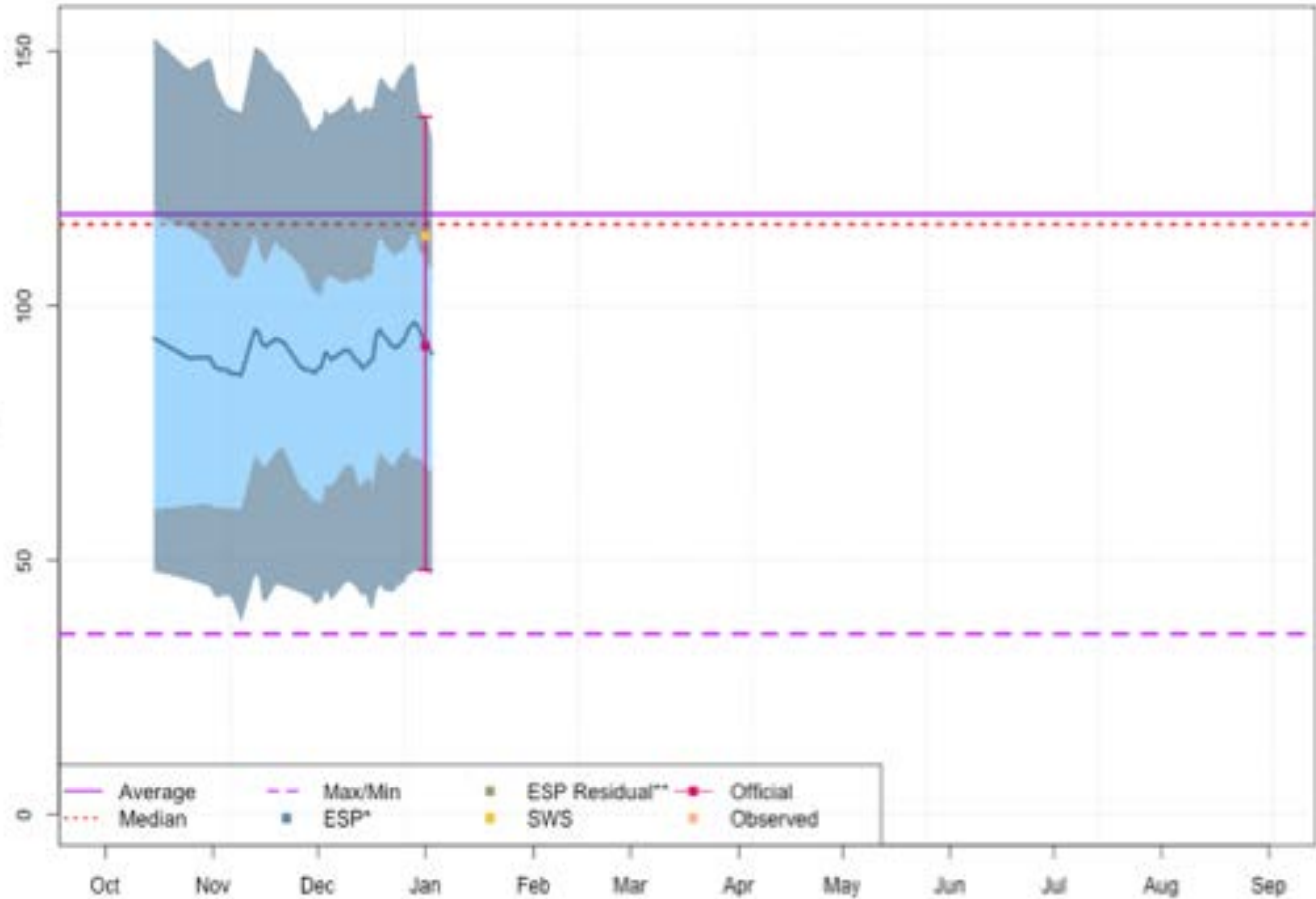




✕ Weber - Oakley Nr

Plot Data Maps Verification Gage

OAWU1, Weber - Oakley- Nr, 2013 WY, 0 Days, empirical



✕ More info

Weber - Oakley Nr
OAWU1

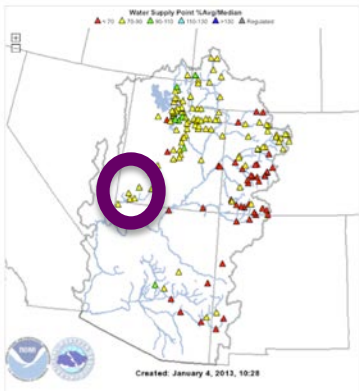
Official Forecast Date: 2013-01-01
 Official Min (90%): 48 kaf
 Official MP (50%): 92 kaf
 Official Max (10%): 137 kaf
 Official Percent Avg: 78%
 Official Percent Med: 79%

Average: 118 kaf
 Median: 116 kaf

ESP Min (90%): 45 kaf
 ESP Min (70%): 67 kaf
 ESP MP (50%): 88 kaf
 ESP Min (30%): 99 kaf
 ESP Max (10%): 130 kaf

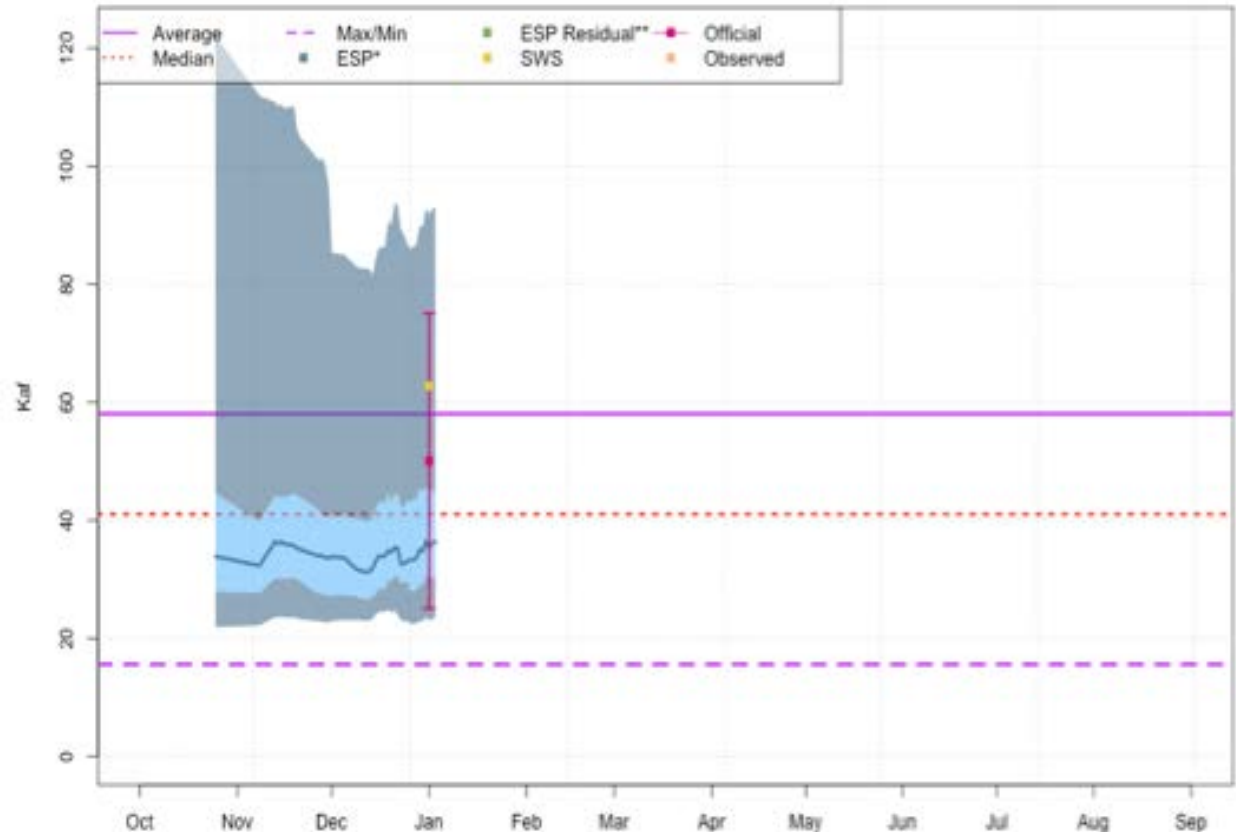
ESP Percent Average: 74%
 ESP Percent Median: 76%
 ESP Date: 2013-01-06

Max 254.2 1907, Min 35.5 1934, Created 2013-01-04 10:37:25, CBRFC / NWS / NOAA
 *Exceedance forecast shading is 50%, 30-70%, and 10-90%. **Residual forecasts include observed (when available).



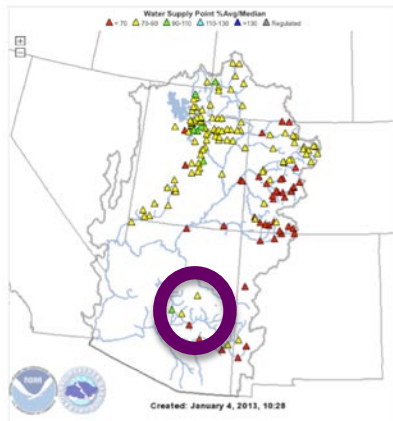
Virgin - Virgin
 Plot Data Maps Verification Gage

VIRU1, Virgin - Virgin, 2013 WY, 0 Days, empirical



Max 208.3 2005, Min 15.6 2002, Created 2013-01-04 10:38:13, CBRFC / NWS / NOAA
 *Exceedance forecast shading is 50%, 30-70%, and 10-90%. **Residual forecasts include observed (when available).

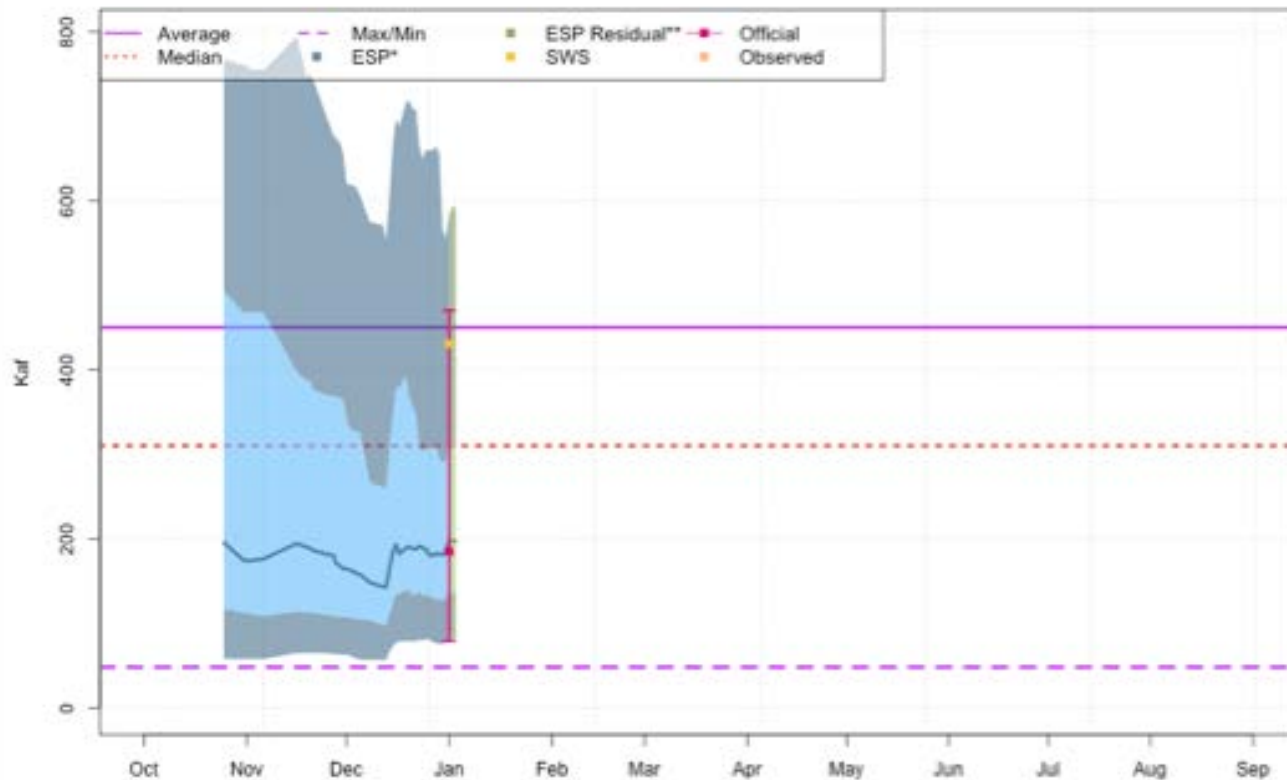
Virgin - Virgin
 VIRU1
 Official Forecast Date: 2013-01-01
 Official Min (90%): 25 kaf
 Official MP (50%): 50 kaf
 Official Max (10%): 75 kaf
 Official Percent Avg: 86%
 Official Percent Med: 122%
 Average: 58 kaf
 Median: 41 kaf
 ESP Min (90%): 20 kaf
 ESP Min (70%): 27 kaf
 ESP MP (50%): 31 kaf
 ESP Min (30%): 40 kaf
 ESP Max (10%): 78 kaf
 ESP Percent Average: 54%
 ESP Percent Median: 77%
 ESP Date: 2013-01-06



✕ Salt - Roosevelt Nr

Plot Data Maps Verification Gage

SLRA3, Salt - Roosevelt- Nr, 2013 WY, 0 Days, empirical



Max 2120.2 1916, Min 48.2 2002, Created 2013-01-04 10:37:49, CBRFC / NWS / NOAA
 *Exceedance forecast shading is 50%, 30-70%, and 10-90%. **Residual forecasts include observed (when available).

Salt - Roosevelt Nr SLRA3

Official Forecast Date: 2013-01-01
 Official Min (90%): 79 kaf
 Official MP (50%): 185 kaf
 Official Max (10%): 470 kaf
 Official Percent Avg: 60%
 Official Percent Med: 60%

Average: 310 kaf
 Median: 310 kaf

ESP Min (90%): 79 kaf
 ESP Min (70%): 111 kaf
 ESP MP (50%): 184 kaf
 ESP Min (30%): 269 kaf
 ESP Max (10%): 469 kaf

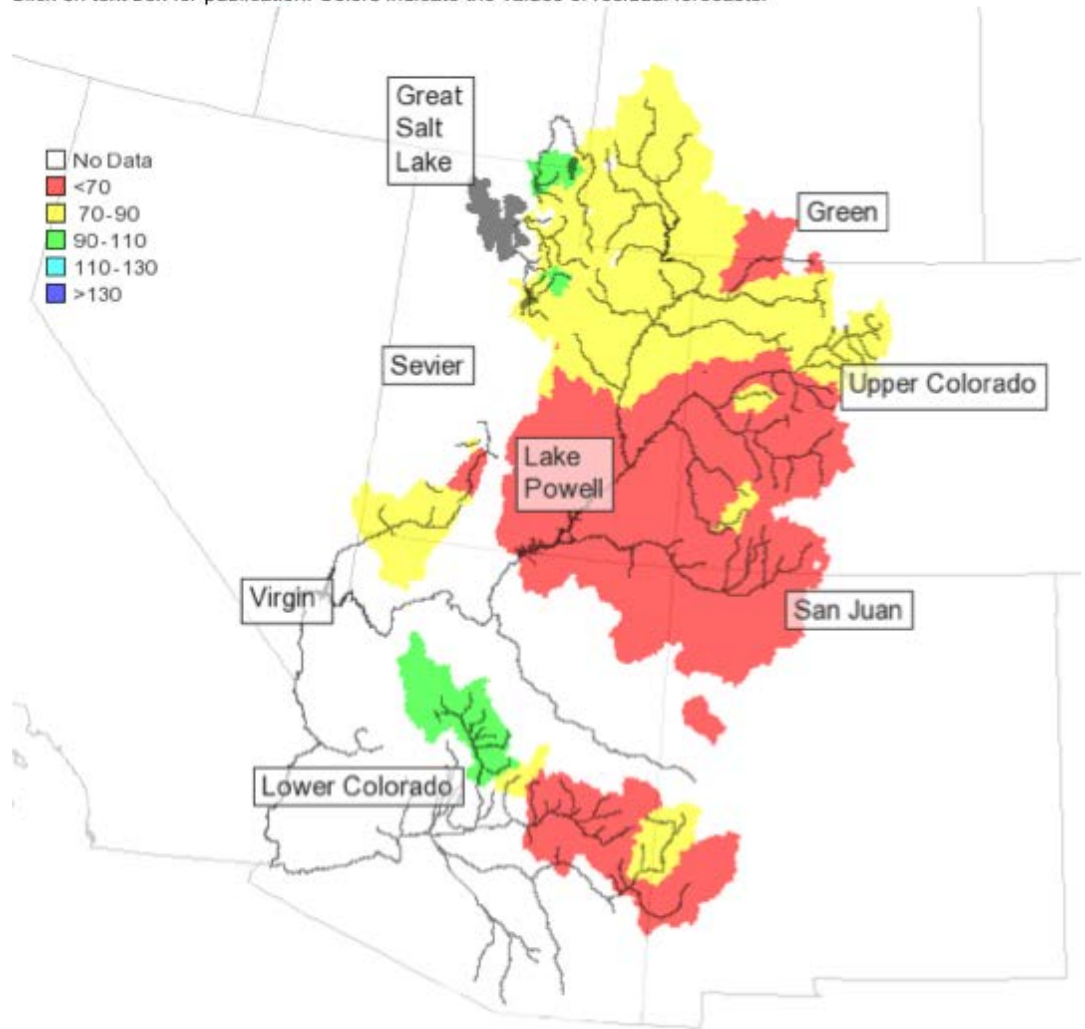
ESP Percent Average: 41%
 ESP Percent Median: 59%
 ESP Date: 2013-01-06

Online Publication

Water Supply Outlook, January 1, 2013

New 1981-2010 Averages being used this year.

Click on text box for publication. Colors indicate the values of residual forecasts.



Web Reference: www.cbrfc.noaa.gov/wsup/pub2/map/html/cpub.php



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

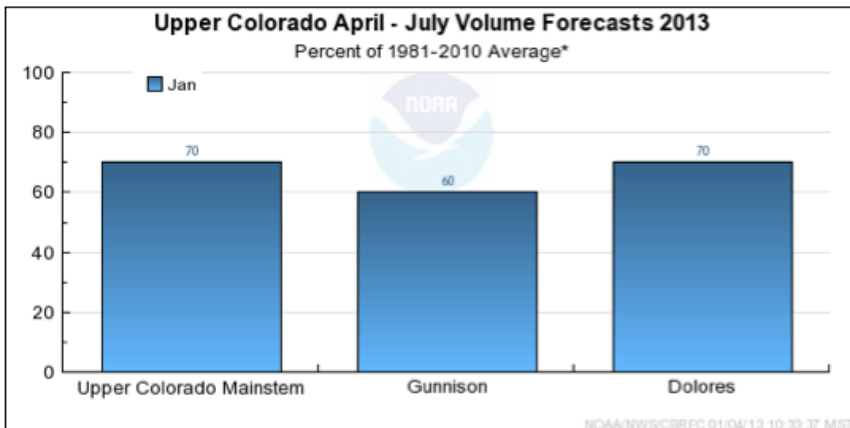
Contents

- Water Supply Forecast Discussion
- Upper Colorado Mainstem Basin Conditions
- Gunnison Basin Conditions
- Dolores Basin Conditions
- Upper Colorado Mainstem Specific Site Forecasts
- Gunnison Specific Site Forecasts
- Dolores Specific Site Forecasts
- Reservoir Contents
- Precipitation Maps
- Definitions
- Additional Information
- Questions or Comments

Water Supply Forecast Discussion

CLICK HERE For a narrative describing last months weather conditions, current hydrologic conditions, and water supply forecasts

Upper Colorado Summary



*Median of forecasts within each basin

Click site name for graph.

	Forecast Period	90% Exceedance Volume	50% Exceedance Volume	Percent Average	10% Exceedance Volume
Colorado					
Lake Granby, Granby, Nr	April-July	97	165	75	250
Willow Ck					
Willow Ck Res, Granby, Nr	April-July	17	38	81	67
Fraser					
Winter Park	April-July	8	15	77	22
Williams Fork					
Williams Fork Res, Parshall, Nr	April-July	45	75	78	112
Muddy Ck					
Wolford Mountain Reservoir	April-July	15	40	74	70
Blue					
Dillon Res	April-July	65	115	71	178
Green Mtn Res	April-July	115	200	73	315
Colorado					
Kremmling, Nr	April-July	330	620	72	950
Eagle					
Gypsum, Blo	April-July	130	235	70	400
Colorado					
Dotsero, Nr	April-July	535	995	71	1580
Frying Pan					
Ruedi Res, Basalt, Nr	April-July	50	90	65	157
Roaring Fork					
Glenwood Springs	April-July	280	470	68	755
Colorado					
Glenwood Springs, Blo	April-July	850	1500	71	2350
Cameo, Nr	April-July	950	1650	70	2640
Plateau Ck					
Cameo, Nr	April-July	34	88	71	175
Colorado					
Cisco, Nr	April-July	1700	2860	64	4900
Lake Powell, Glen Cyn Dam, At	April-July	1800	4400	61	7700

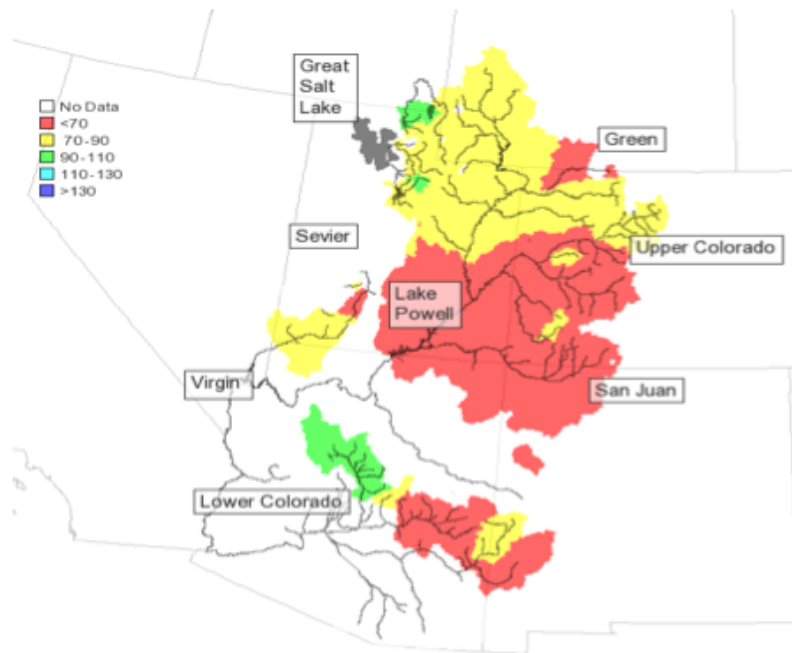
JANUARY 1st 2013 Water Supply Forecasts & Discussion

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

Seasonal Water Supply Forecasts:

Below average spring and summer April-July streamflow volumes are forecast throughout the Upper Colorado River Basin and Great Basin. Below to near median January-May volumes are expected in the Lower Colorado River Basin.

The highest runoff volumes relative to average are expected in the Great Basin of northern Utah and Green River Basin of southeast Utah. Lowest volumes relative to average are forecast for the Gunnison and San Juan Basins. In the Lower Colorado River Basin highest volumes relative to median are expected in the Verde Basin with lowest volumes in the Gila Basin



[specific site water supply forecasts](#)

Water Supply Discussion

Weather Synopsis:

The weather pattern during the October-November period resulted in storms affecting the very northern parts of the forecast area including the northern Great Basin in Utah and Green River Basin of Wyoming. Minimal precipitation occurring throughout the Upper Colorado River Basin and Lower Colorado River Basin.

CBRFC News

- Basin Focal Points (Available to discuss forecasts: 801.524.5130)
 - Upper Colorado: Brenda Alcorn
 - Green: Ashley Nielson
 - San Juan / Gunnison: Greg Smith
 - Dolores: John Lhotak
 - Great Basin: Brent Bernard
 - Sevier / Virgin: Stacie Bender
 - Lower Colorado (below Lake Powell): Tracy Cox
- Misc:
 - Sign up for next webinar Feb 6
 - Email product updates via govdelivery no longer working – let us know if you want to be on new mailing list.

More Resources

- www.cbrfc.noaa.gov
- wateroutlook.nwrfc.noaa.gov
- February webinar: 11am Feb 6

Feedback, Questions, Concerns always welcome....



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