

CBRFC
January 2012
Water Supply Webinar

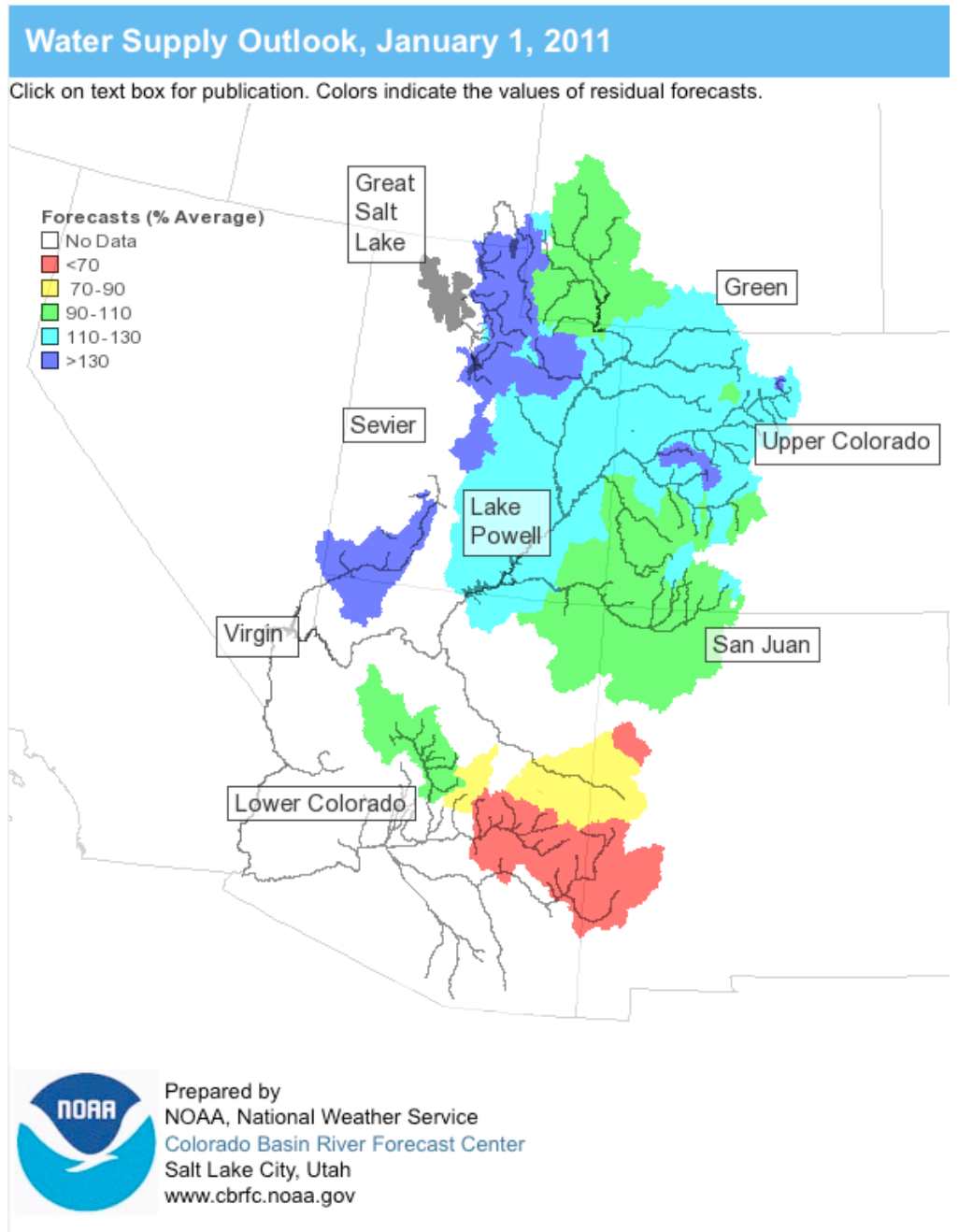
1pm, January 6, 2012

Kevin Werner

These slides: www.cbrfc.noaa.gov/present/present.php

Outline

- December Weather Review
- Snow States
- Water Supply Forecasts

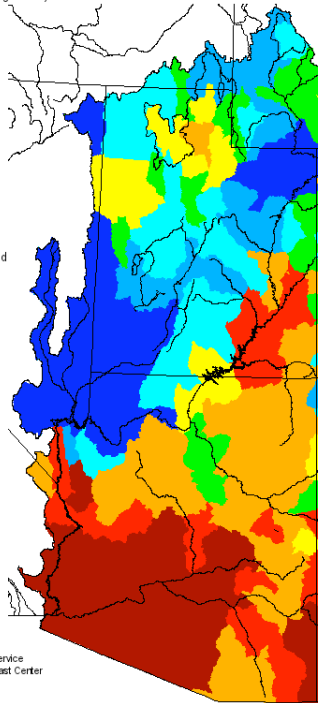
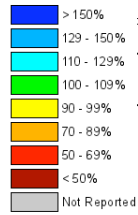


Web Reference: www.cbrfc.noaa.gov/wsup/pub2/map/html/cbrfc.1.2011.html

Monthly Precipitation for October 2011

(Averaged by Hydrologic Unit)

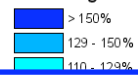
% Average



Monthly Precipitation for November 2011

(Averaged by Hydrologic Unit)

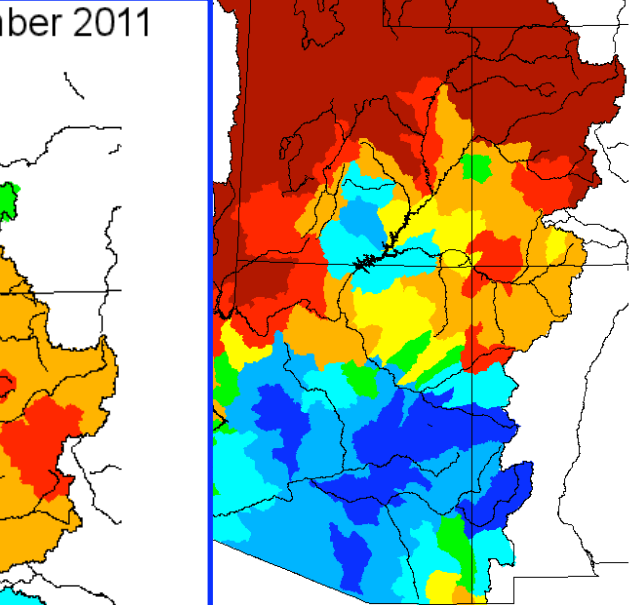
% Average



Monthly Precipitation for December 2011

(Averaged by Hydrologic Unit)

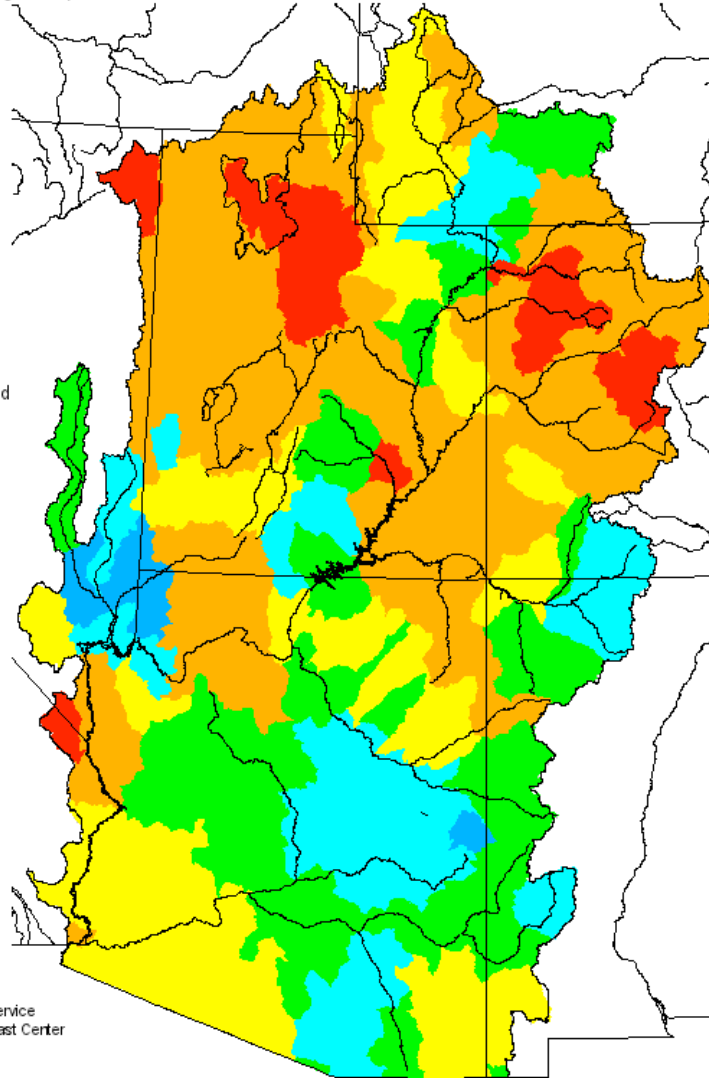
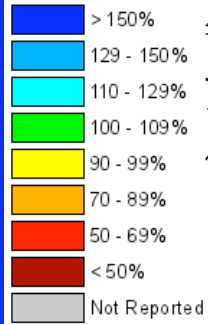
% Average



Seasonal Precipitation, October 2011 - December 2011

(Averaged by Hydrologic Unit)

% Average

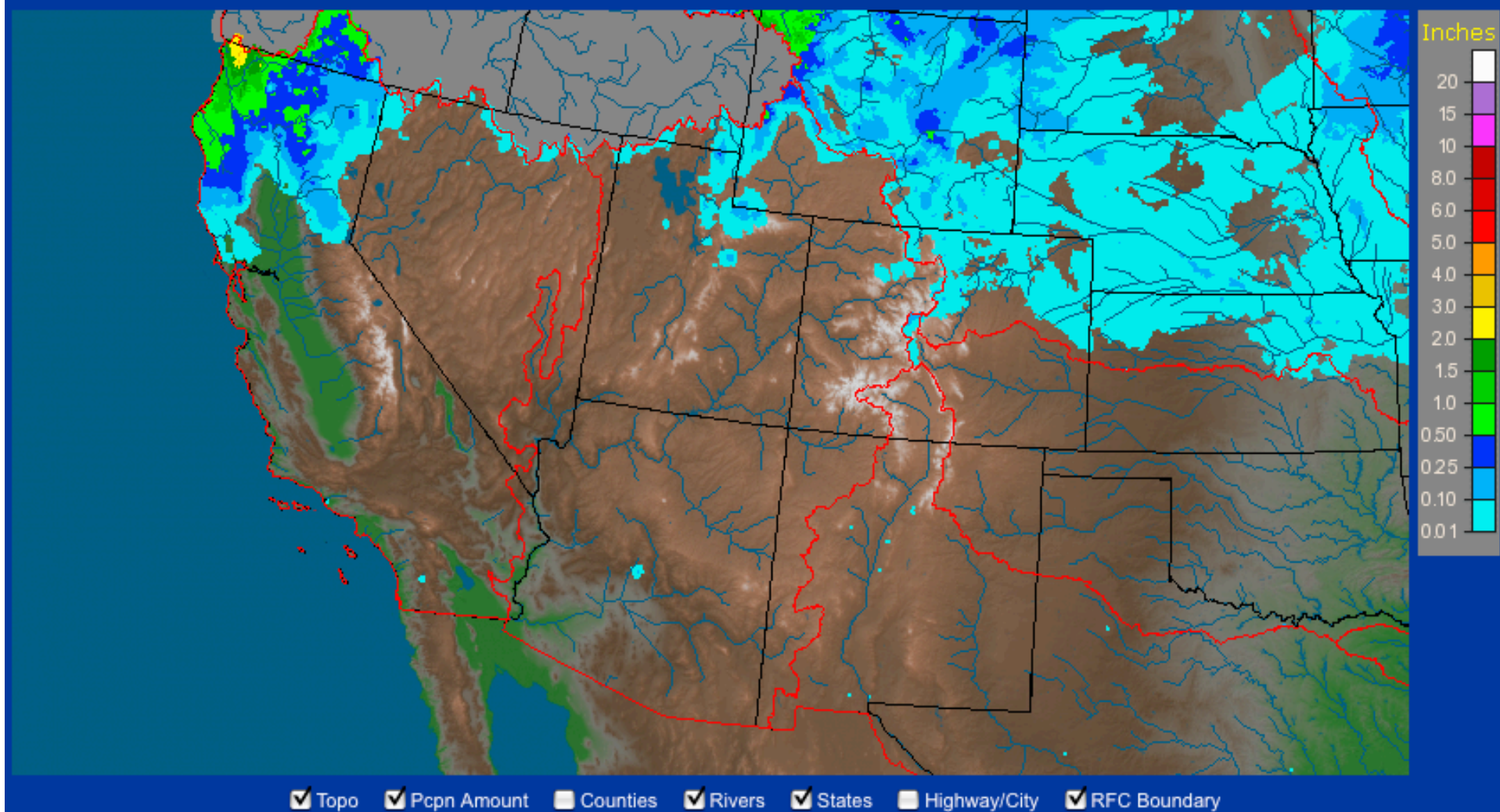


Prepared by
 NOAA, National Weather Service
 Colorado Basin River Forecast Center
 Salt Lake City, Utah
www.cbrfc.noaa.gov

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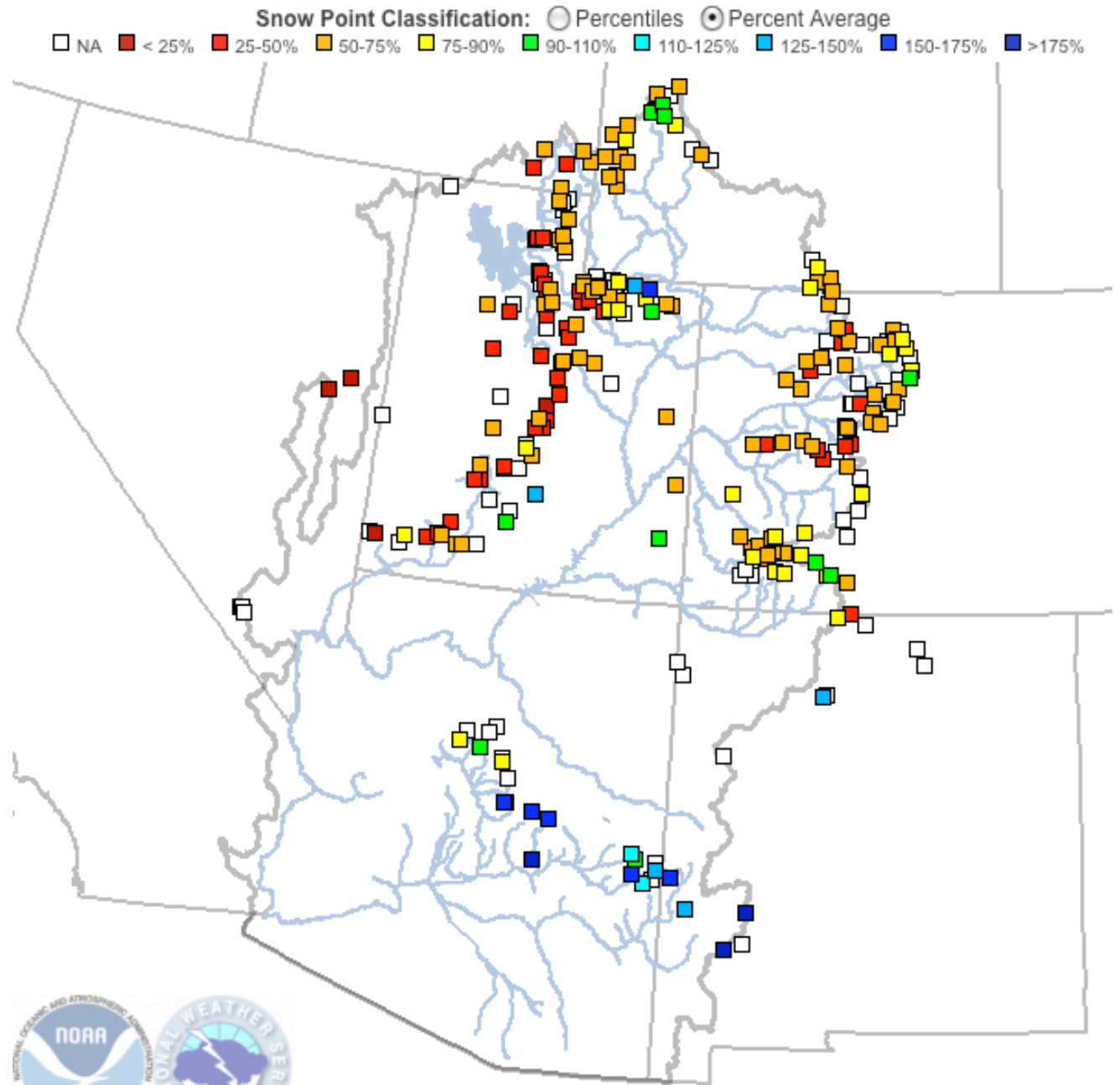
Web Reference: <http://www.cbrfc.noaa.gov>

Colorado Basin RFC Salt Lake City, UT: Current 7-Day Observed Precipitation
Valid at 1/6/2012 1200 UTC - Created 1/6/12 15:54 UTC



Web Reference: water.weather.gov/precip

Snow



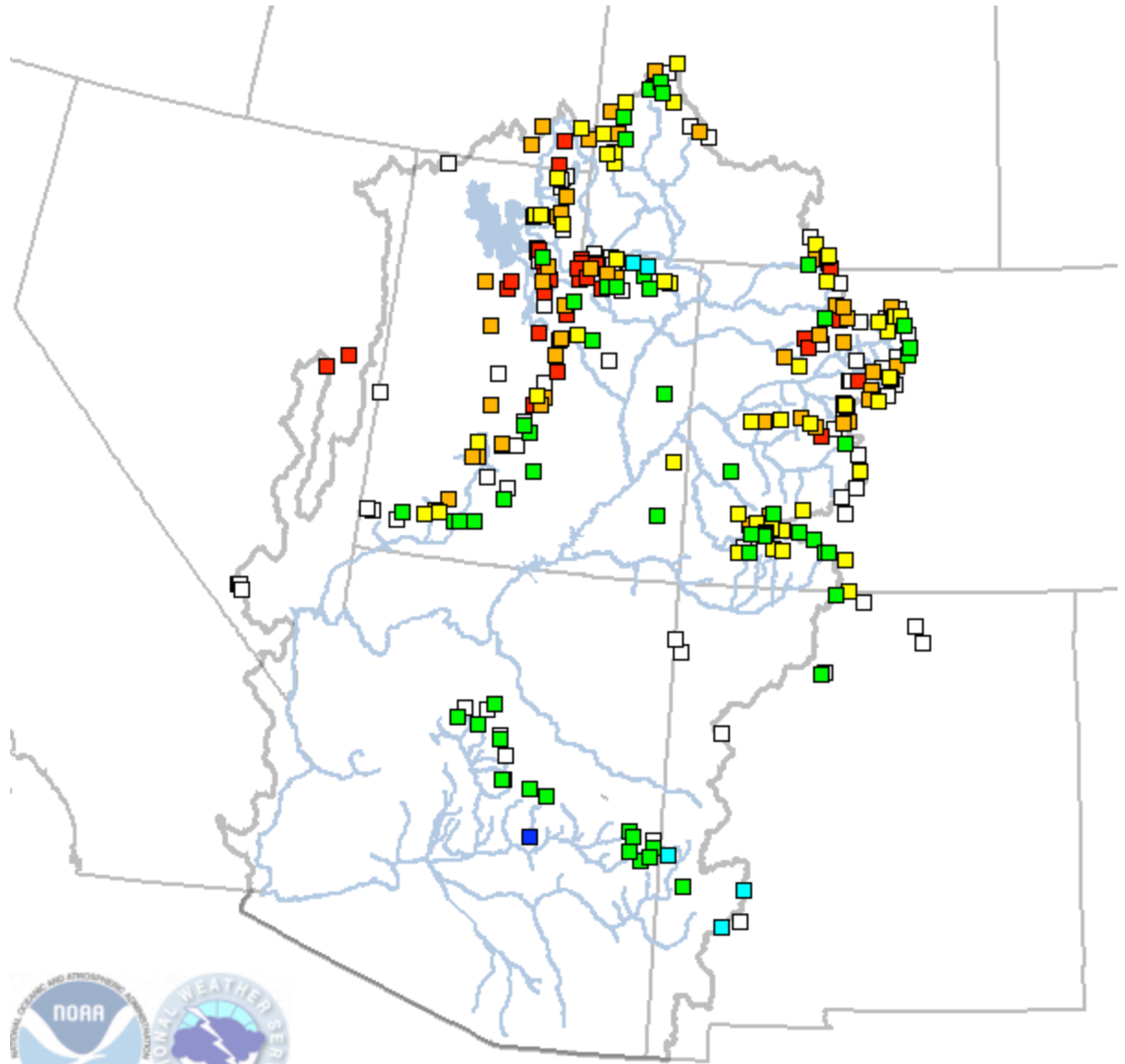
January 5, 2012



Web Reference: <http://www.cbrfc.noaa.gov/gmap/gmapm.php?scon=checked>

Snow

Snow Point Classification: ● Percentiles ○ Percent Average
□ Not Ranked ■ Low ■ <10 ■ 10-25 ■ 25-75 ■ 75-90 ■ >90 ■ High

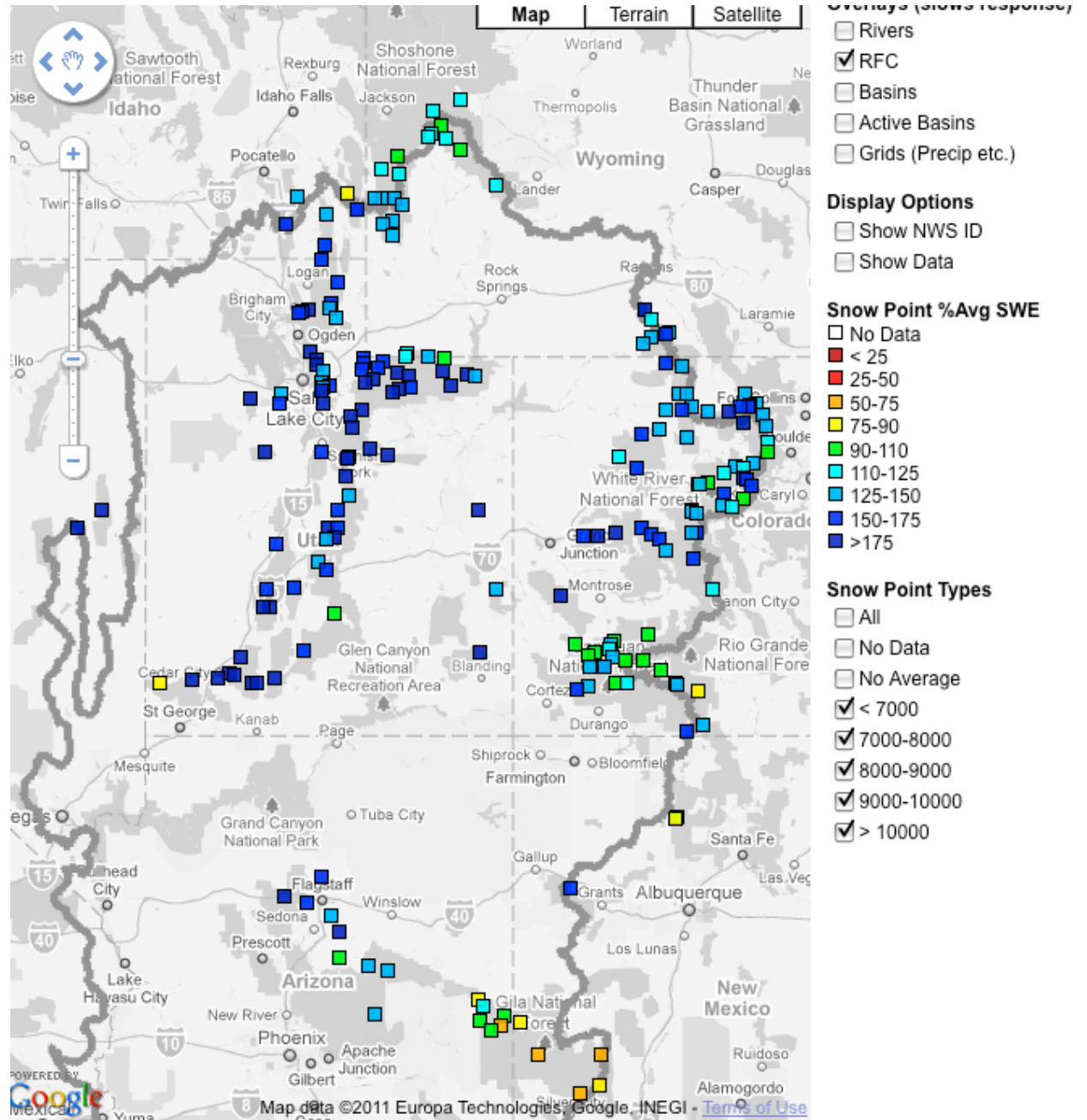


January 5, 2012



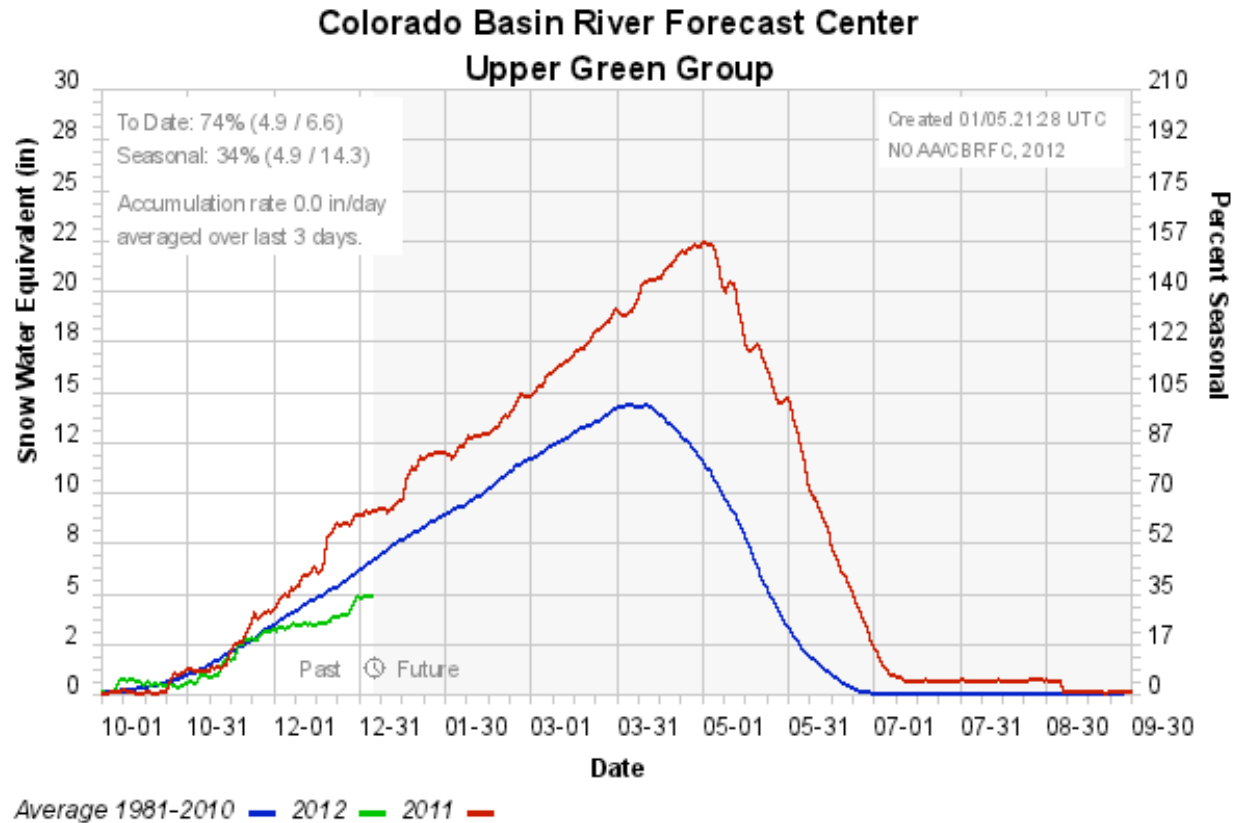
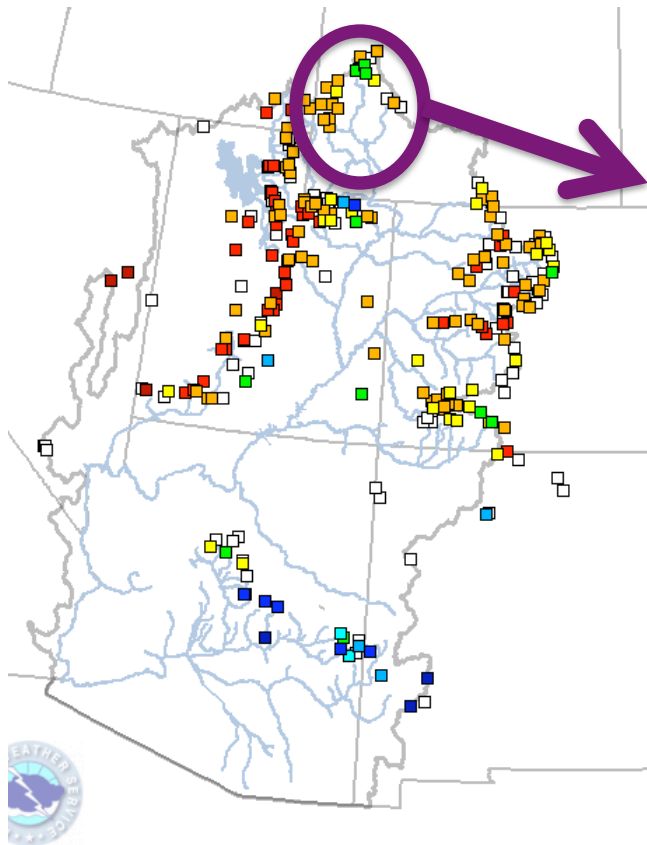
Web Reference: <http://www.cbrfc.noaa.gov/gmap/gmapm.php?scon=checked>

SNOW



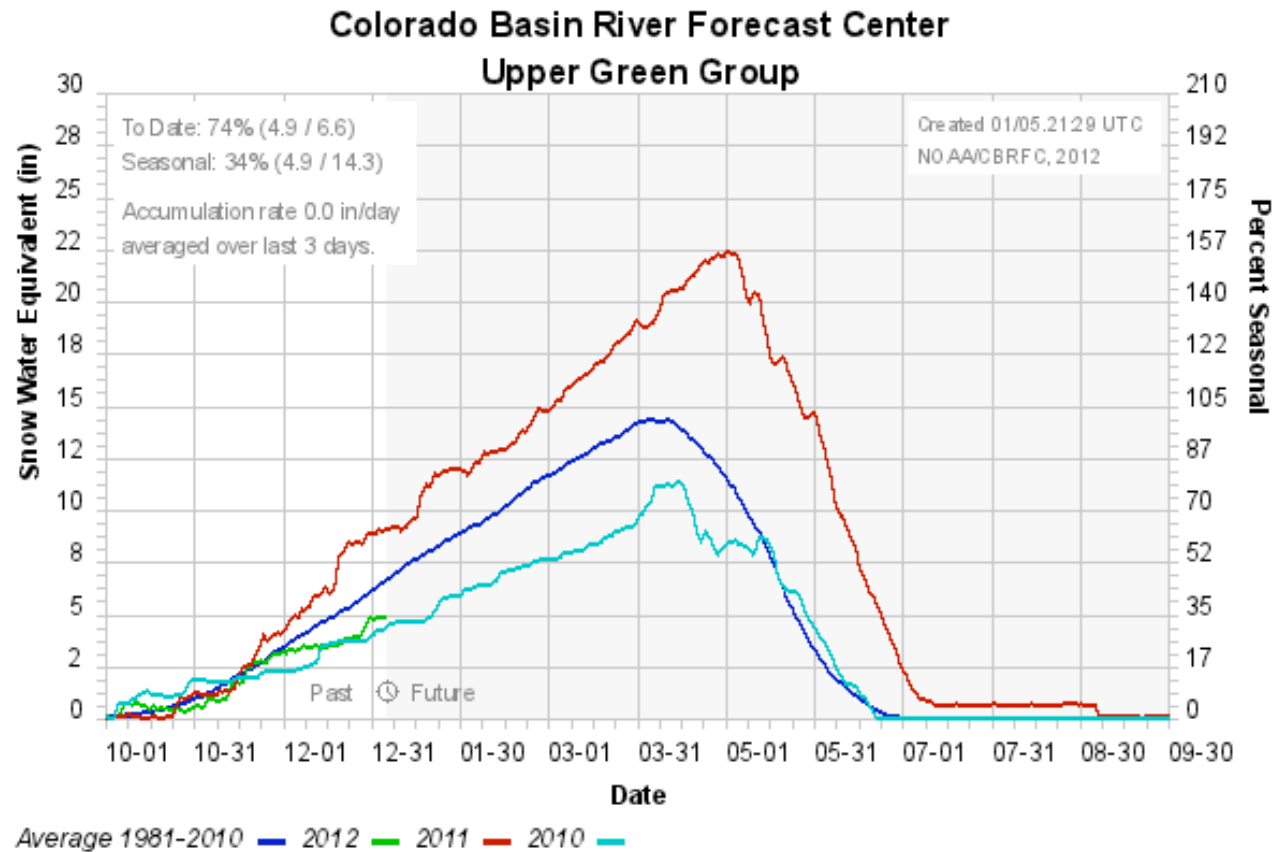
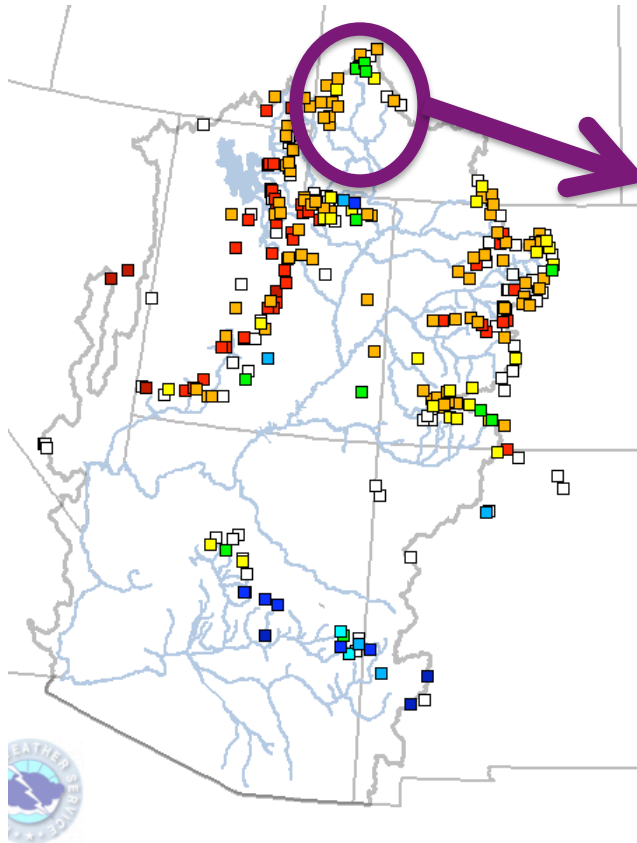
Web Reference: <http://www.cbrfc.noaa.gov/gmap/gmapm.php?scon=checked>

Snow: Upper Green Basin (above Flaming Gorge)



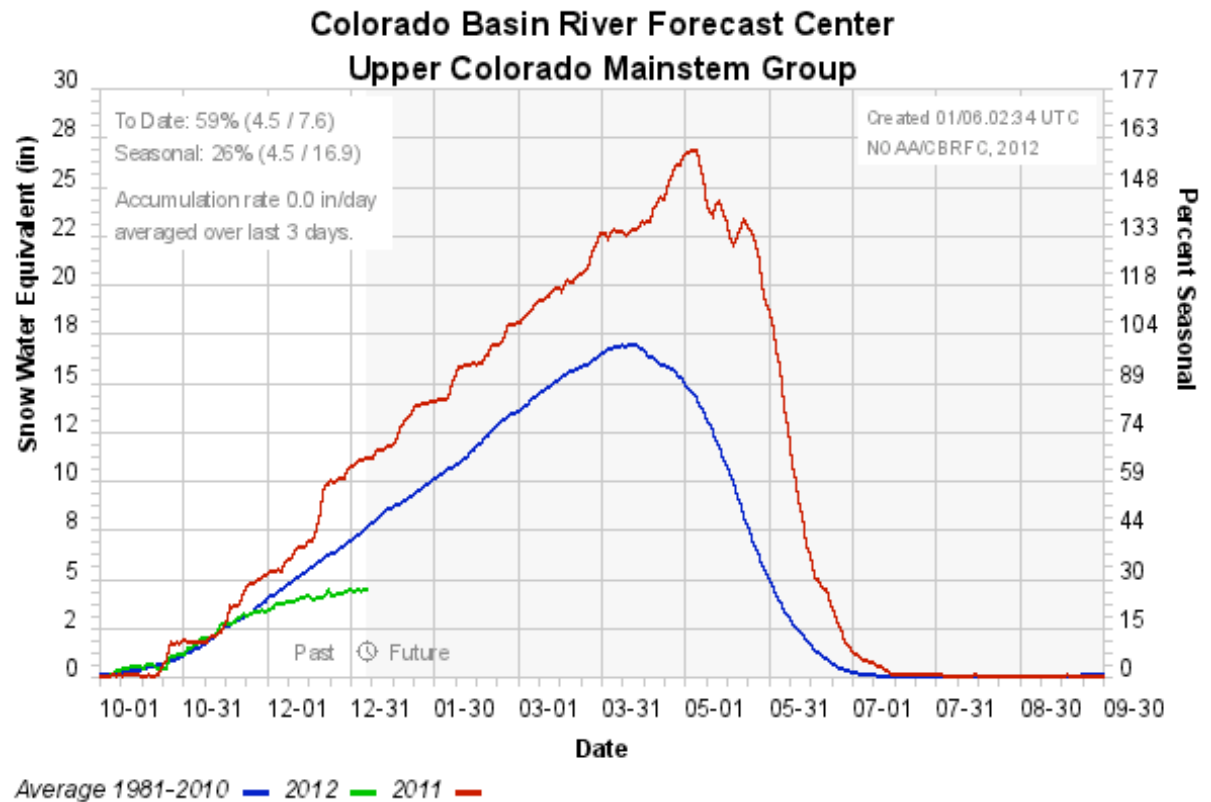
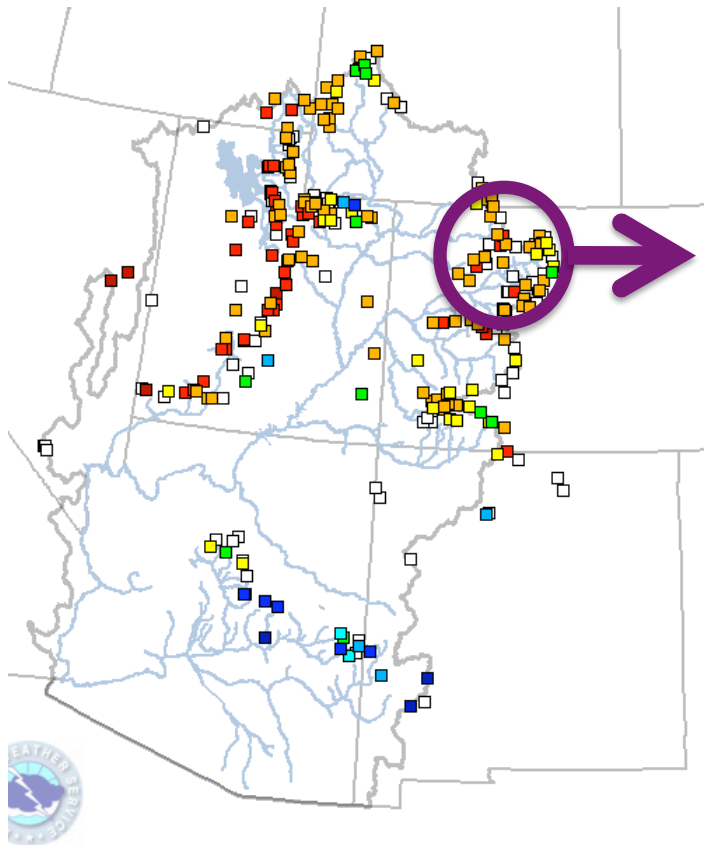
Web Reference: <http://www.cbrfc.noaa.gov/station/swep/plot/swep/plot.cgi???open>

Snow: Upper Green Basin (above Flaming Gorge)



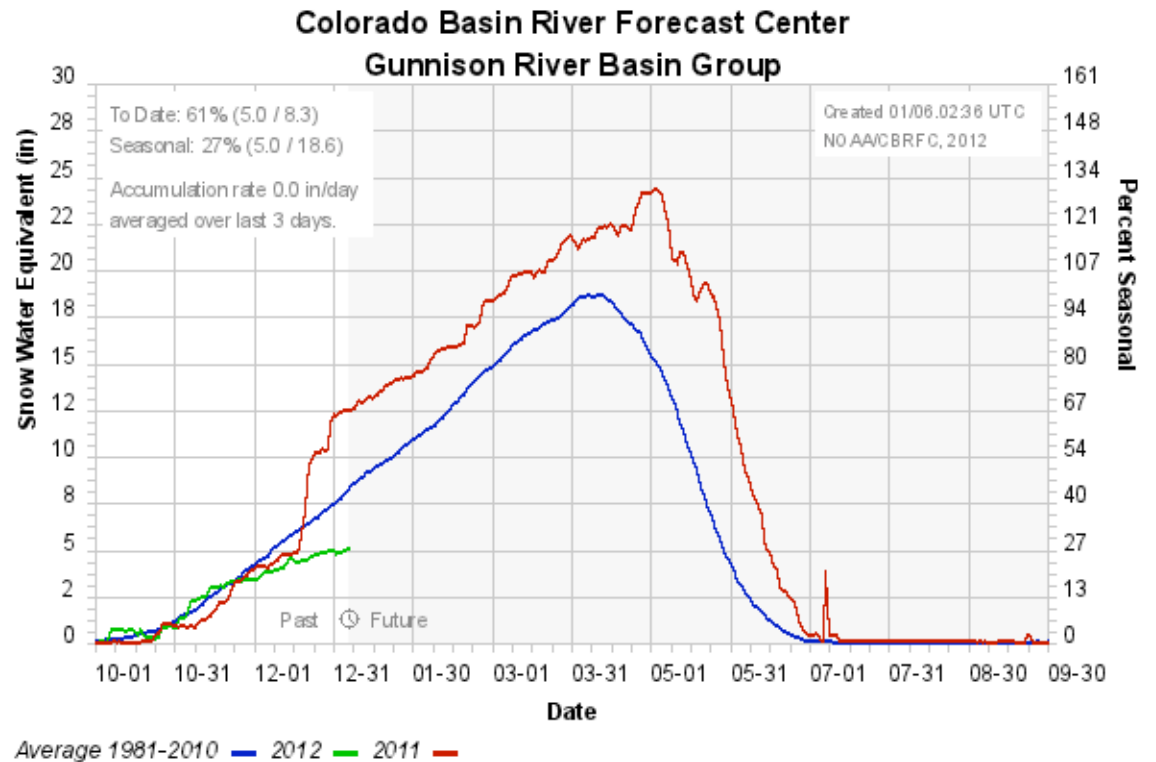
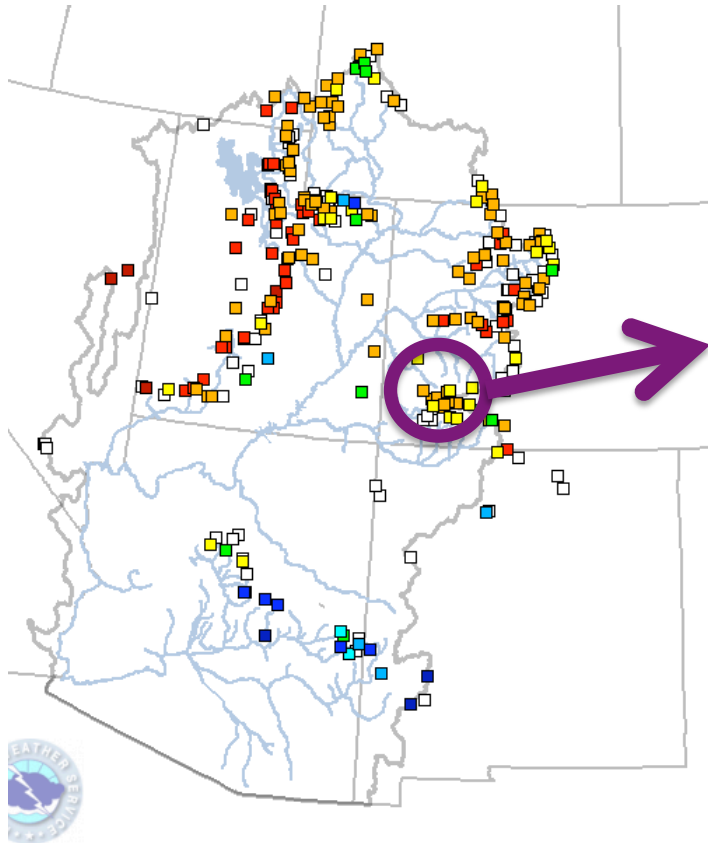
Web Reference: <http://www.cbrfc.noaa.gov/station/sweplo/plot/sweplo.cgi???open>

Snow: Colorado Mainstem (above Cameo)



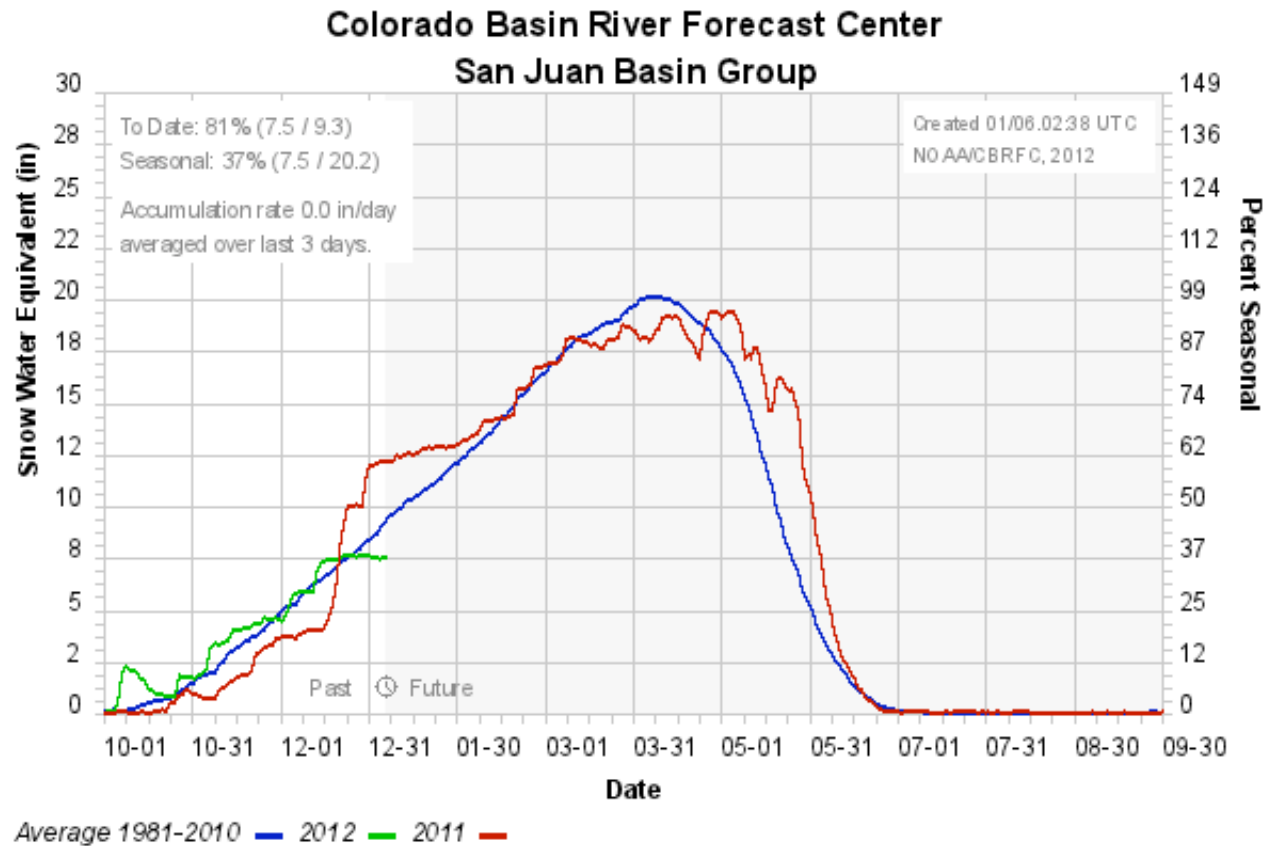
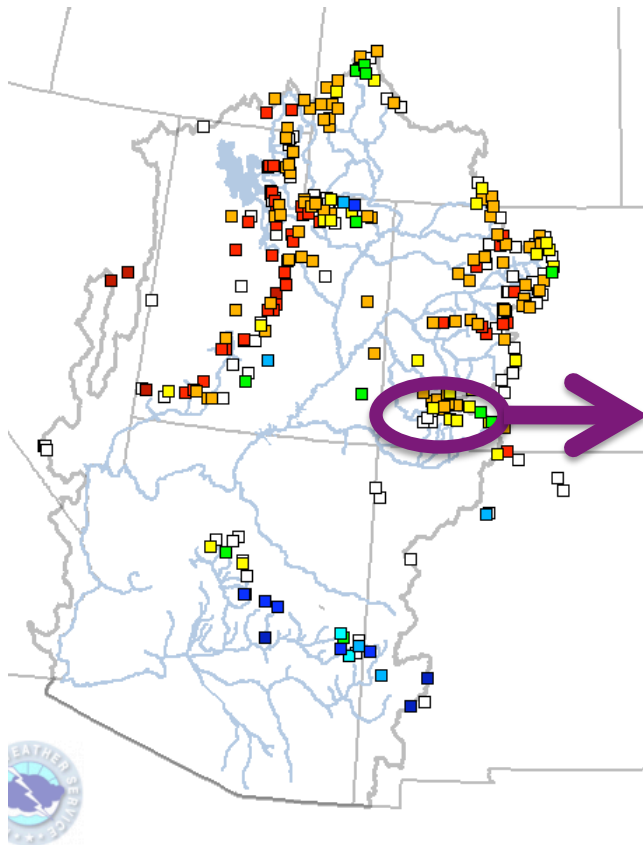
Web Reference: <http://www.cbrfc.noaa.gov/station/swep/plot/swep/plot.cgi???open>

Snow: Gunnison Basin



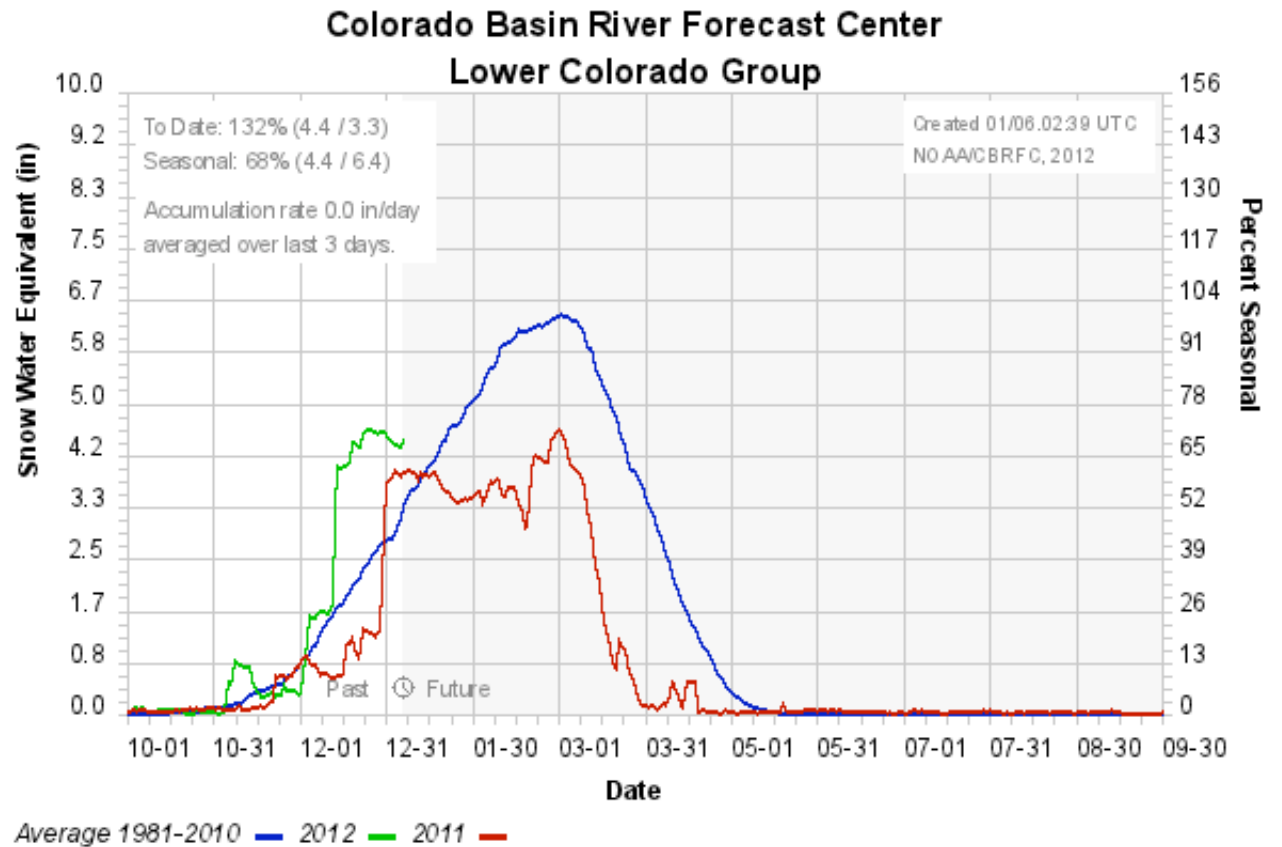
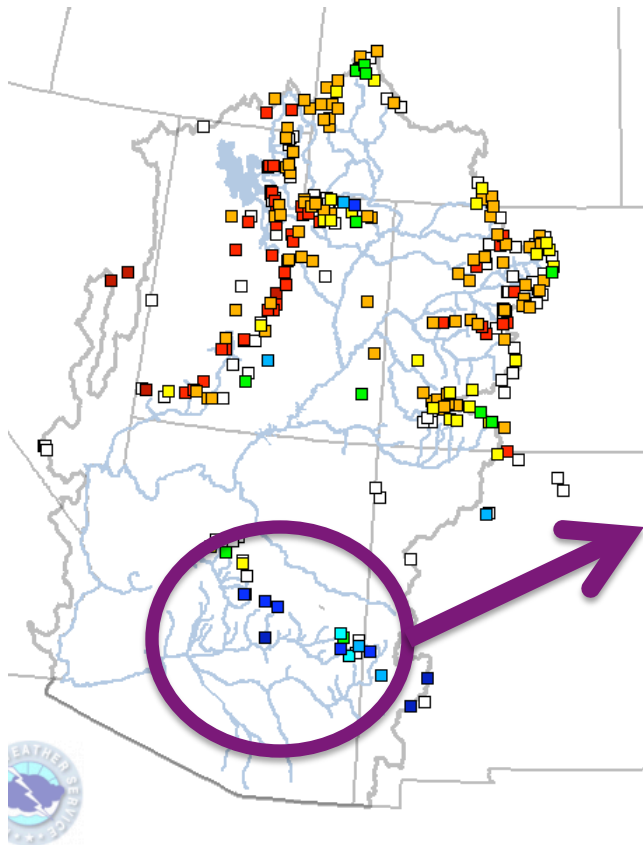
Web Reference: <http://www.cbrfc.noaa.gov/station/swep/plot/swep/plot.cgi???open>

Snow: San Juan Basin



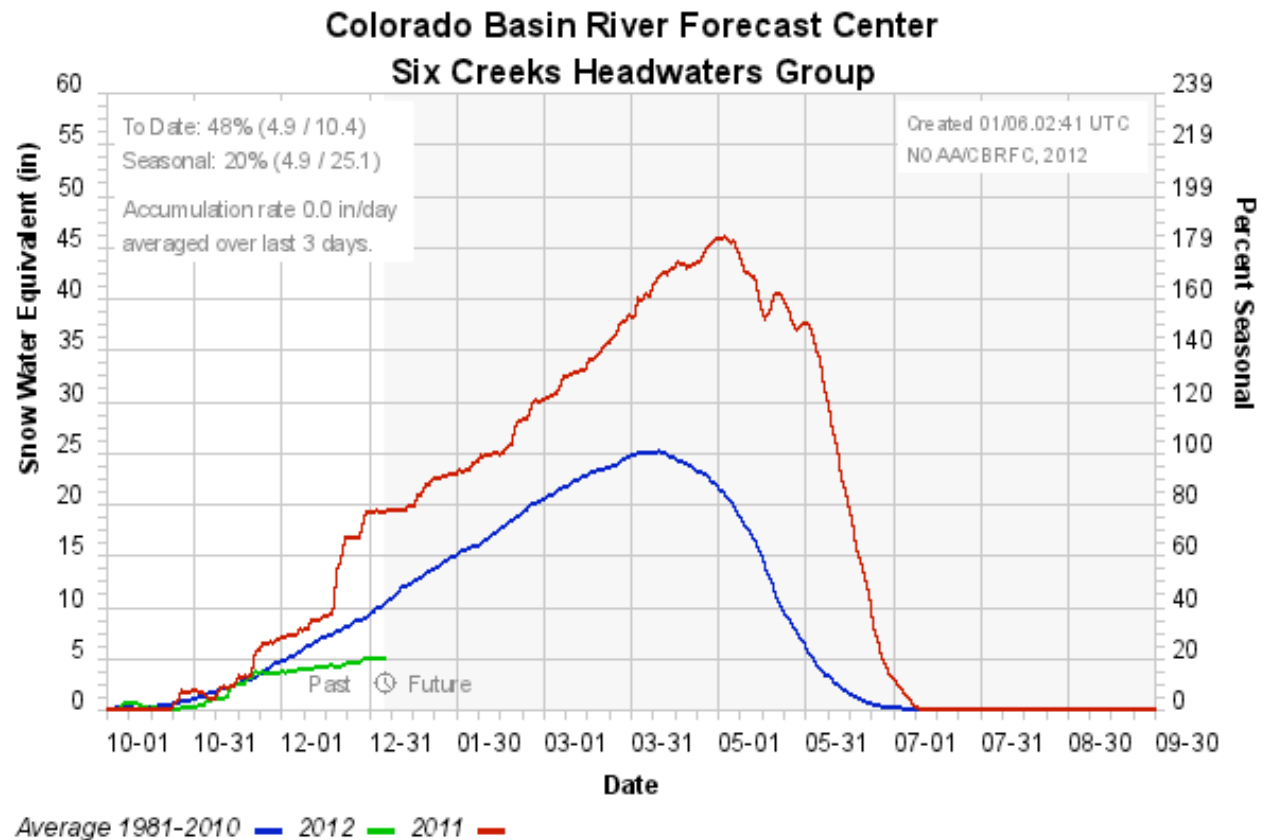
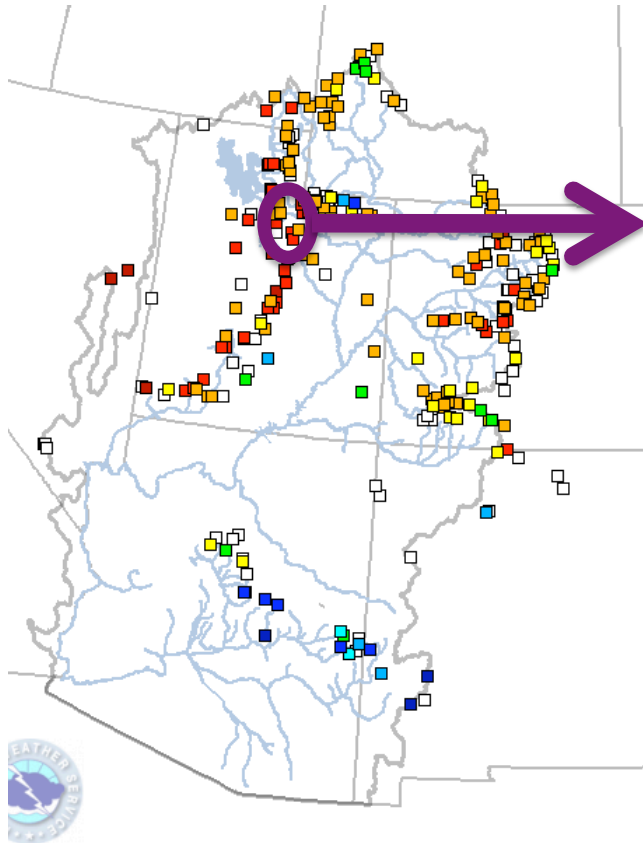
Web Reference: <http://www.cbrfc.noaa.gov/station/swep/plot/swep/plot.cgi???open>

Snow: Lower Colorado



Web Reference: <http://www.cbrfc.noaa.gov/station/sweplo/plot/sweplo.cgi???open>

Snow: Six Creeks in Salt Lake County

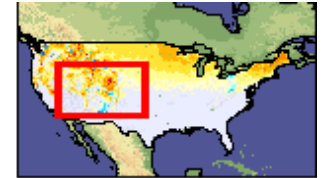
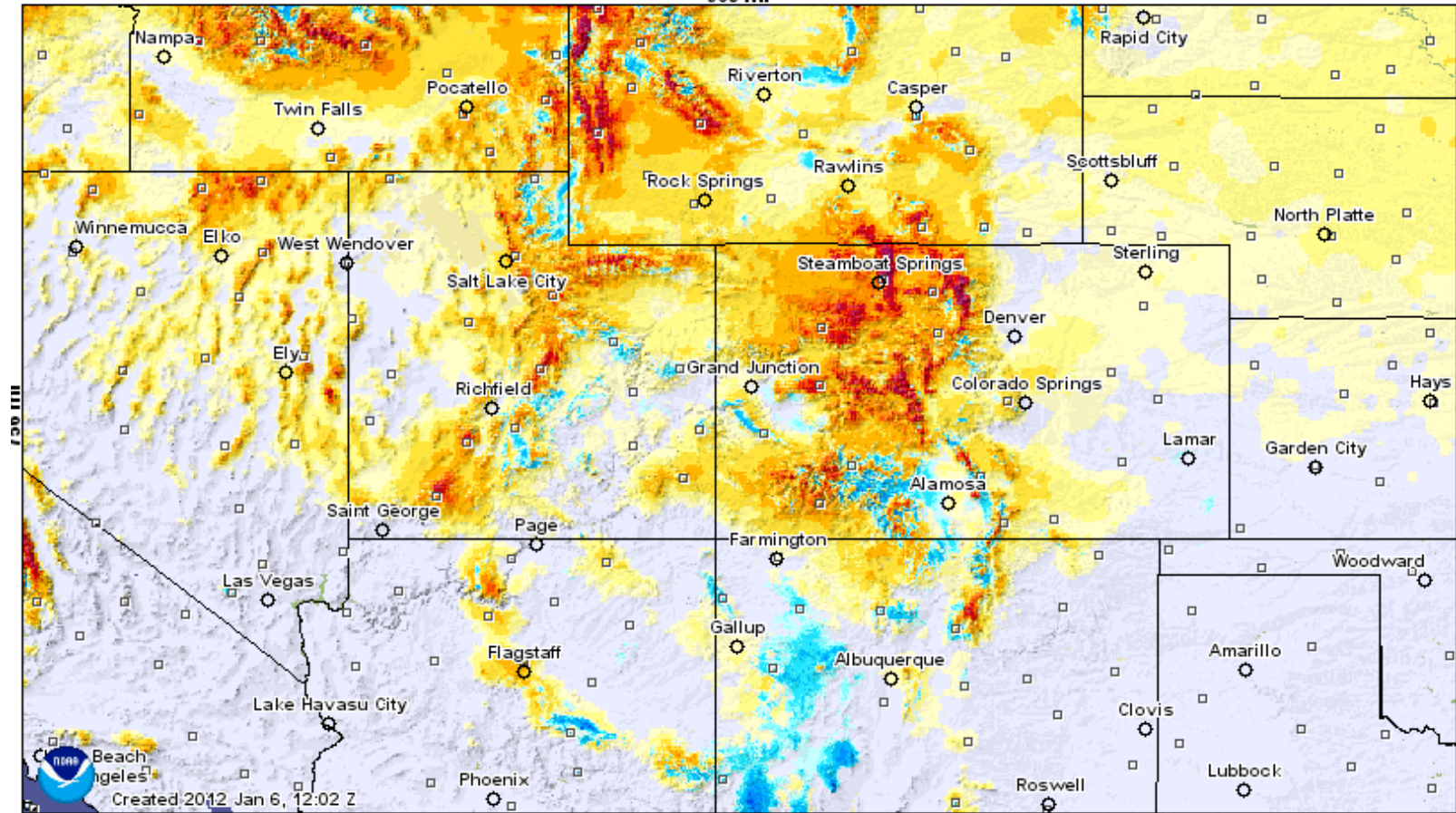


Web Reference: <http://www.cbrfc.noaa.gov/station/sweplo/plot/sweplo.cgi???open>

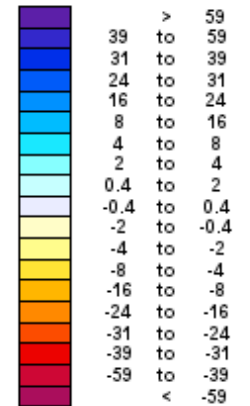
Snow Maps

Modeled Snow Depth Departure from Normal (Daily) for 2012 January 6, 6:00 Z

965 mi

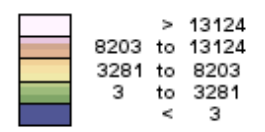


Inches of depth



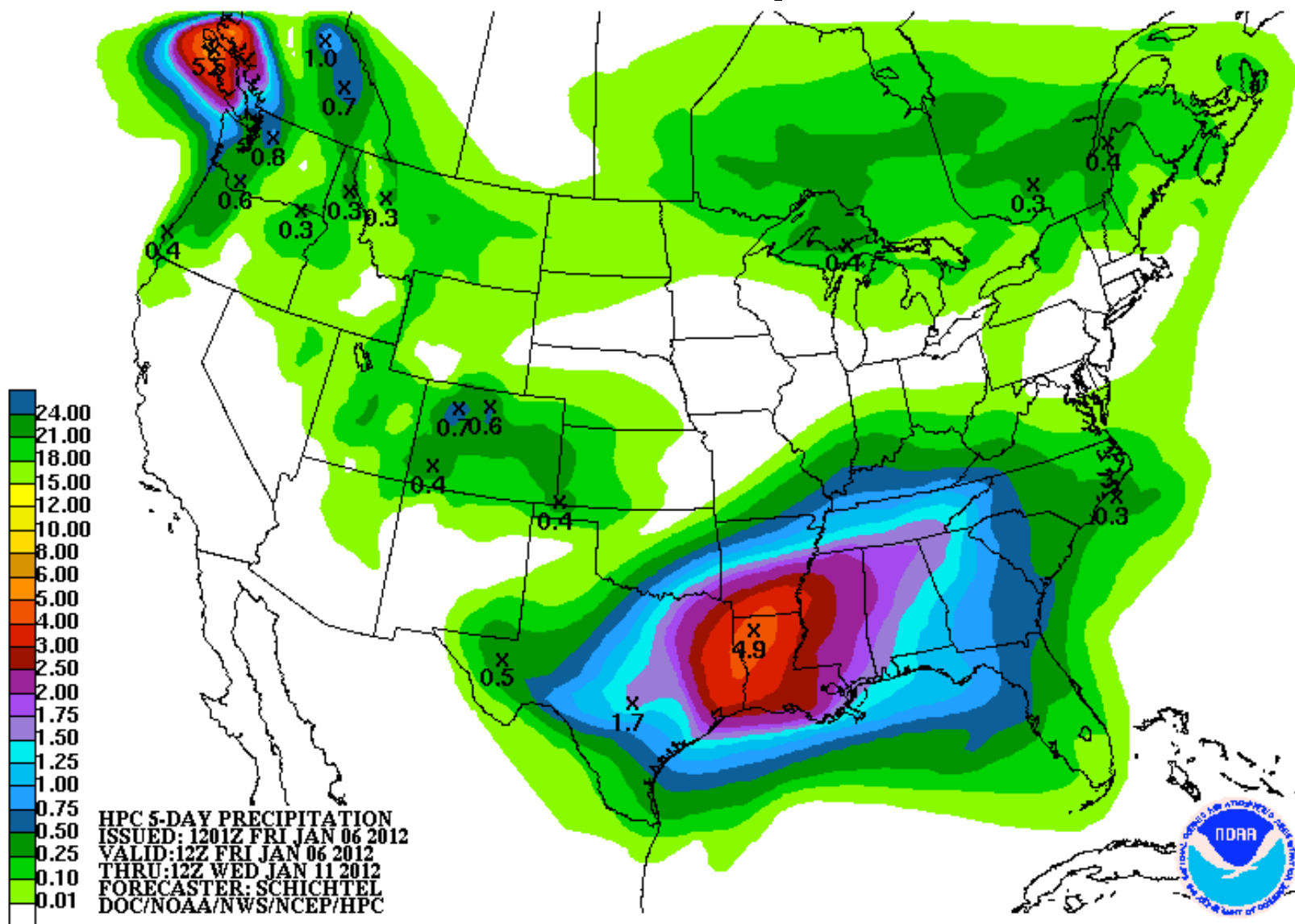
Not Estimated

Elevation in feet



Web Reference: <http://www.nohrsc.nws.gov>

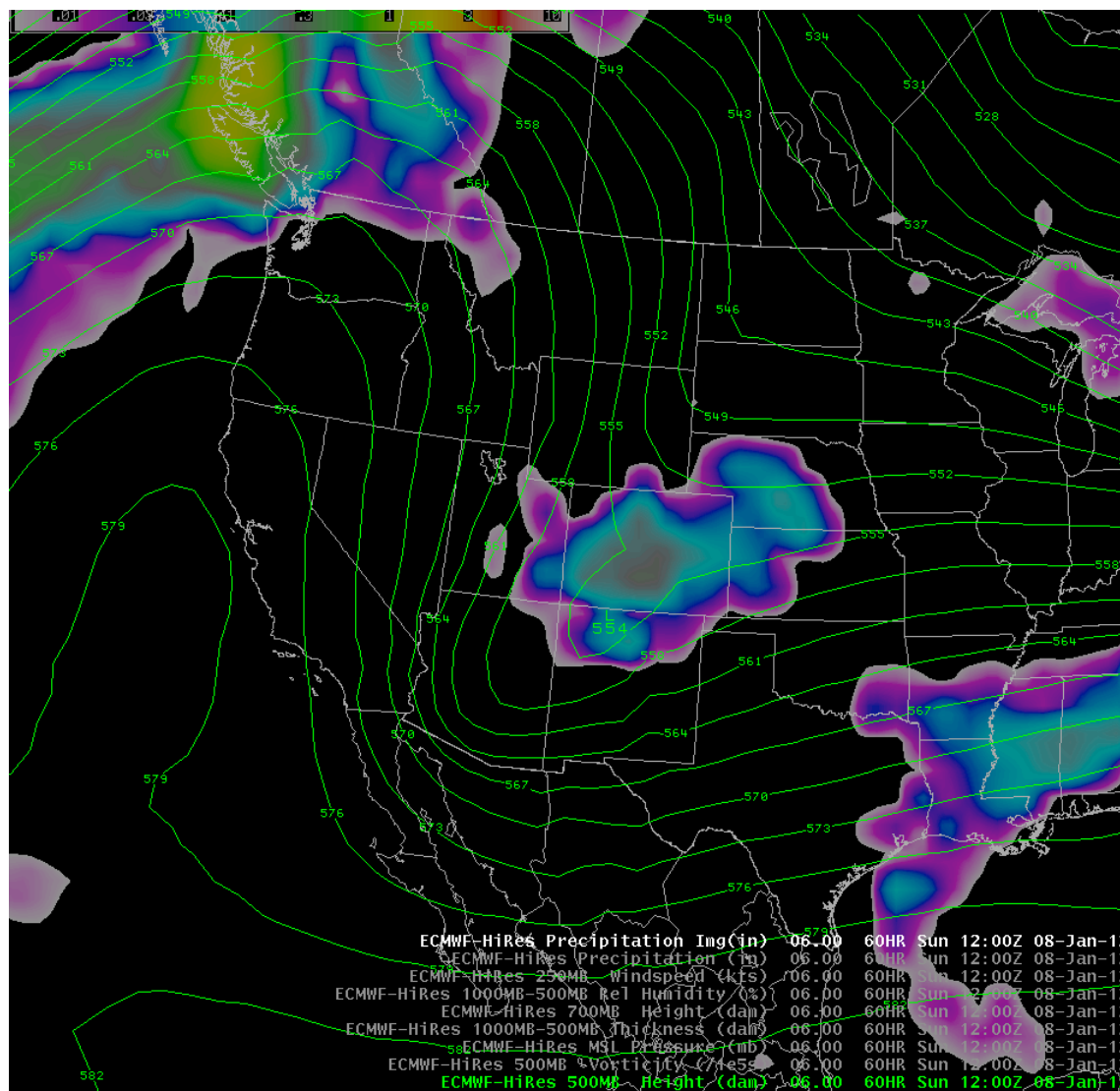
Forecast Precipitation



Web Reference: www.hpc.noaa.gov

Forecast Precipitation

- Long wave ridge continues to prevail over western United States
- Two small storms:
 - Saturday/Sunday



Web Reference: www.hpc.noaa.gov

Forecast Precipitation

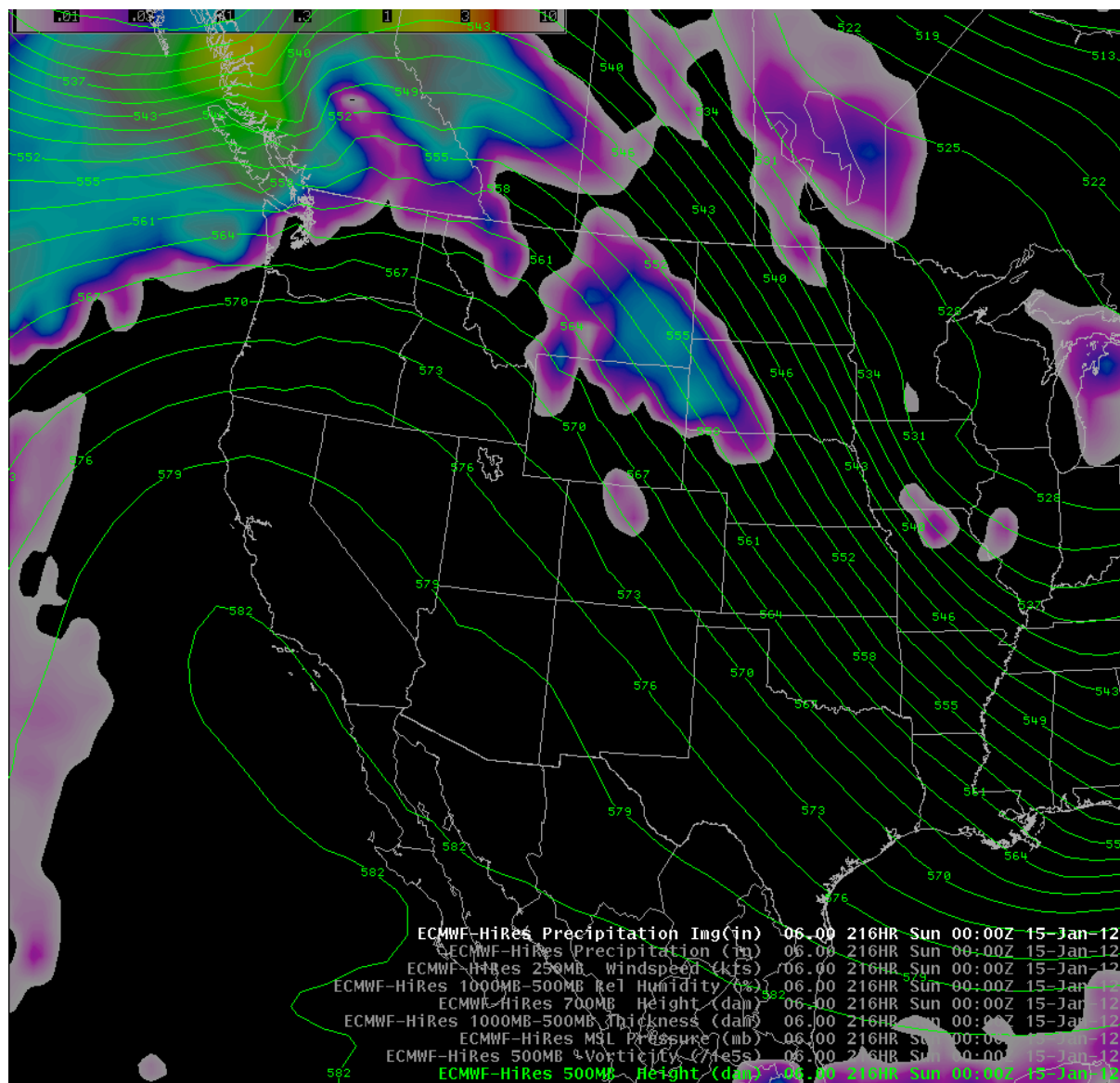
- Long wave ridge continues to prevail over western United States
- Two small storms:
 - Saturday/Sunday
 - Next Wednesday



Web Reference: www.hpc.noaa.gov

Forecast Precipitation

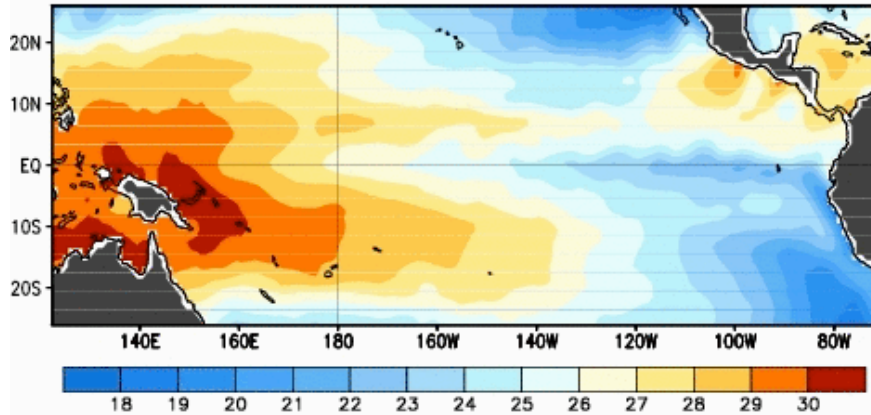
- Long wave ridge continues to prevail over western United States
- Two small storms:
 - Saturday/Sunday
 - Next Wednesday
- Major ridge forecast to follow – Confidence is somewhat higher given global circulation pattern and average positioning of ridging atmospheric western United States



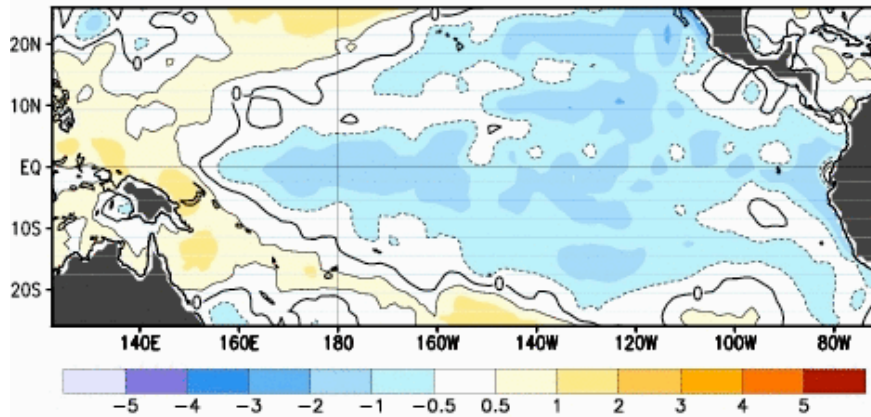
Web Reference: www.hpc.noaa.gov

La Nina Update

Observed Sea Surface Temperature (°C)

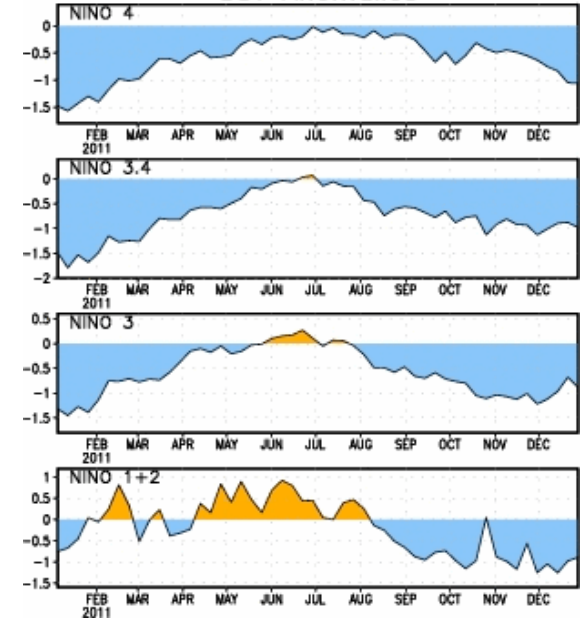


Observed Sea Surface Temperature Anomalies (°C)

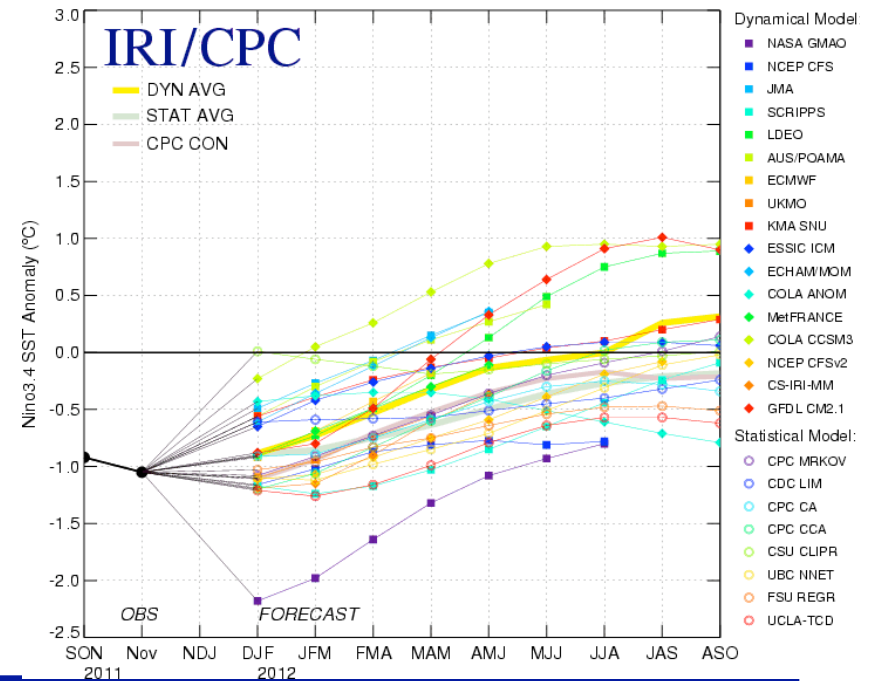


7-day Average Centered on 28 December 2011

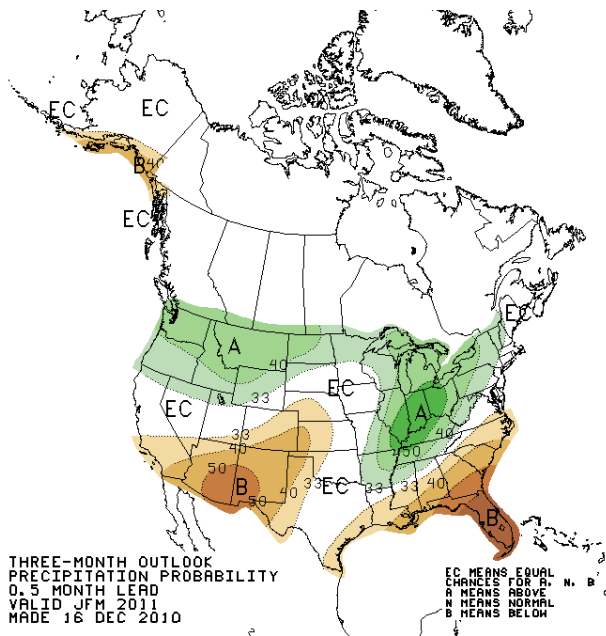
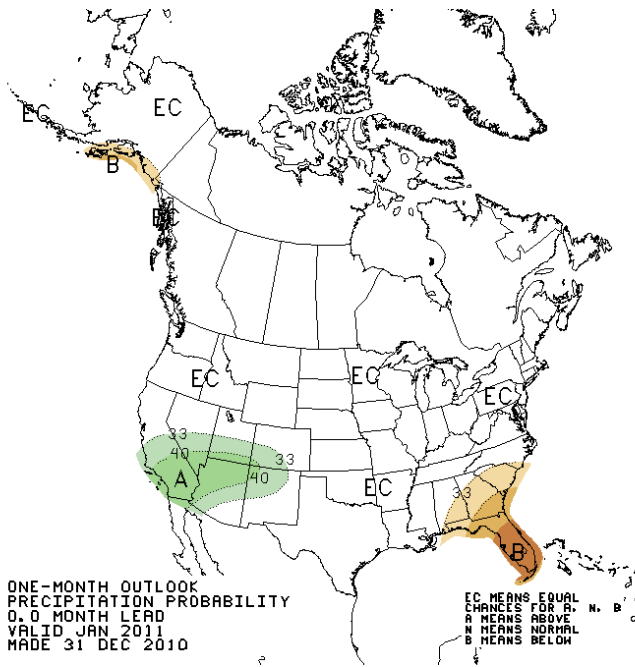
SST Anomalies



Model Predictions of ENSO from Dec 2011



Web Reference: <http://www.cpc.noaa.gov> and iri.columbia.edu/climate/ENSO

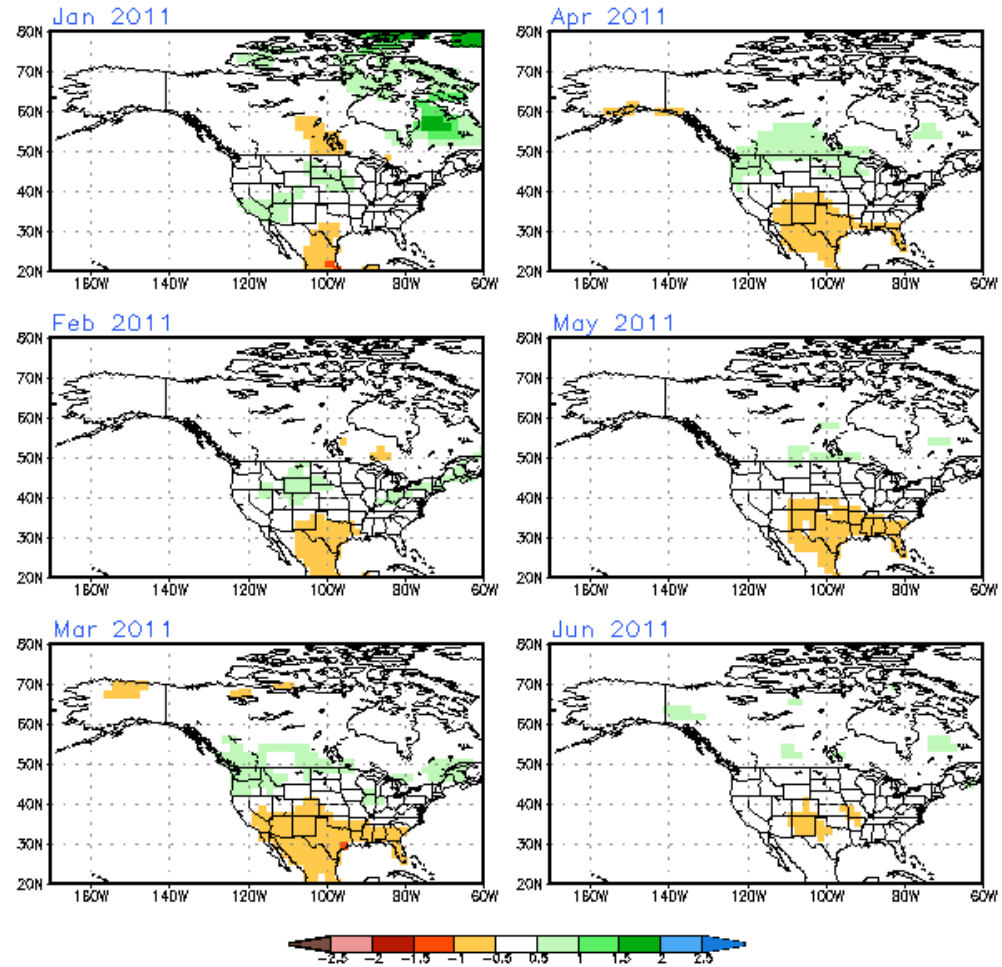


NWS/NCEP/CPC

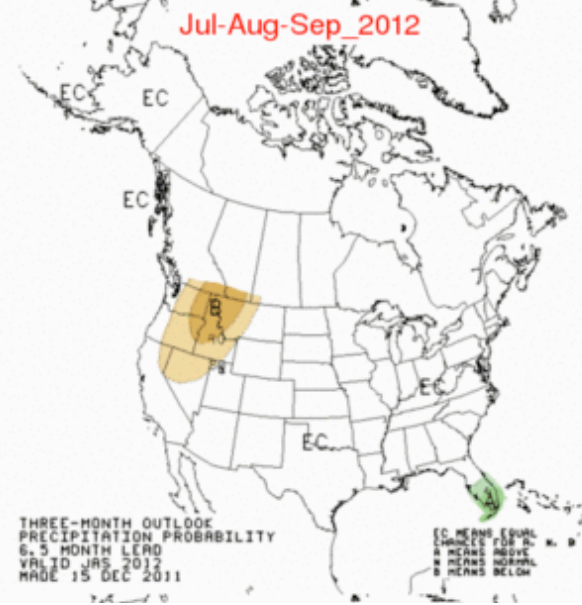
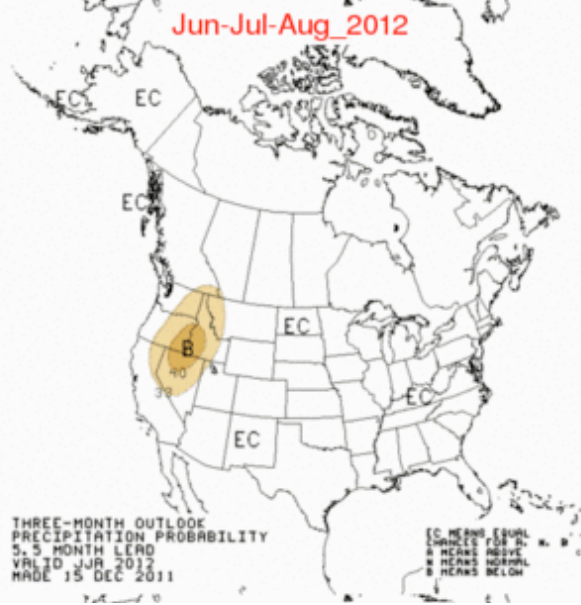
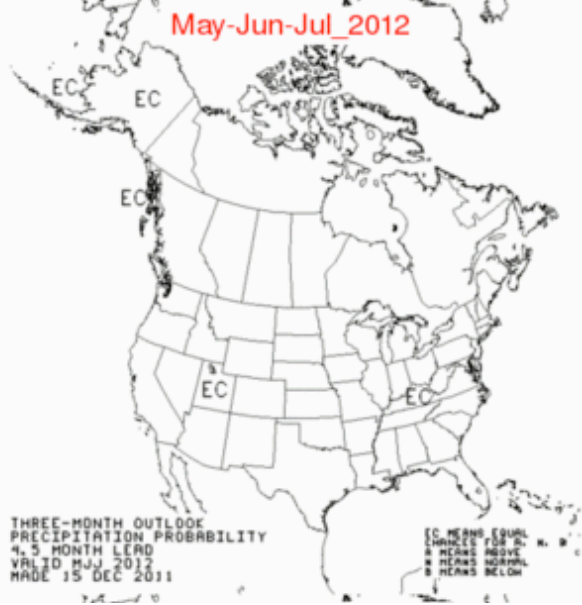
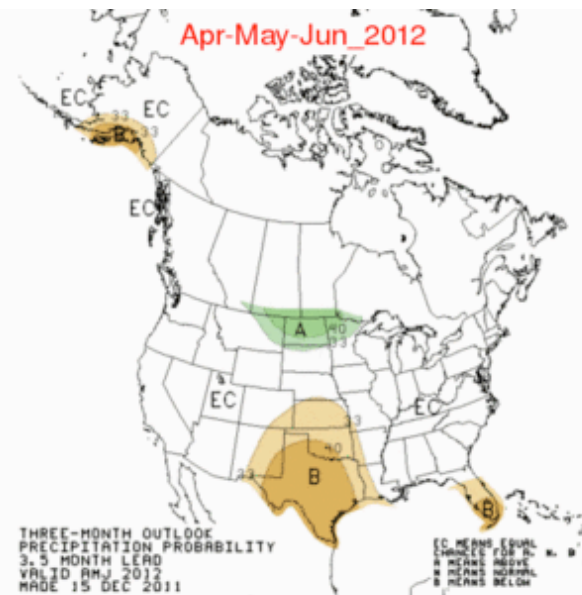
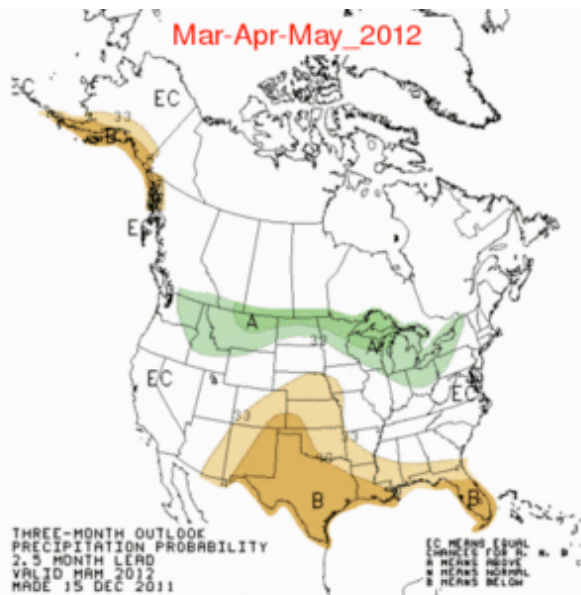
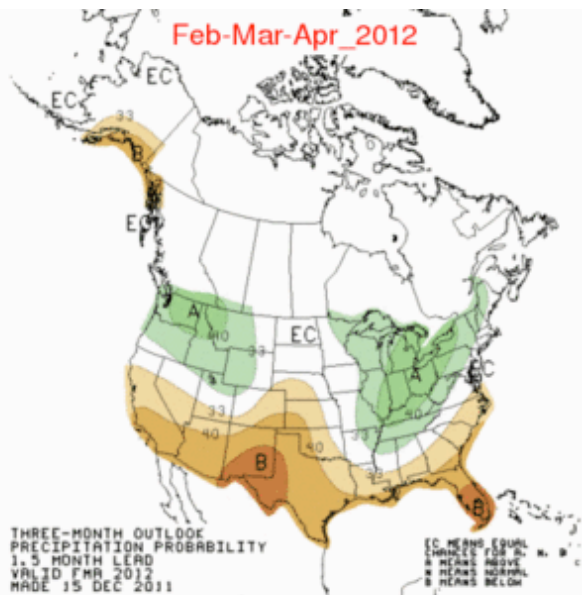
Initial conditions: 27Dec2010–5Jan2011

Last update: Fri Jan 7 2011

CFS monthly standardized Prec

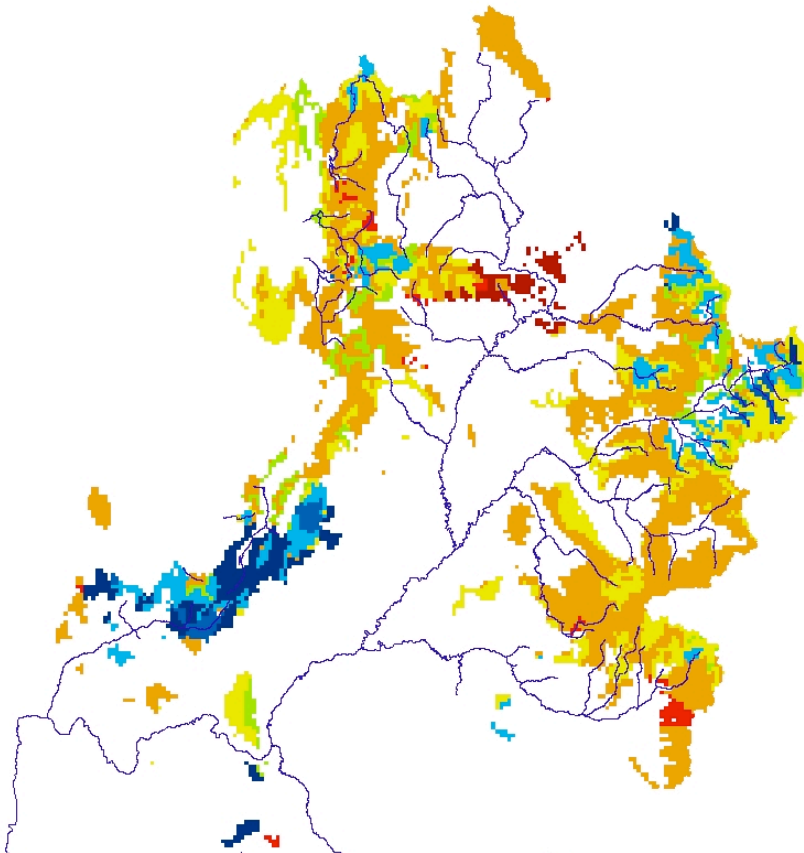


Web Reference: <http://www.cbrfc.noaa.gov/climate/climoForecasts.cgi>



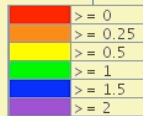
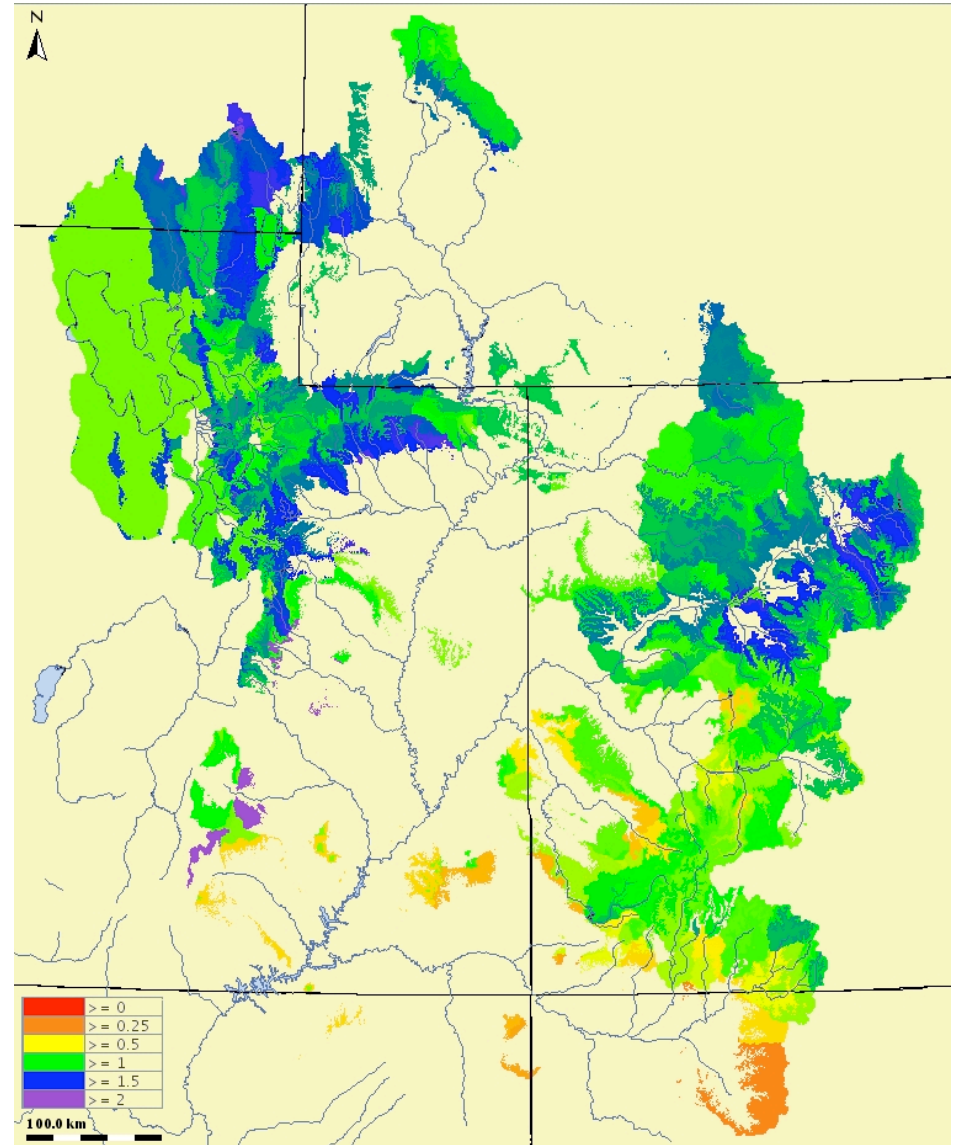
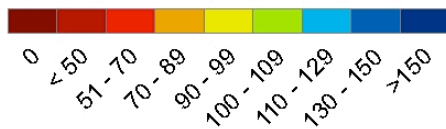
Soil Moisture

*Upper Colorado
NWSRFS Modeled Lower Zone Soil Moisture*



Percent Average (> 1.0 inch) November 1, 2010

VALUE

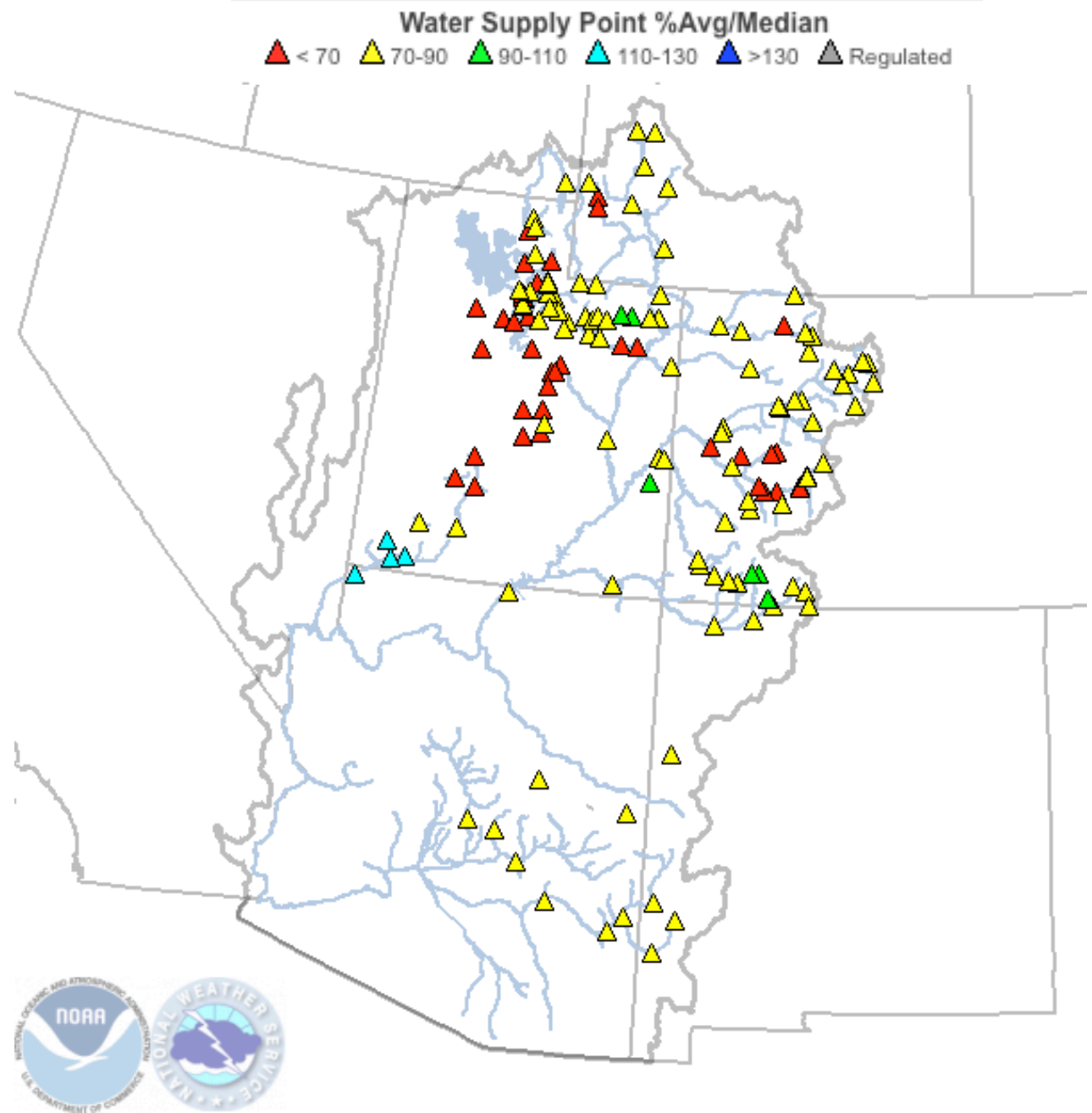


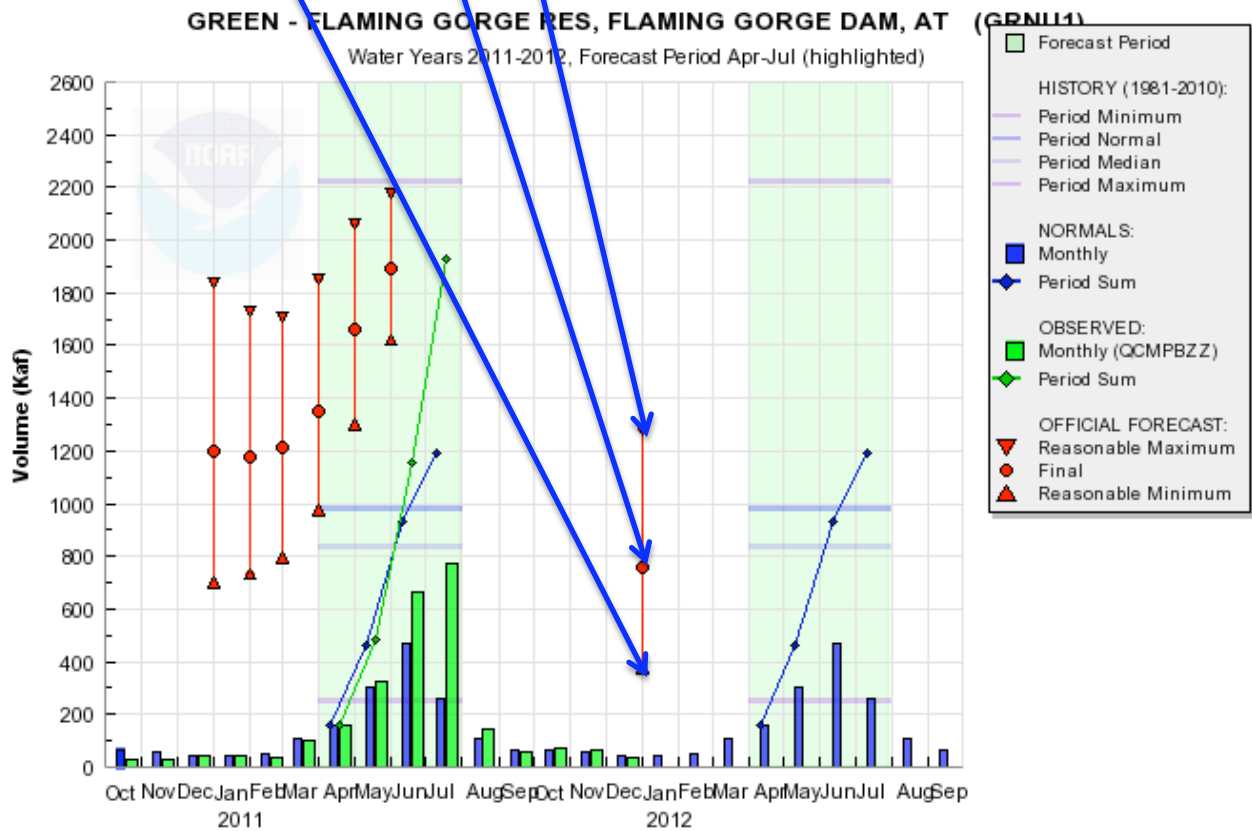
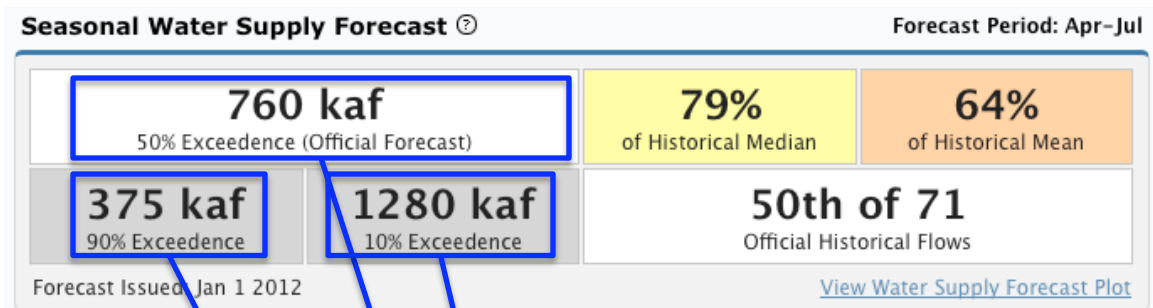
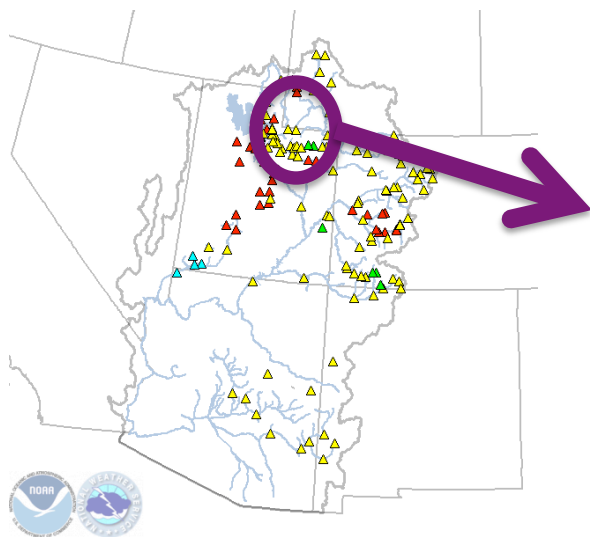
100.0 km

January 1, 2012
Water Supply
Forecasts

Highlights:

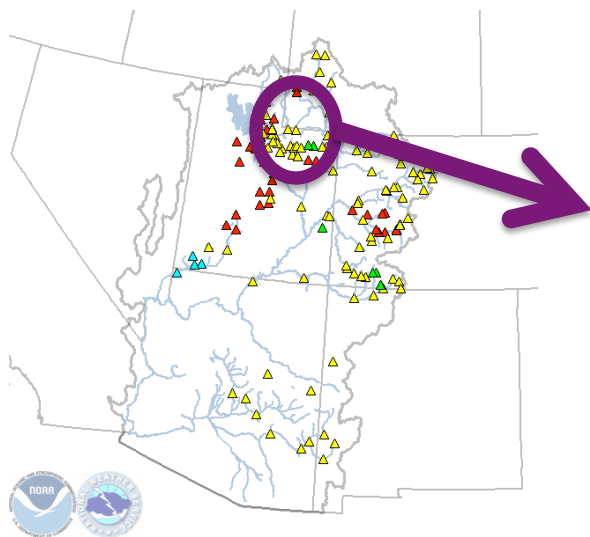
- Below average/
median forecasts
nearly everywhere
- Major factors:
 - Low snow in
upper and Great
Basins
 - La Nina and
low antecedent
conditions in
lower basin





CBRFC/NWS/NOAA 01/06/12 19:28:38 UTC

Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked

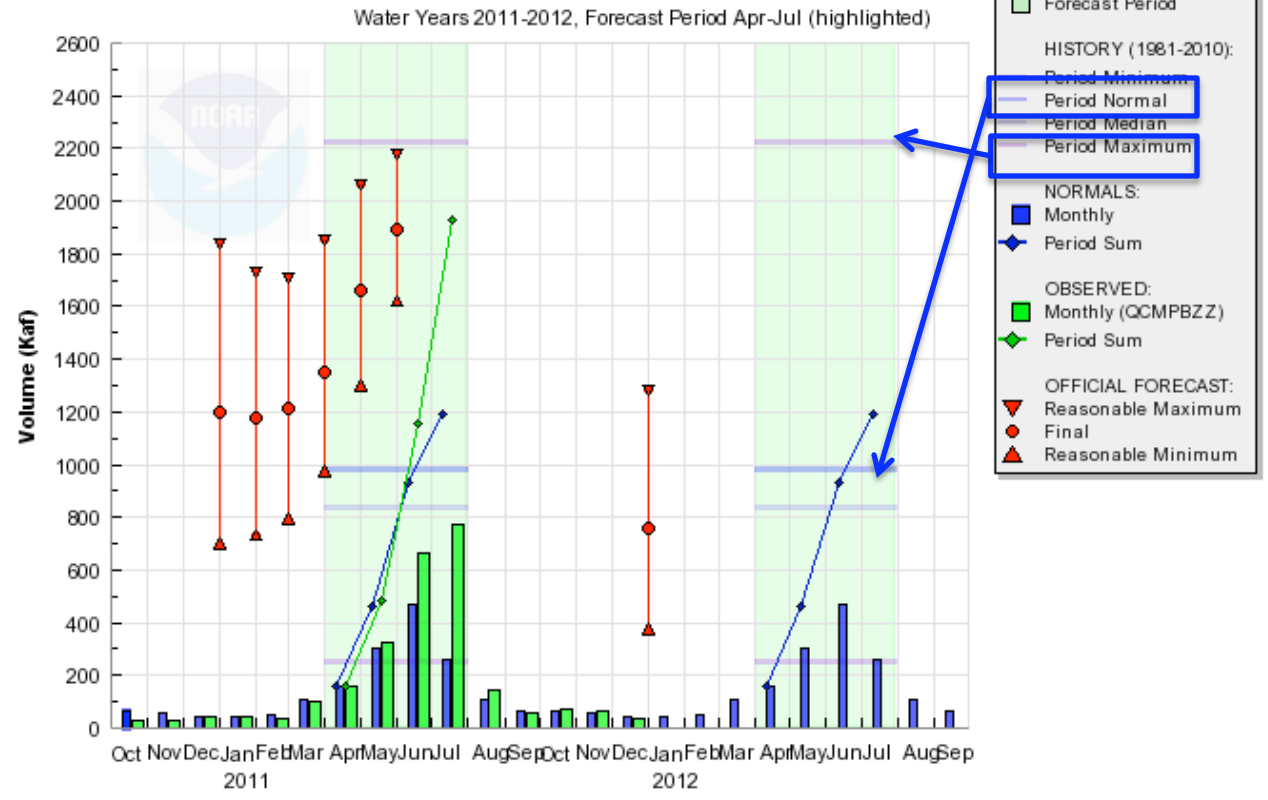


Seasonal Water Supply Forecast Forecast Period: Apr-Jul

760 kaf 50% Exceedence (Official Forecast)		79% of Historical Median	64% of Historical Mean
375 kaf 90% Exceedence	1280 kaf 10% Exceedence	50th of 71 Official Historical Flows	

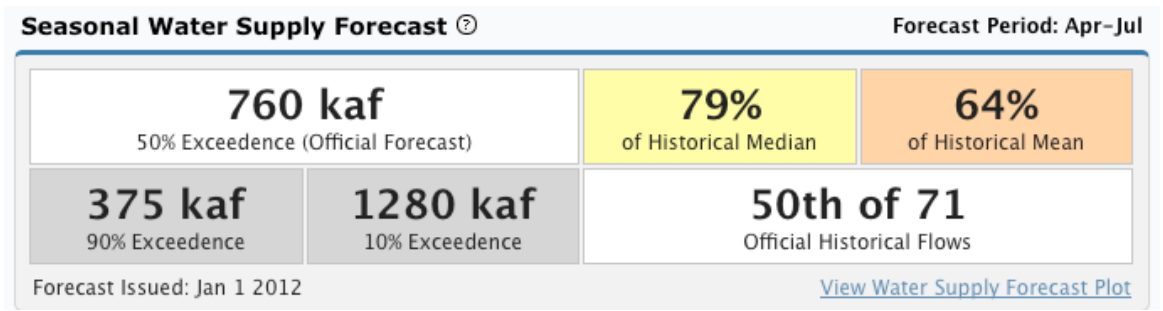
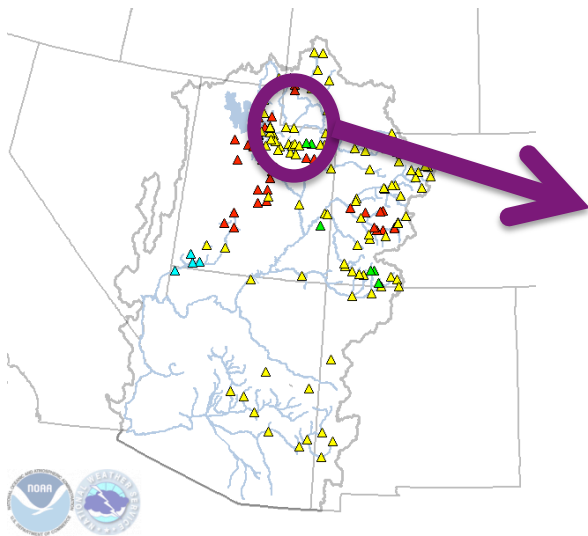
Forecast Issued: Jan 1 2012 [View Water Supply Forecast Plot](#)

GREEN - FLAMING GORGE RES, FLAMING GORGE DAM, AT (GRNLI1)

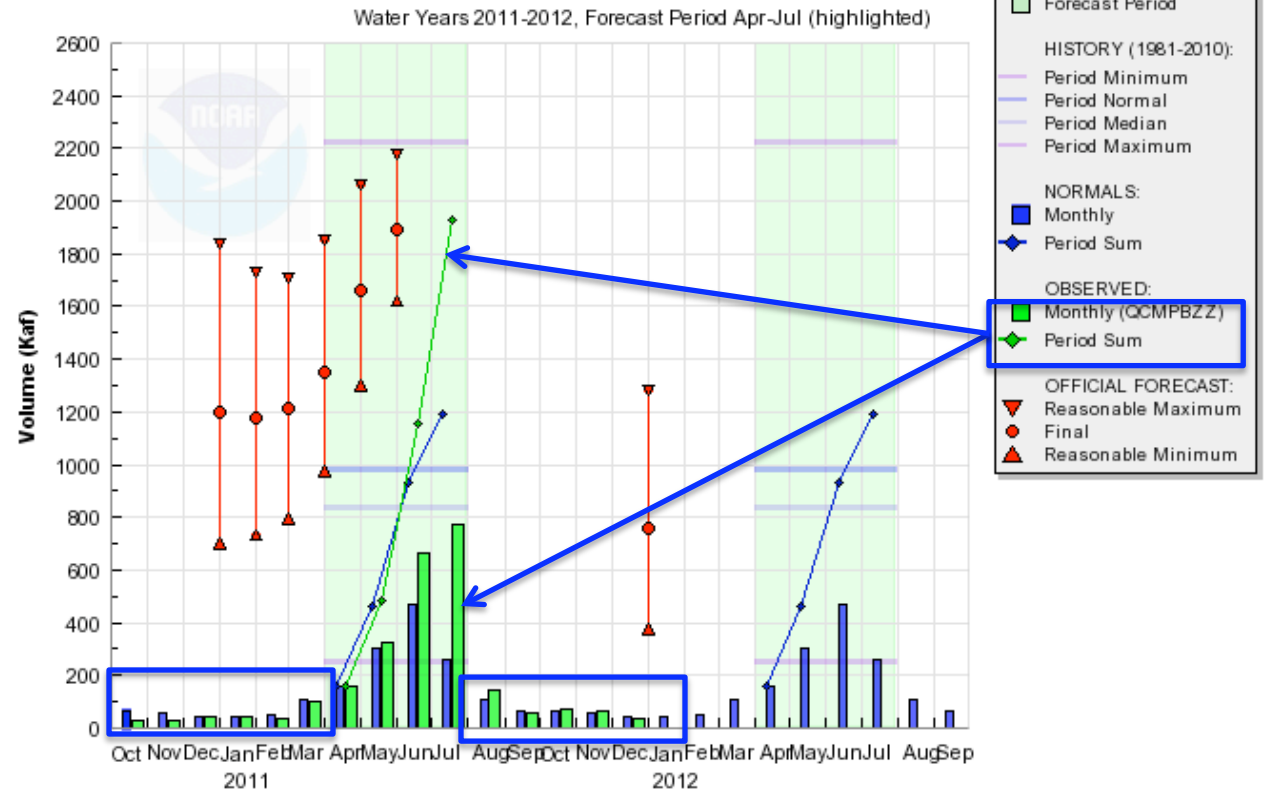


CBRFC/NWS/NOAA 01/06/12 19:28:38 UTC

Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



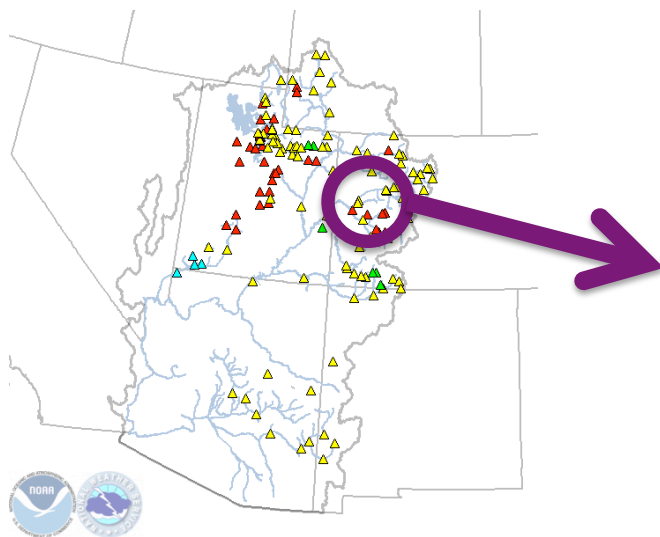
GREEN - FLAMING GORGE RES, FLAMING GORGE DAM, AT (GRNLI1)



Baseflow:

- 2011 lower than average
- 2012 higher than average (but trending toward normal)

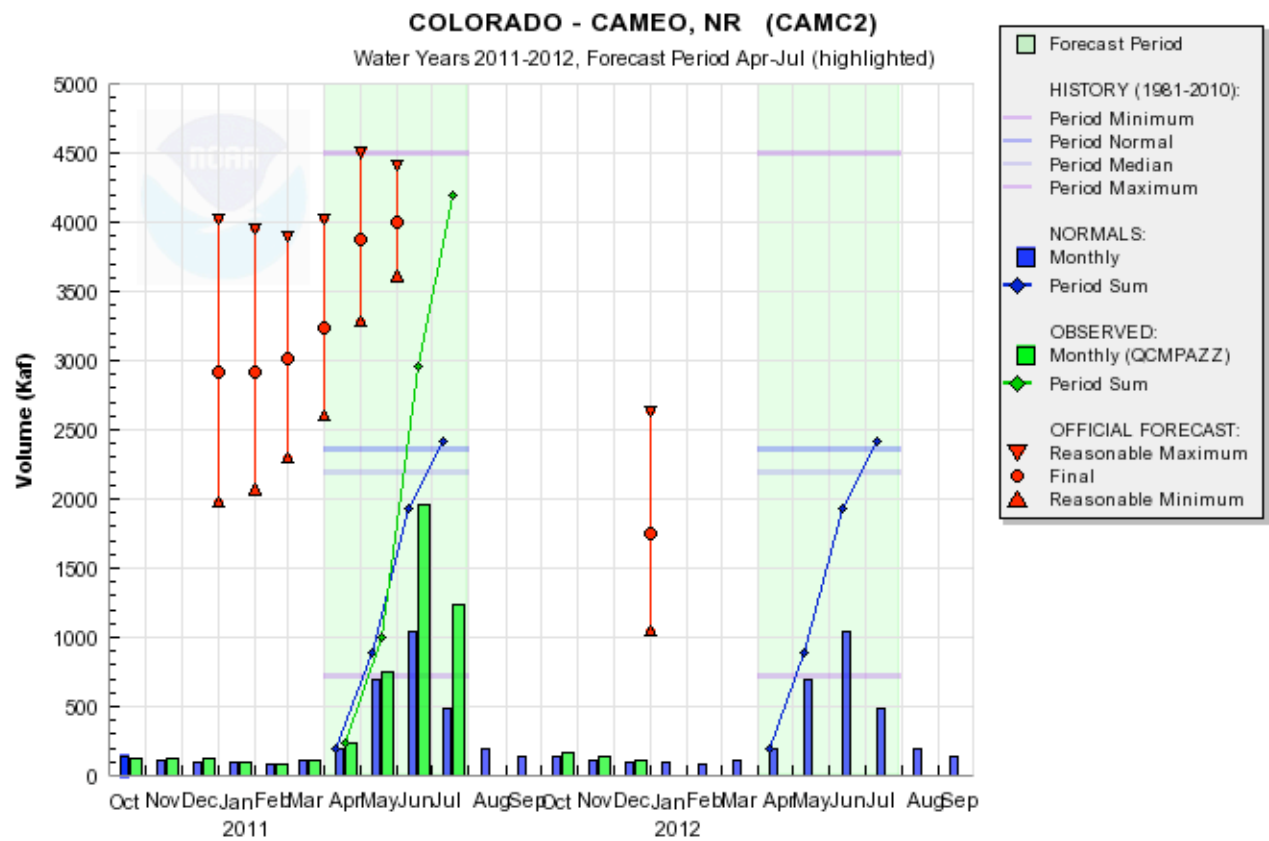
Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



Seasonal Water Supply Forecast ⓘ Forecast Period: Apr-Jul

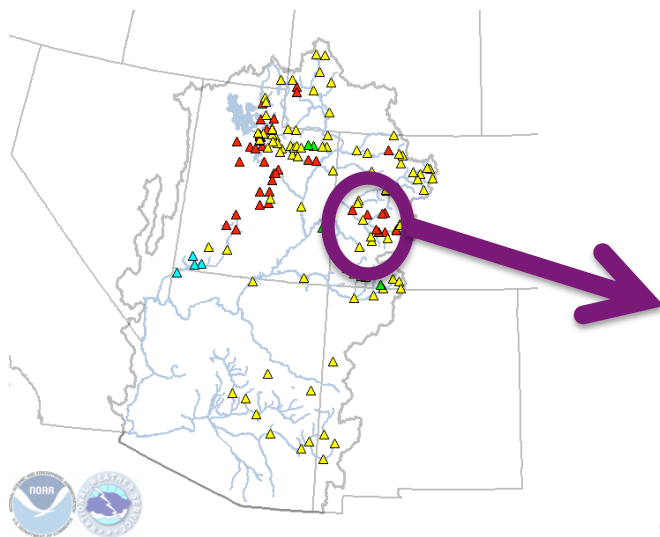
1750 kaf 50% Exceedence (Official Forecast)	82% of Historical Median	74% of Historical Mean
1050 kaf 90% Exceedence	2630 kaf 10% Exceedence	60th of 78 Official Historical Flows

Forecast Issued: Jan 1 2012 [View Water Supply Forecast Plot](#)



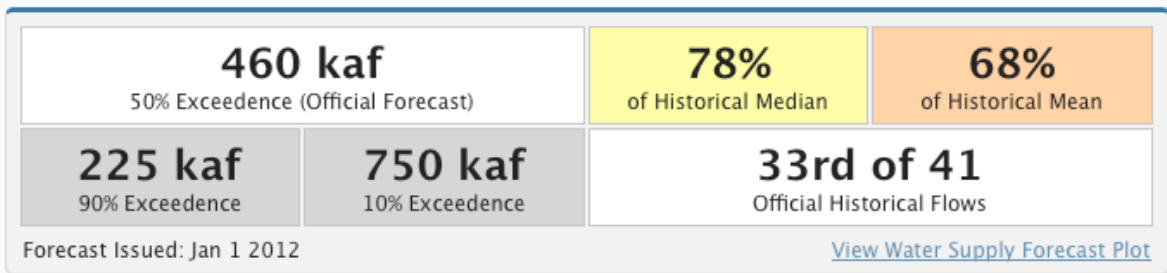
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Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



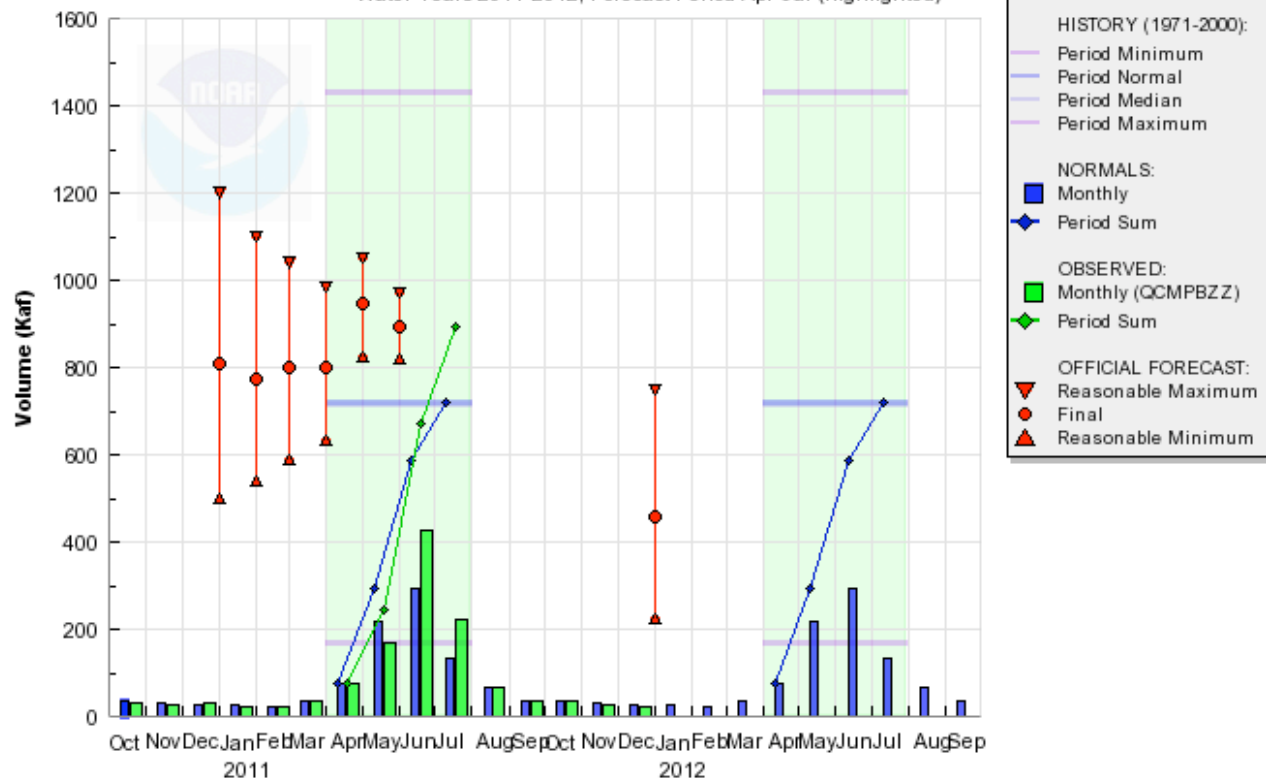
Seasonal Water Supply Forecast [?]

Forecast Period: Apr-Jul



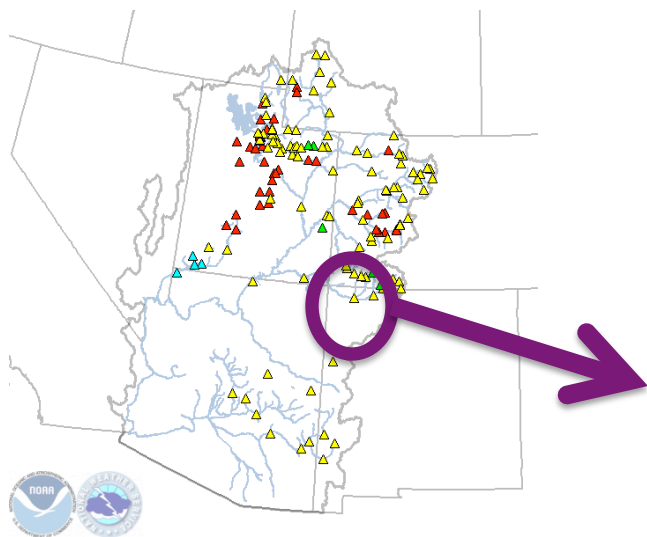
GUNNISON - BLUE MESA RES (BMDC2)

Water Years 2011-2012, Forecast Period Apr-Jul (highlighted)



CBRFC/NWS/NOAA 01/06/12 17:42:13 UTC

Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



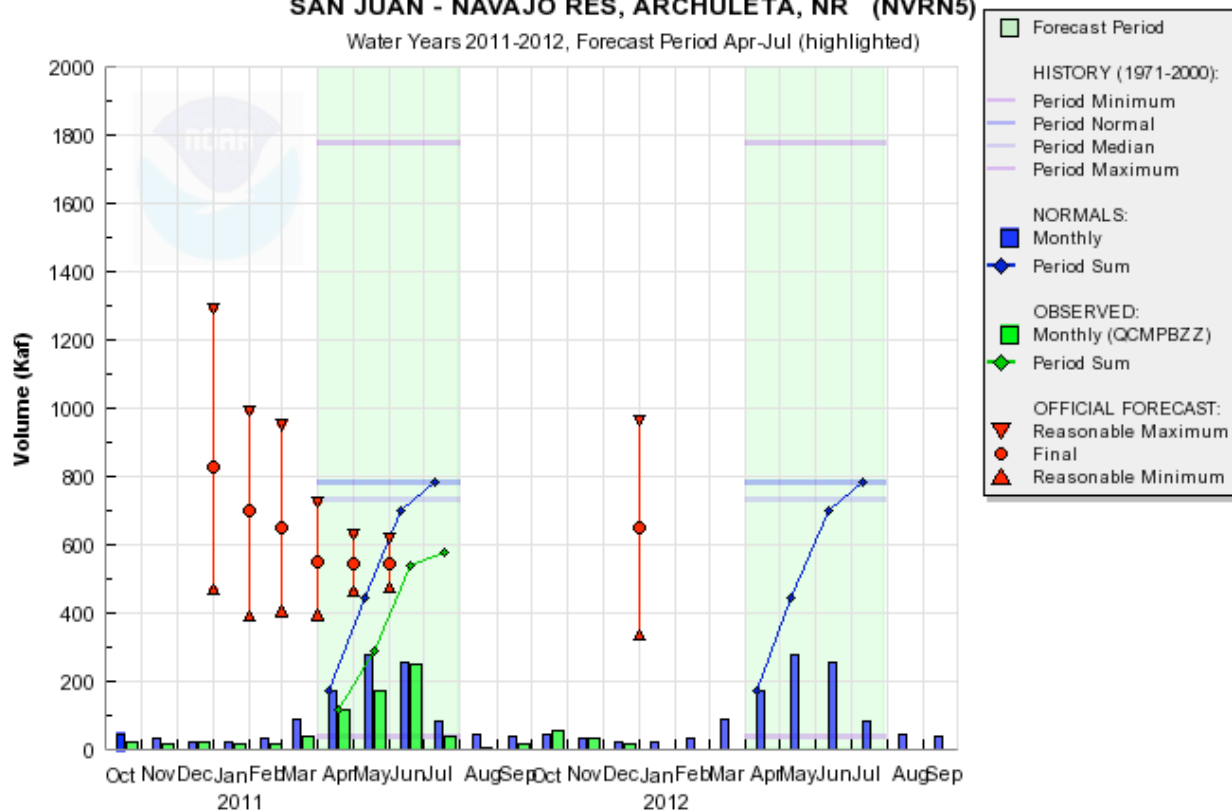
Seasonal Water Supply Forecast

Forecast Period: Apr-Jul

<p>650 kaf 50% Exceedence (Official Forecast)</p>		<p>107% of Historical Median</p>	<p>88% of Historical Mean</p>
<p>335 kaf 90% Exceedence</p>	<p>965 kaf 10% Exceedence</p>	<p>37th of 64 Official Historical Flows</p>	
<p>Forecast Issued: Jan 1 2012</p>		<p>View Water Supply Forecast Plot</p>	

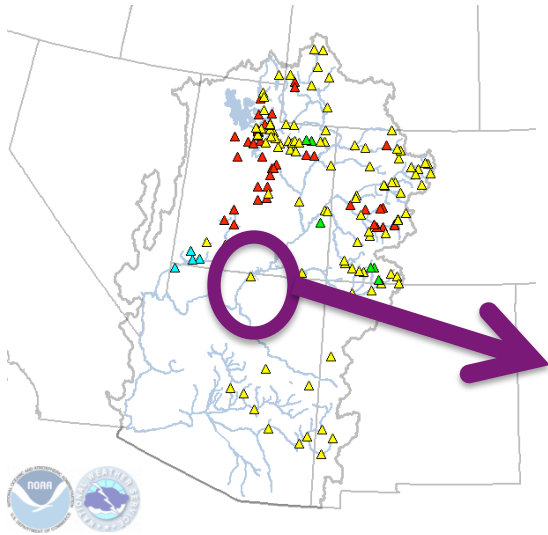
SAN JUAN - NAVAJO RES, ARCHULETA, NR (NVRN5)

Water Years 2011-2012, Forecast Period Apr-Jul (highlighted)



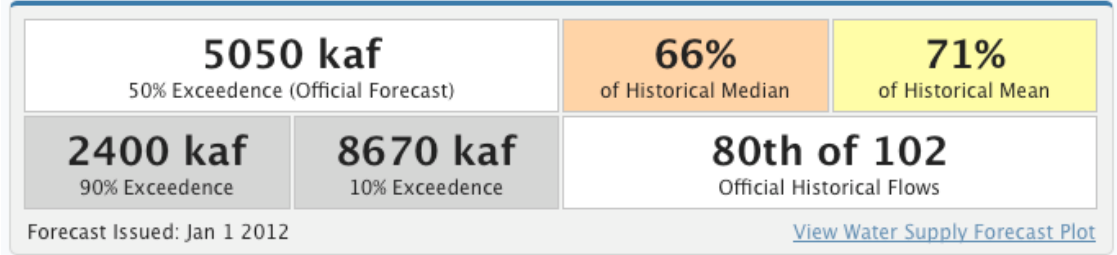
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Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



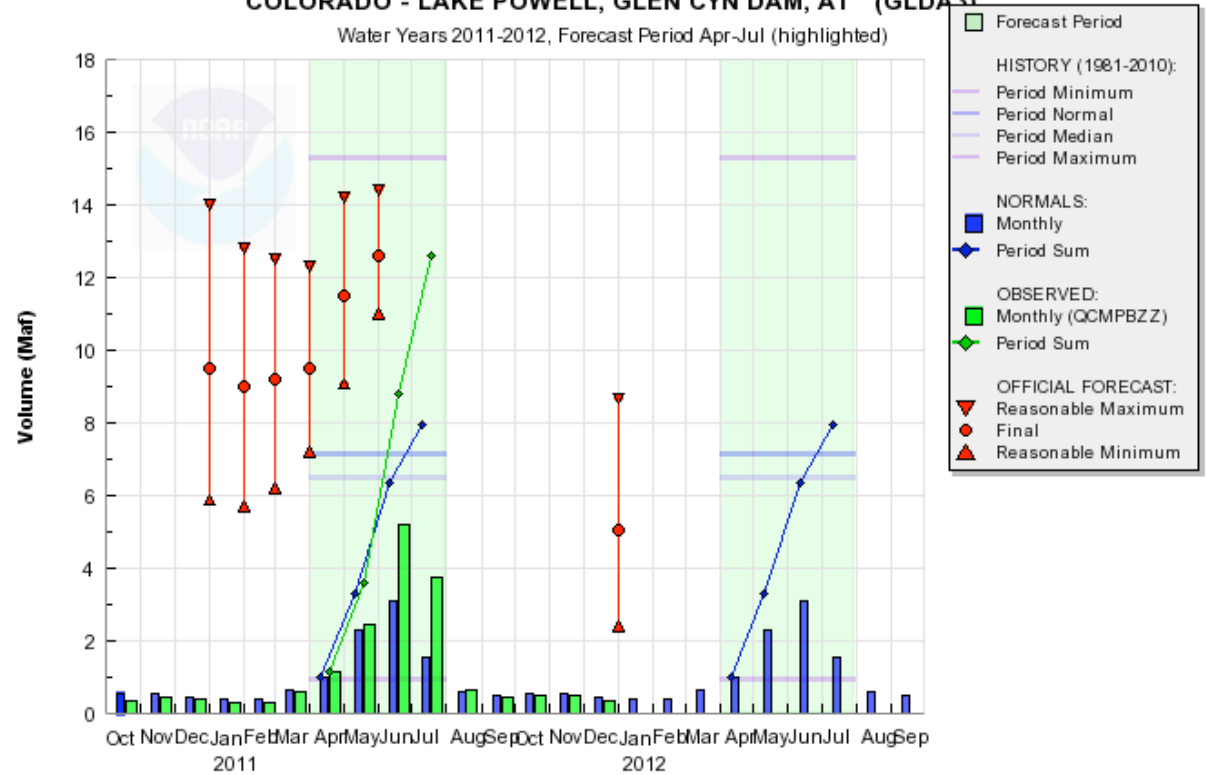
Seasonal Water Supply Forecast ©

Forecast Period: Apr-Jul



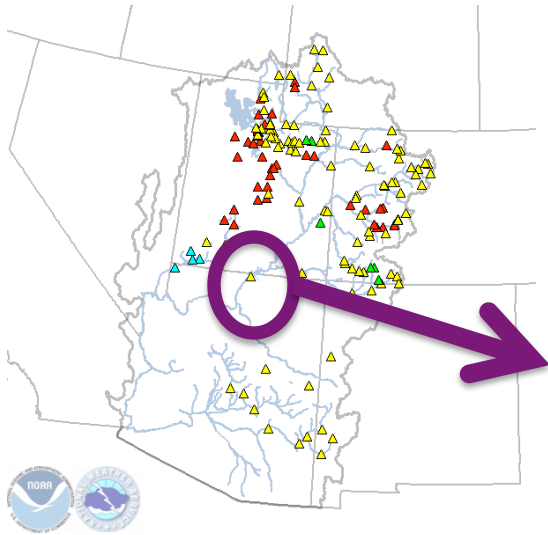
COLORADO - LAKE POWELL, GLEN CYN DAM, AT (GLDA3)

Water Years 2011-2012, Forecast Period Apr-Jul (highlighted)



CBRFC/NWS/NOAA 01/06/12 18:44:28 UTC

Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



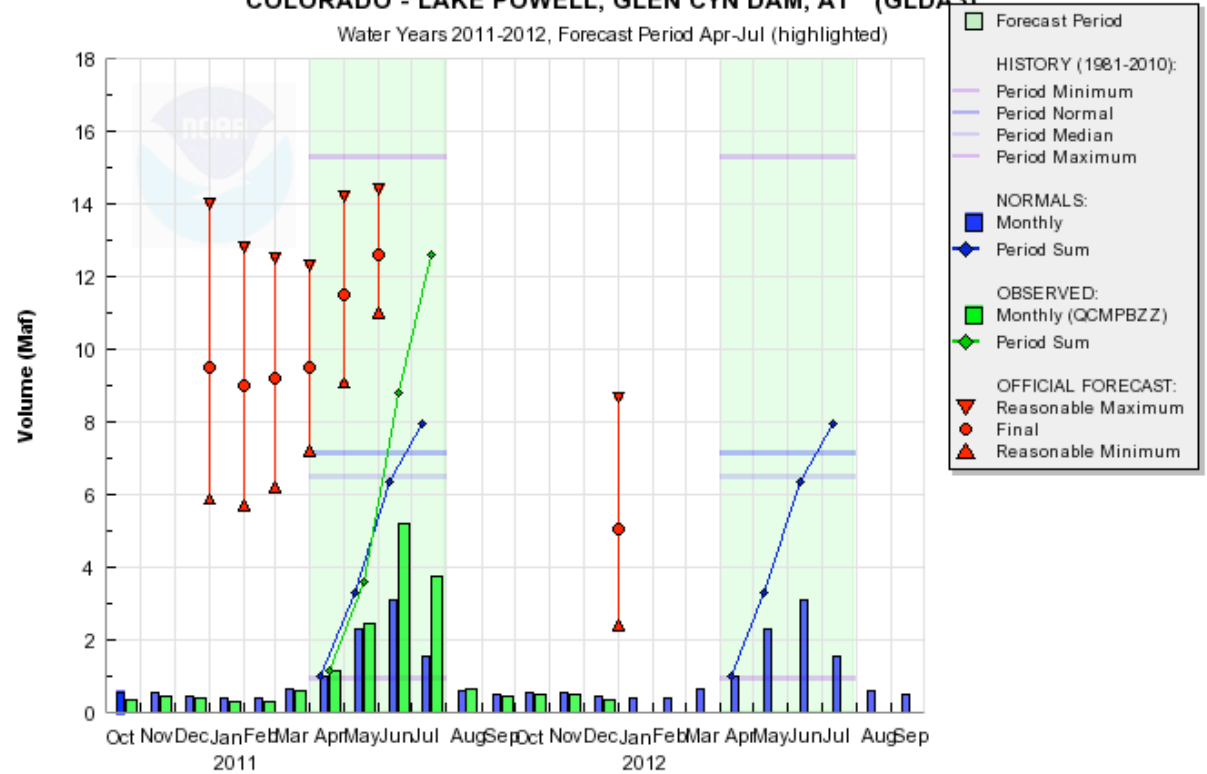
Seasonal Water Supply Forecast ©

Forecast Period: Apr-Jul

5050 kaf 50% Exceedence (Official Forecast)	66% of Historical Median	71% of Historical Mean
2400 kaf 90% Exceedence	8670 kaf 10% Exceedence	80th of 102 Official Historical Flows
Forecast Issued: Jan 1 2012		View Water Supply Forecast Plot

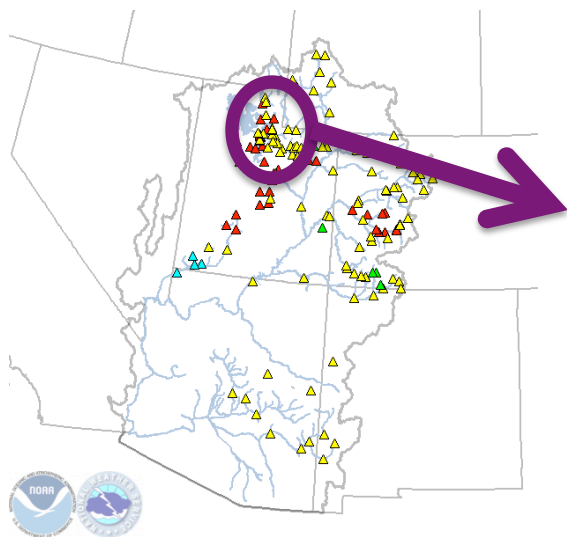
COLORADO - LAKE POWELL, GLEN CYN DAM, AT (GLDA3)

Water Years 2011-2012, Forecast Period Apr-Jul (highlighted)



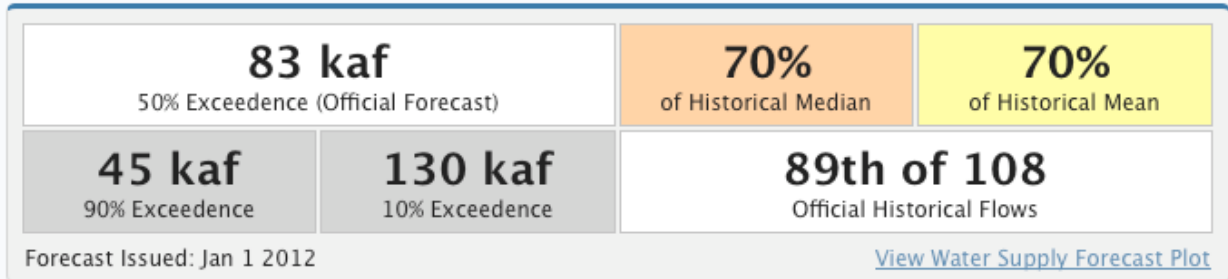
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Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



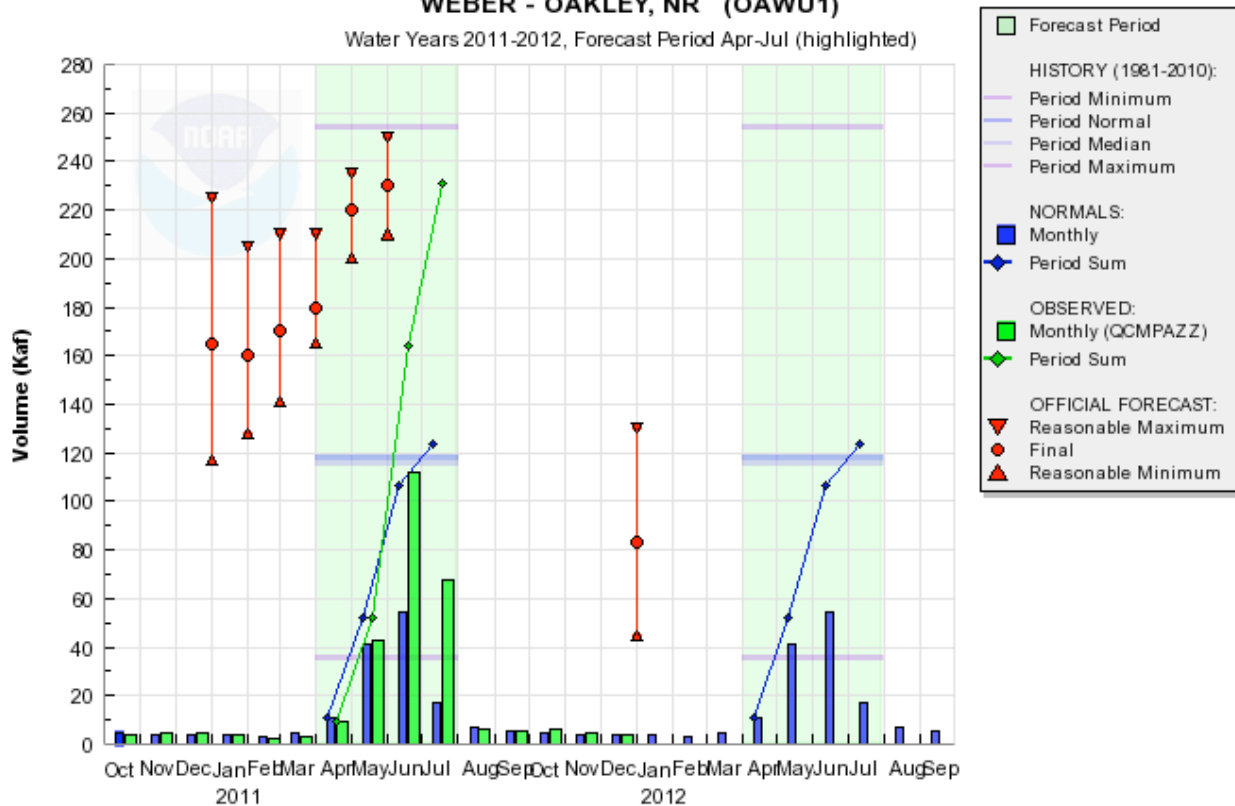
Seasonal Water Supply Forecast ?

Forecast Period: Apr-Jul



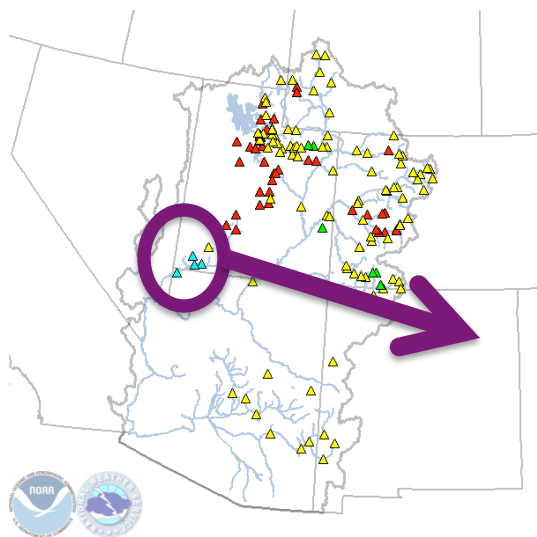
WEBER - OAKLEY, NR (OAWU1)

Water Years 2011-2012, Forecast Period Apr-Jul (highlighted)



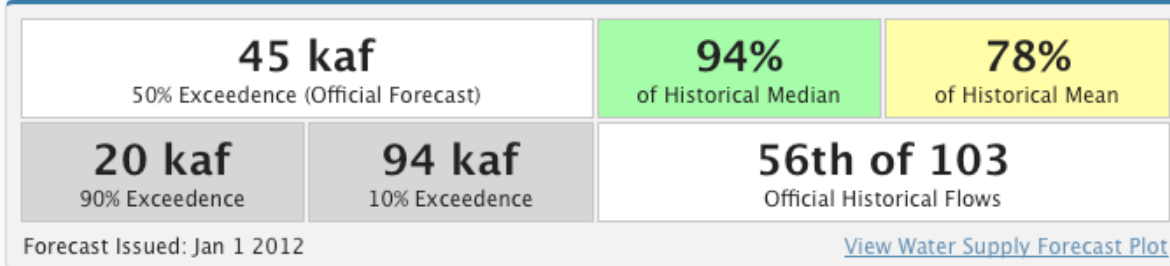
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Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



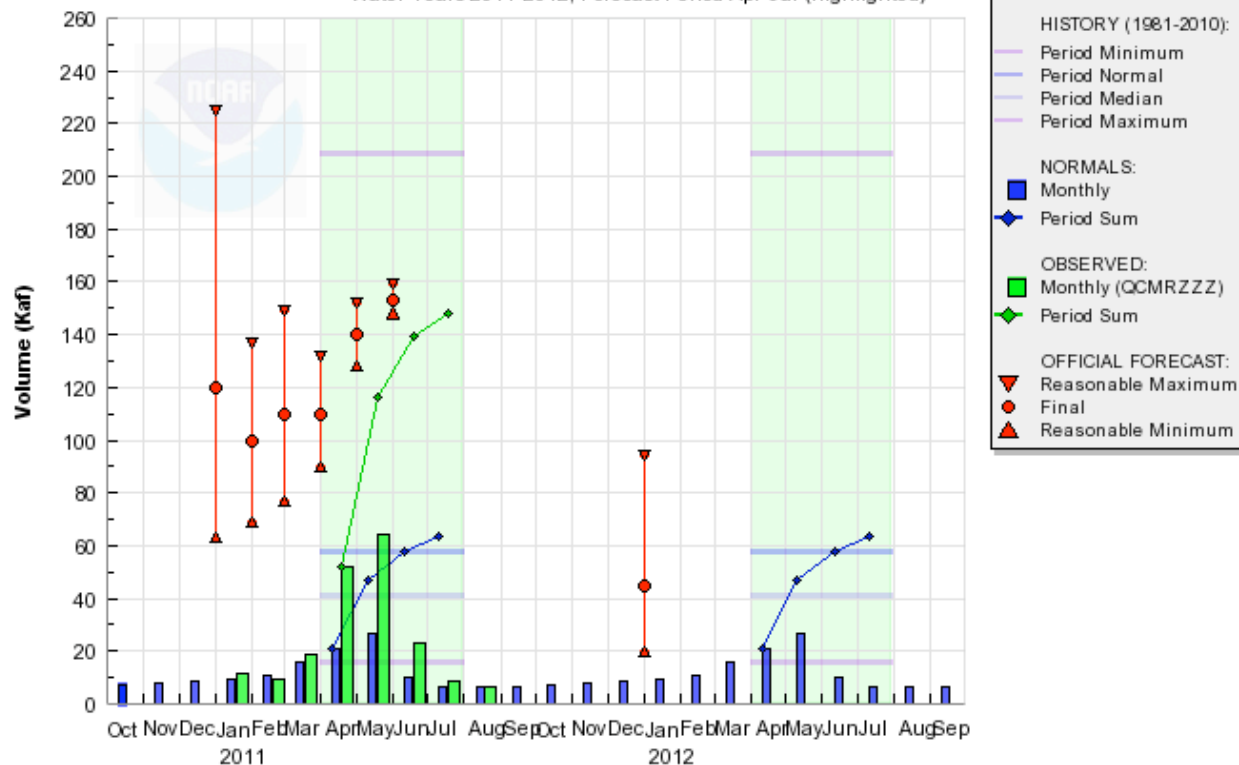
Seasonal Water Supply Forecast ?

Forecast Period: Apr-Jul



VIRGIN - VIRGIN (VIRU1)

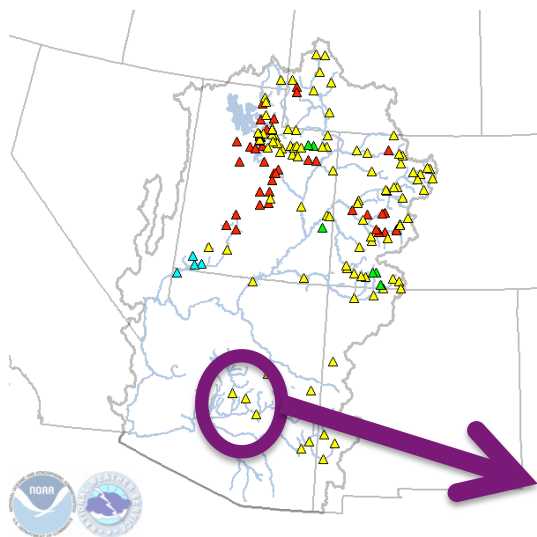
Water Years 2011-2012, Forecast Period Apr-Jul (highlighted)



No data before 2010-10-01

CBRFC/NWS/NOAA 01/06/12 19:16:35 UTC

Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked



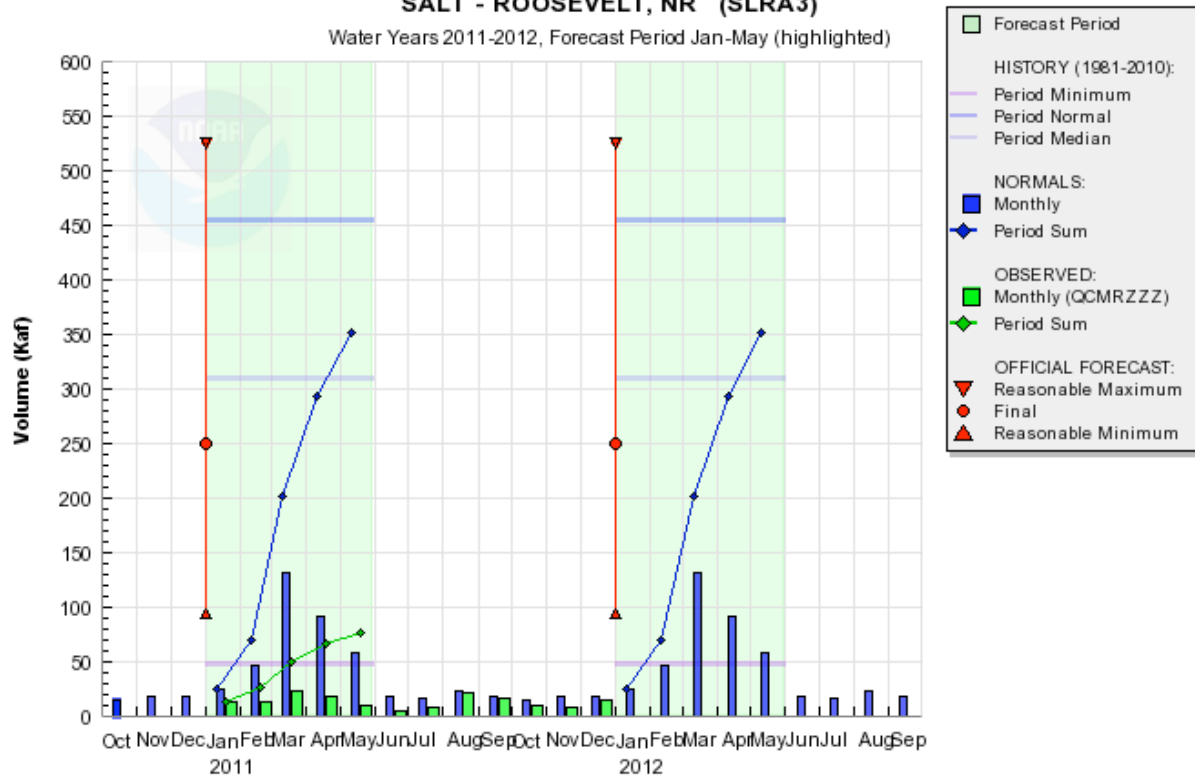
Seasonal Water Supply Forecast

Forecast Period: Jan-May

250 kaf 50% Exceedence (Official Forecast)		98% of Historical Median	55% of Historical Mean
94 kaf 90% Exceedence	525 kaf 10% Exceedence	55th of 98 Official Historical Flows	
Forecast Issued: Jan 1 2012		View Water Supply Forecast Plot	

SALT - ROOSEVELT, NR (SLRA3)

Water Years 2011-2012, Forecast Period Jan-May (highlighted)



No data before 2010-10-01

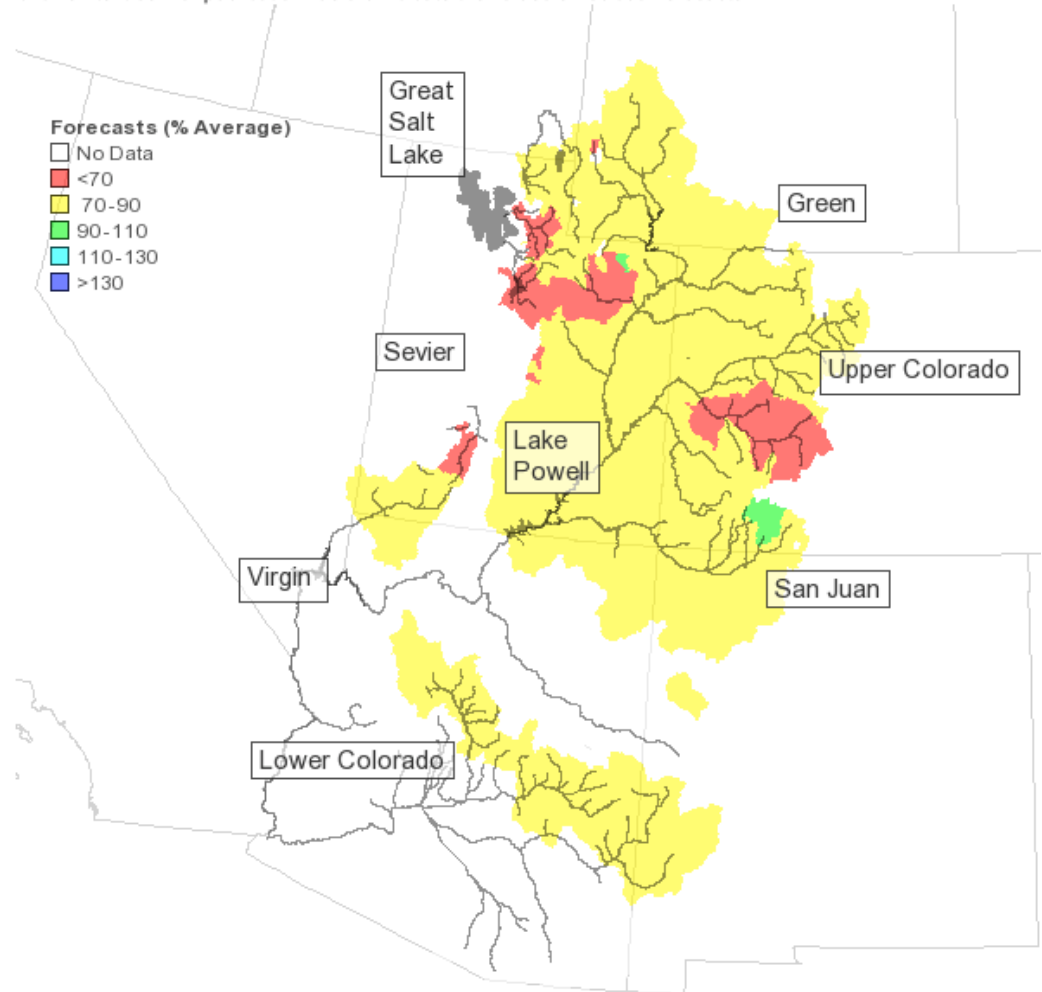
CBRFC/NWS/NOAA 01/06/12 19:15:34 UTC

Web Reference: www.cbrfc.noaa.gov/gmap/gmapm.php?wcon=checked

Online Publication

Water Supply Outlook, January 1, 2012

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



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

Note: This publication is currently undergoing major revisions and parts of it may be discontinued during or after WY2011. If this change could impact your operations or you have input for the revisions, please contact us at cbrfc.webmasters@noaa.gov

Upper Colorado Mainstem Specific Site Forecasts (kaf)

Upper Colorado Water Supply Outlook, January 1, 2011

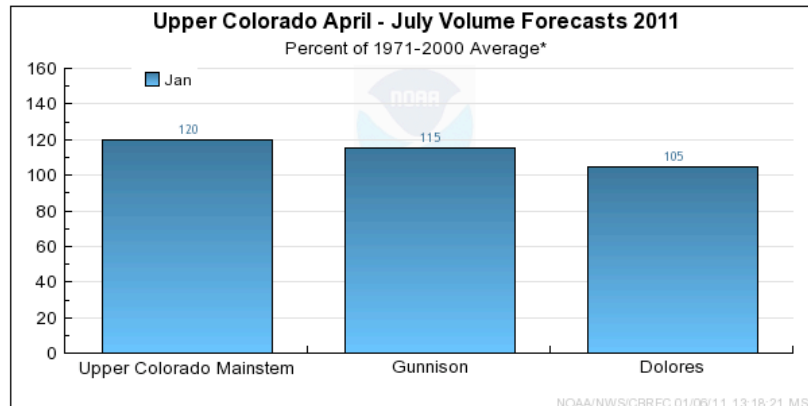


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Contents

- Upper Colorado Summary
- 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 Monthly Inflow Forecasts
- Reservoir Contents
- Monthly Streamflows
- Precipitation Maps
- Definitions
- Additional Information
- Questions or Comments

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	200	280	124	370
Willow Ck					
Willow Ck Res, Granby, Nr	April-July	44	70	137	102
Fraser					
Winter Park	April-July	15	23	115	29
Williams Fork					
Williams Fork Res, Parshall, Nr	April-July	76	110	116	150
Muddy Ck					
Wolford Mtn Res, Blo	April-July	46	76	127	114
Blue					
Dillon Res	April-July	134	200	120	280
Green Mtn Res	April-July	225	335	120	465
Colorado					
Kremmling, Nr	April-July	725	1070	123	1450
Eagle					
Gypsum, Blo	April-July	250	380	113	535
Colorado					
Dotsero, Nr	April-July	1140	1720	119	2410
Frying Pan					
Ruedi Res, Basalt, Nr	April-July	112	160	113	215
Roaring Fork					
Glenwood Springs	April-July	570	840	118	1160
Colorado					
Glenwood Springs, Blo	April-July	1700	2560	119	3600
Cameo, Nr	April-July	1980	2910	120	4020
Plateau Ck					
Cameo, Nr	April-July	100	160	139	250
Colorado					
Cisco, Nr	April-July	3640	5620	121	8020
Mill Ck					
Moab, Nr, Sheley Tun, At	April-July	2.9	6	120	10.8
Colorado					
Lake Powell, Glen Cyn Dam, At	April-July	5860	9500	120	14000

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

CBRFC News

- Basin Focal Points (Available to discuss forecasts: 801.524.5130)
 - Upper Colorado: Brenda Alcorn / John Lhotak
 - Green: Ashley Nielson
 - San Juan / Gunnison: Greg Smith
 - Great Basin: Brent Bernard
 - Sevier / Virgin: Stacie Bender
 - Lower Colorado (below Lake Powell): Tracy Cox
- Misc:
 - New CBRFC webpage (www.cbrfc.noaa.gov) - “How to use the webpage” webinar / recorded tutorial coming later this month
 - Sign up for next webinar Feb 7
 - Weekly ESP model guidance
 - Email product updates via govdelivery
 - Blog

More Resources

- www.cbrfc.noaa.gov
- Wateroutlook.nwrfc.noaa.gov
- Tentative February webinar: 10am Feb 7

Feedback, Questions, Concerns always welcome....



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