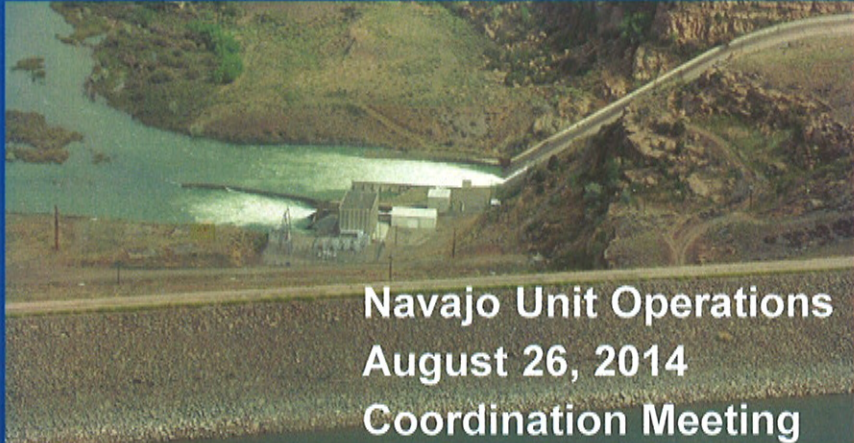



RECLAMATION

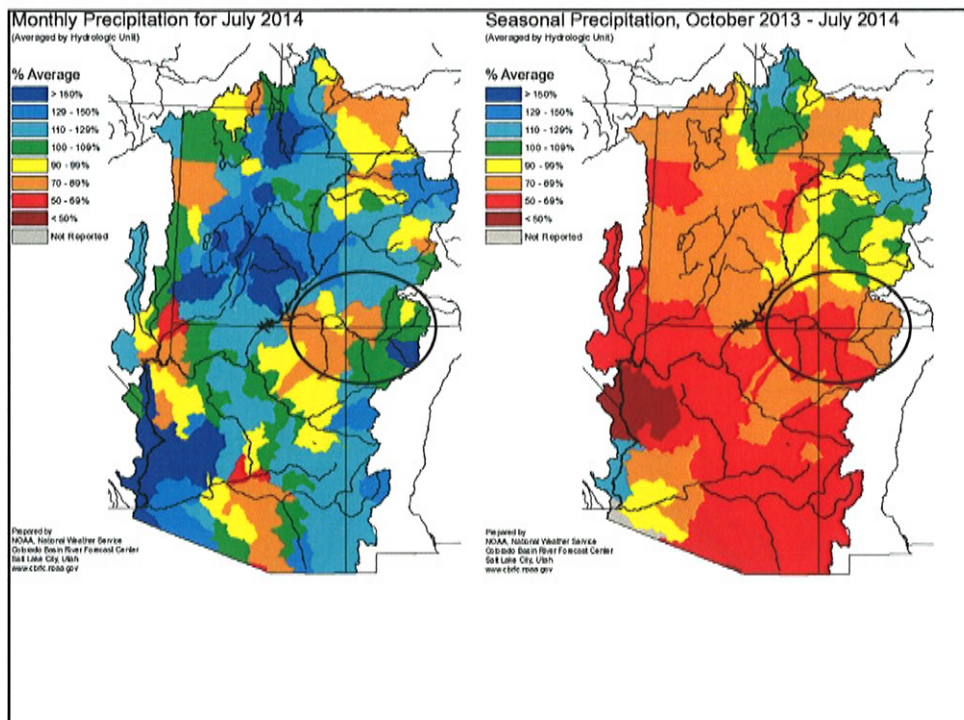
Managing Water in the West



**Navajo Unit Operations
August 26, 2014
Coordination Meeting**

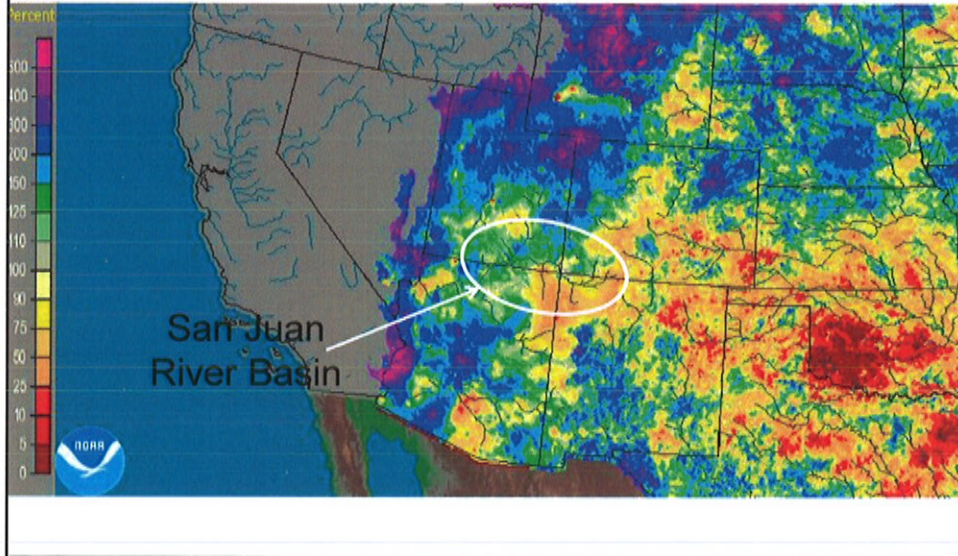


U.S. Department of the Interior
Bureau of Reclamation

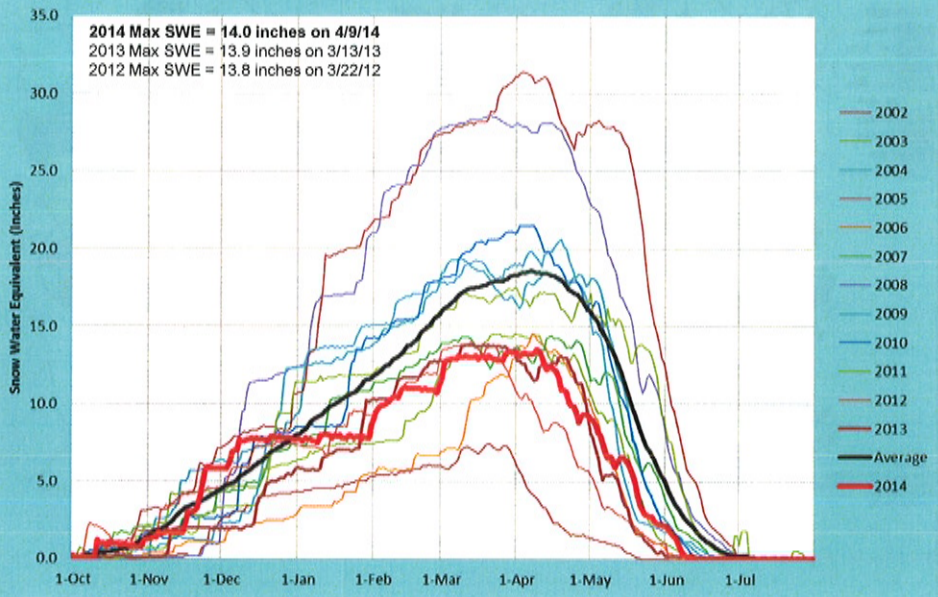


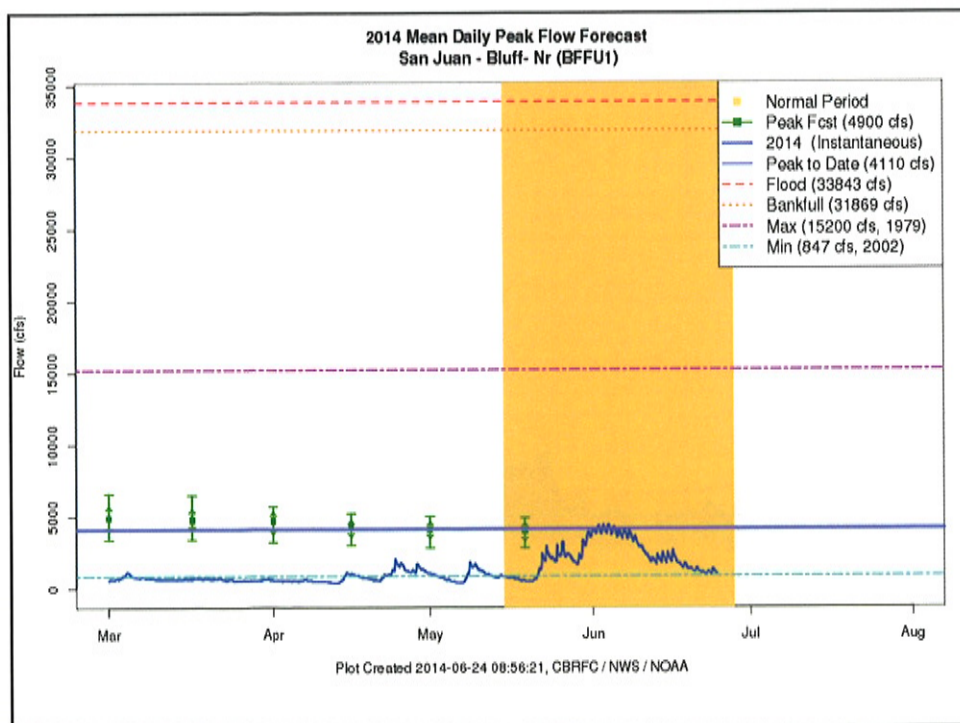
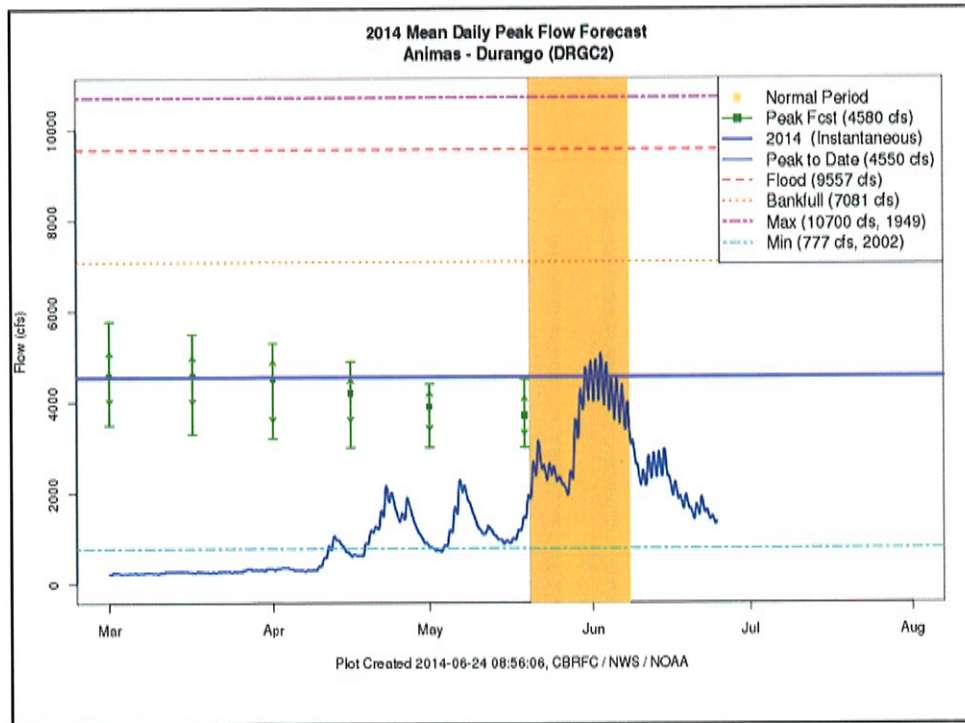
% of Average Precipitation for August to Date

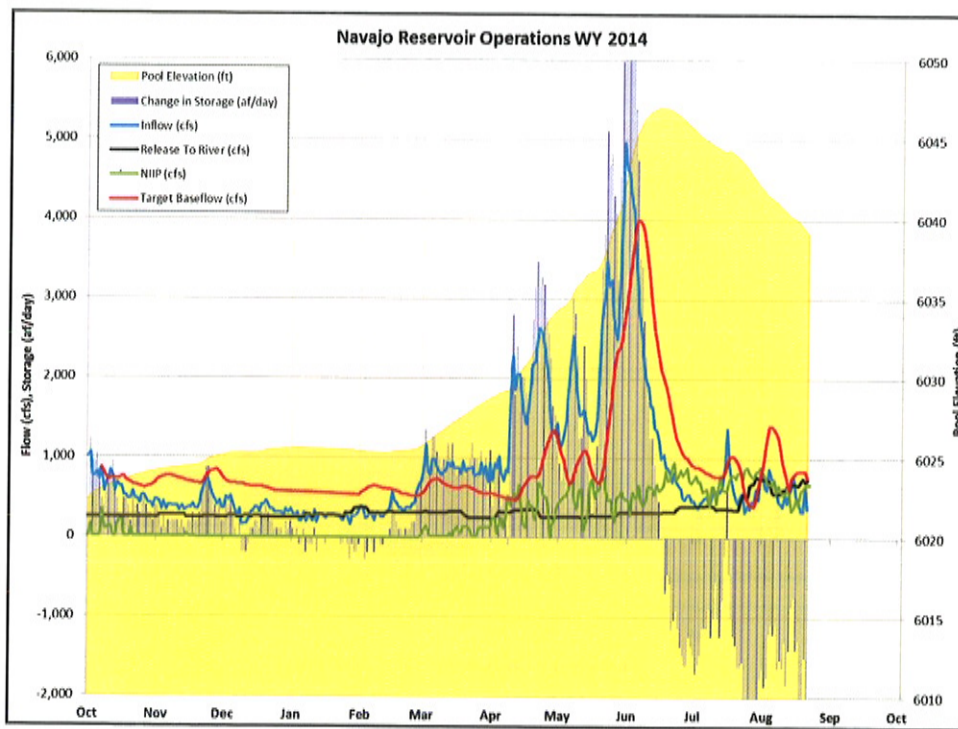
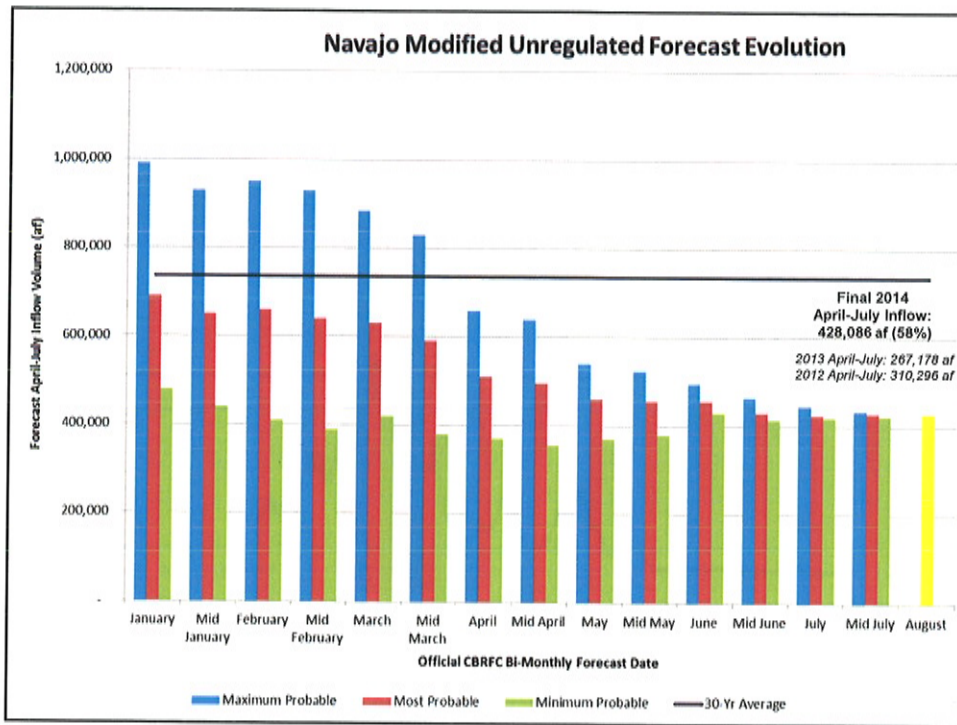
Colorado Basin RFC Salt Lake City, UT: Current Month to Date Percent of Normal Precipitation
Valid at 8/25/2014 1200 UTC- Created 8/25/14 14:17 UTC

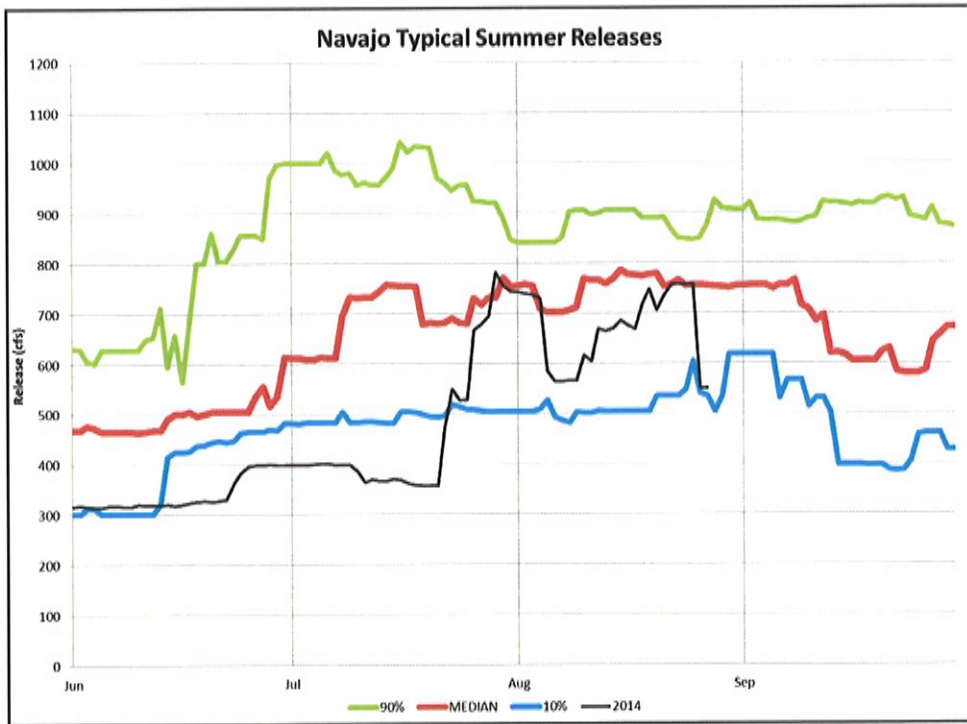
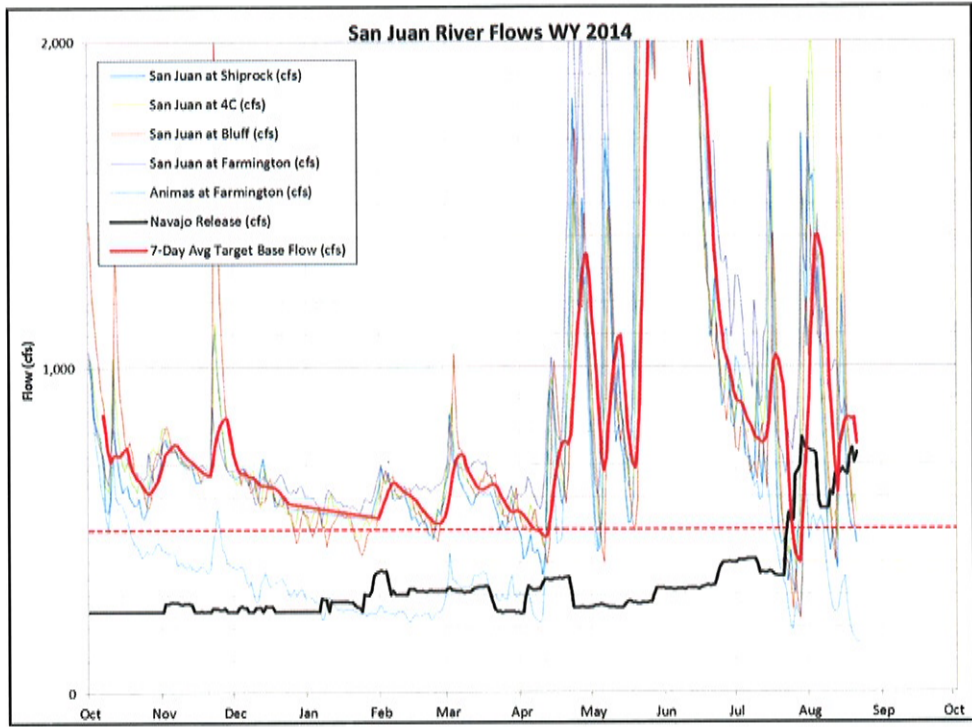


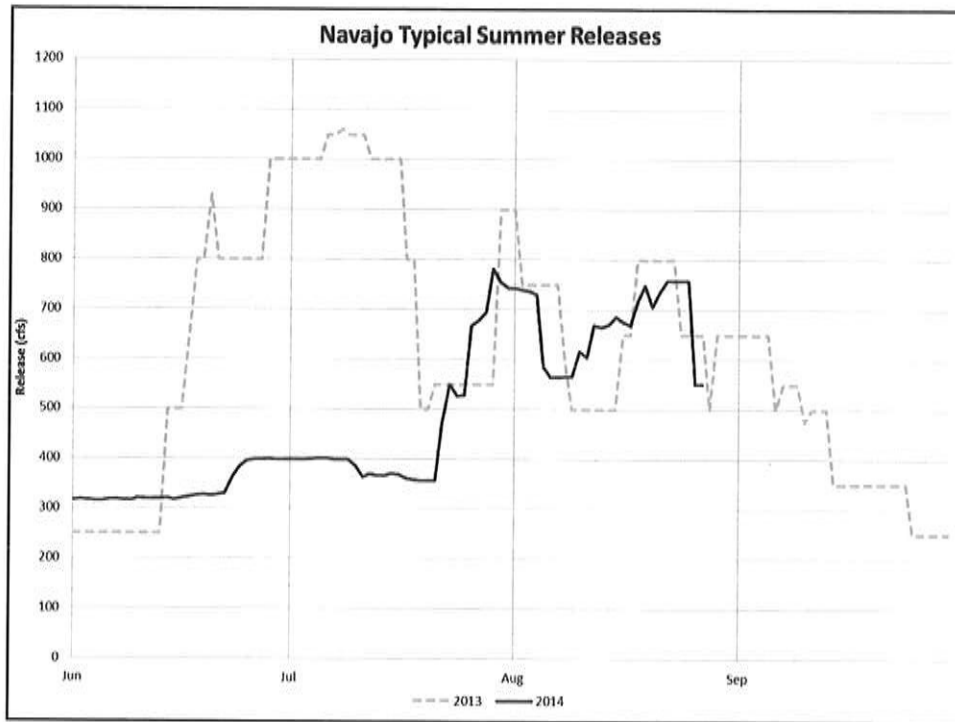
Navajo Reservoir SNOTEL SWE from 2002-2014











2014 Spring Peak Release

In cooperation with the SJRIP, Reclamation did not conduct a spring peak release in 2014, in favor of recovering the reservoir and ensuring that user needs and target base flows can be met.

SJRIP Spring Peak Flow Goals

(March 1 – July 31)

Critical Habitat Gages	>10,000 cfs for 5-days Req. Frequency – 20%	>8000 cfs for 10-days Req. Frequency – 33%	>5000 cfs for 21-days Req. Frequency – 50%	>2500 cfs for 10-days Req. Frequency – 80%
San Juan River @ 4 Corners	0	0	0	17

Navajo Current Conditions

(as of 8/24/14)

Elevation = 6038.68

Storage = 1,098,609 af *(65% Full, 43% of Active)*

Observed Inflow = 371 cfs

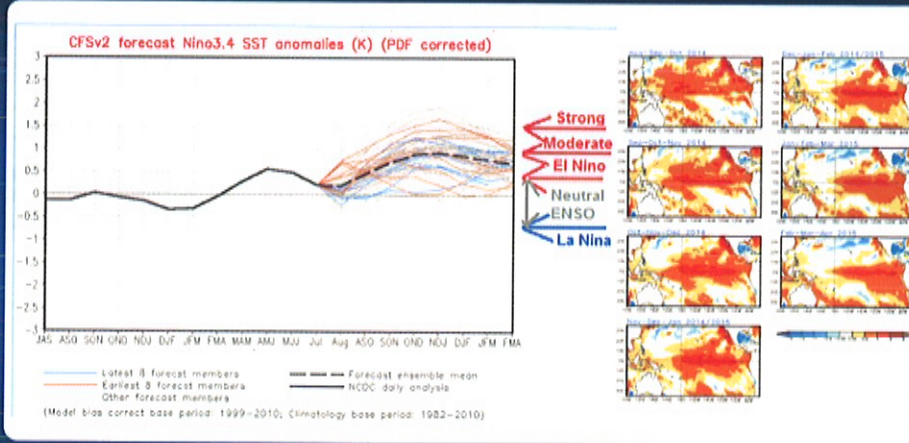
Release = 750 cfs *(release reduced to 550 cfs 8/26)*

NIIP = 452 cfs

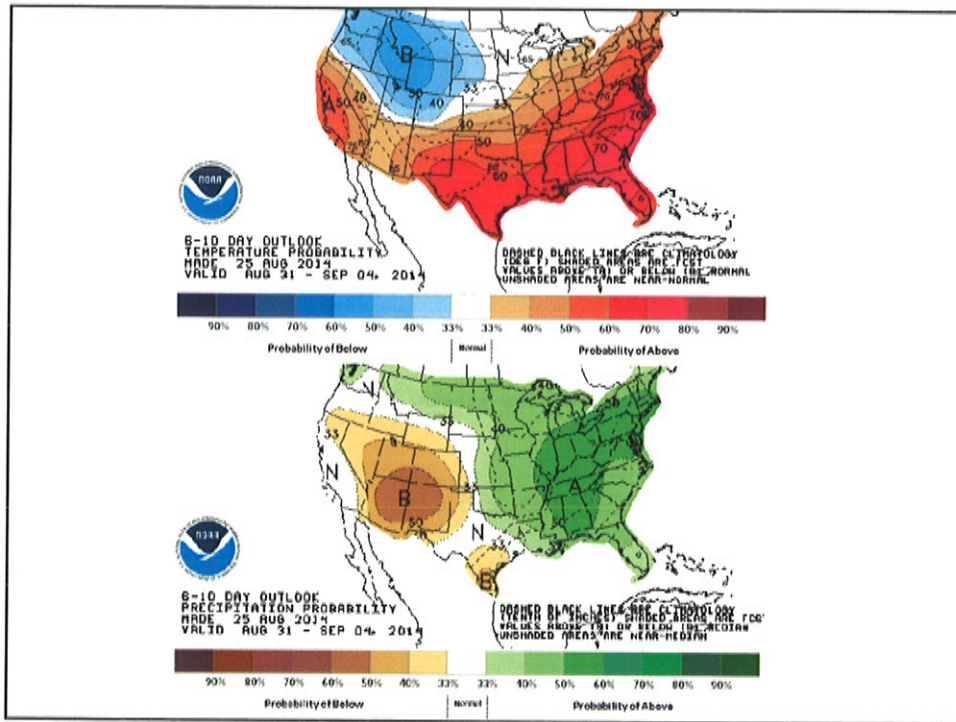
SJ-Chama Diversion = 1.8 cfs

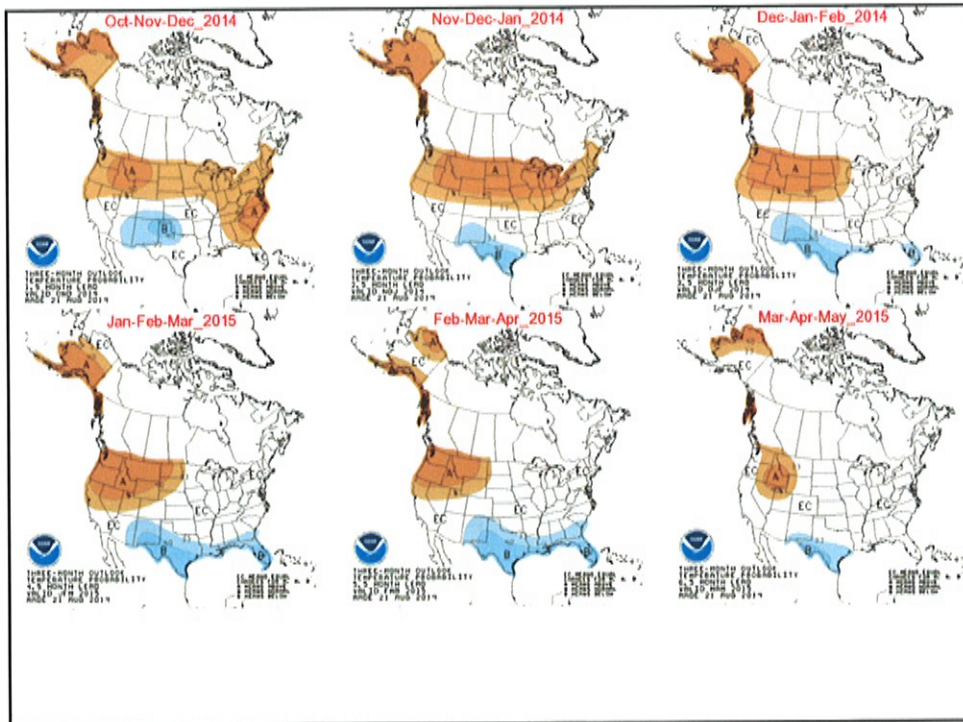
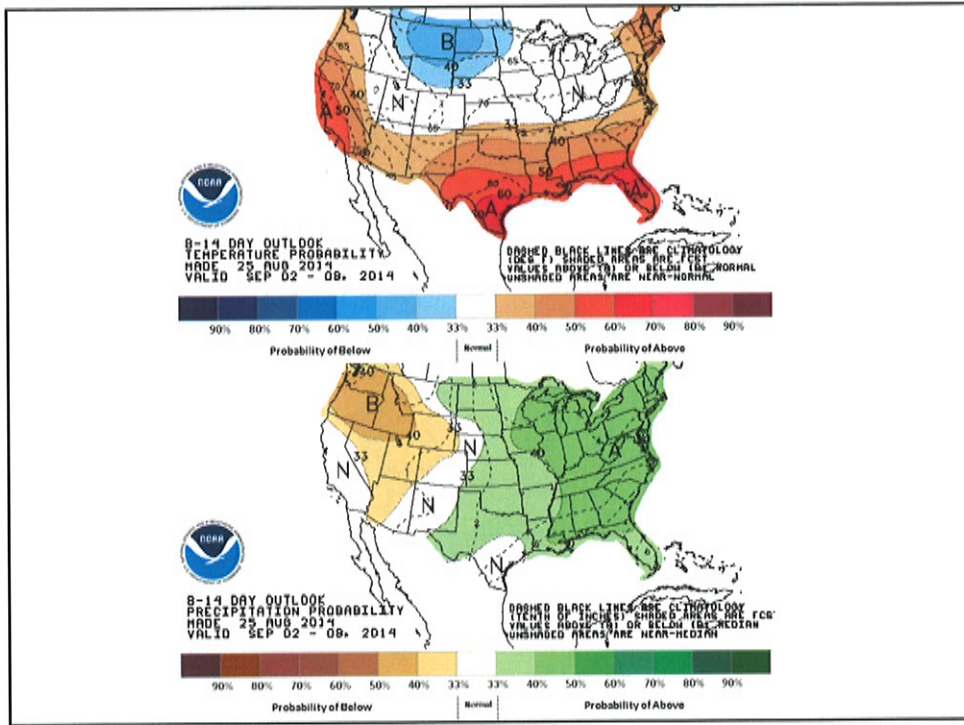
Apr-Jul Modified Unreg Inflow = 428,086 af (58% avg)

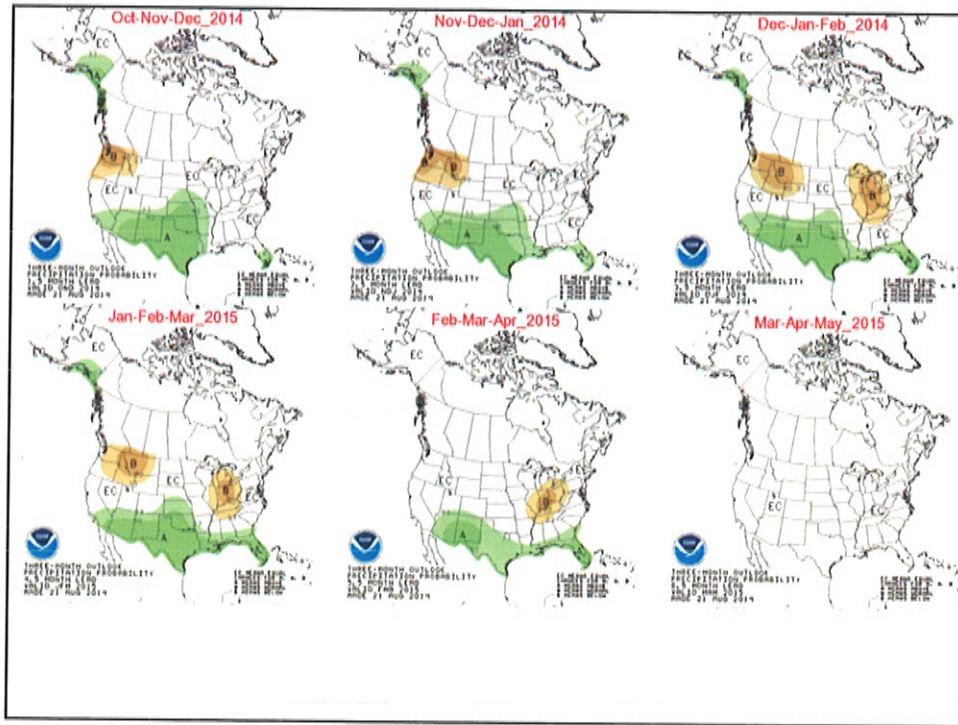
Most models favor El Niño (greater than or equal to +0.5°C) to develop in the next several months and persist through Northern Hemisphere winter 2014-15.



A strong El Niño is not favored in any of the ensemble averages, and slightly more models call for a weak event rather than a moderate event.







Water Year 2015 Forecasts

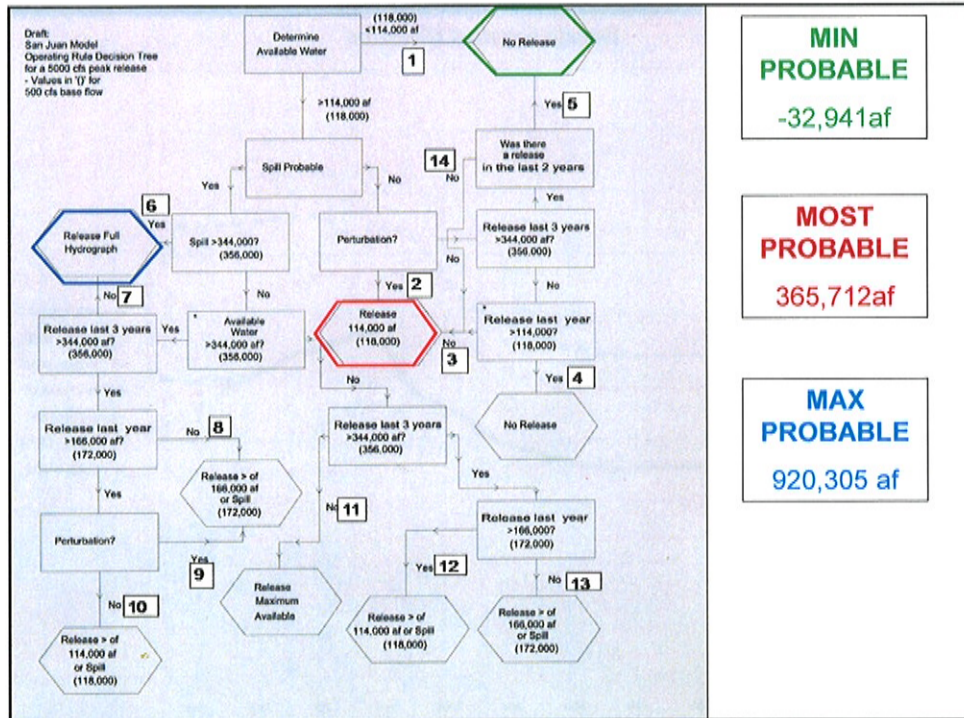
(as of August 1st CBRFC Forecast)

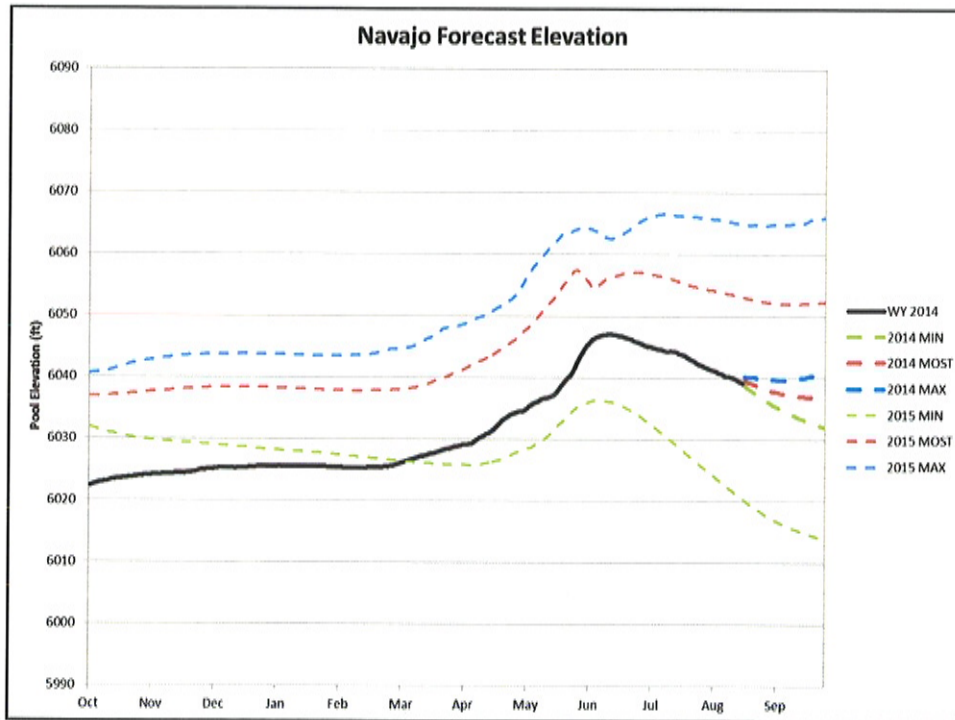
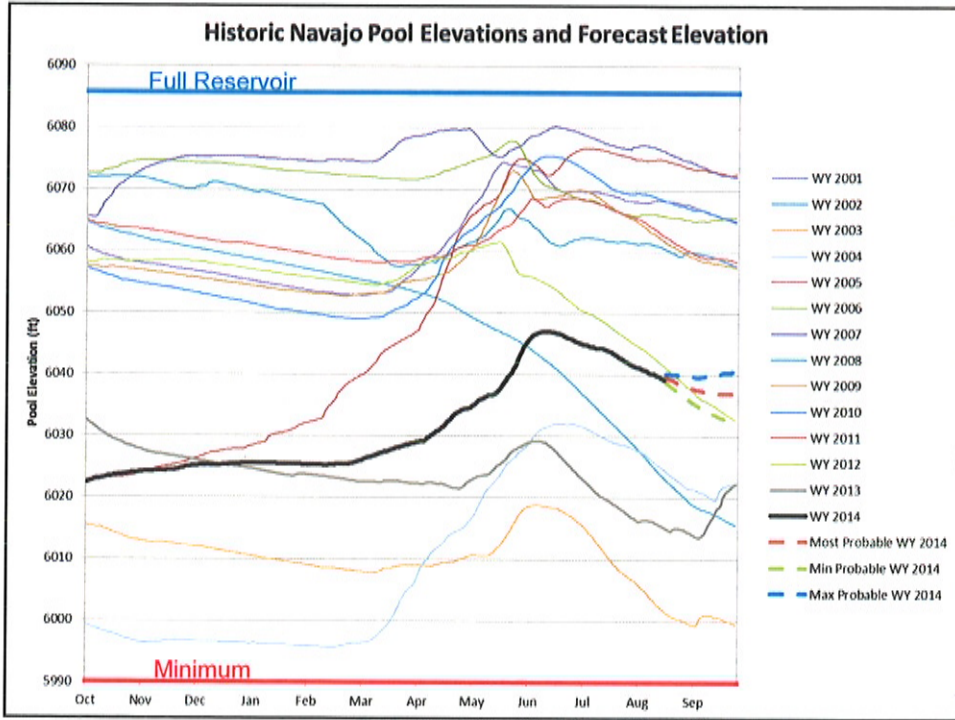
Forecast	Water Year		Preliminary April-July	
	Volume (af)	% of avg	Volume (af)	% of avg
MIN	430,000	40%	265,580	36%
MOST	885,000	82%	631,000	85%
MAX	1,450,000	134%	1,039,620	140%

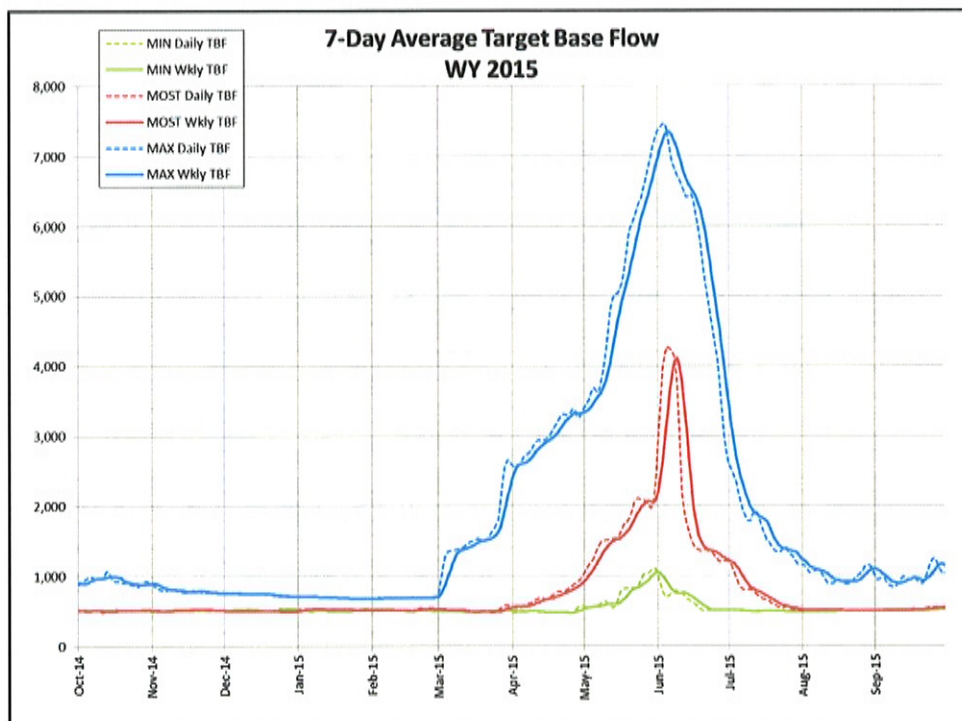
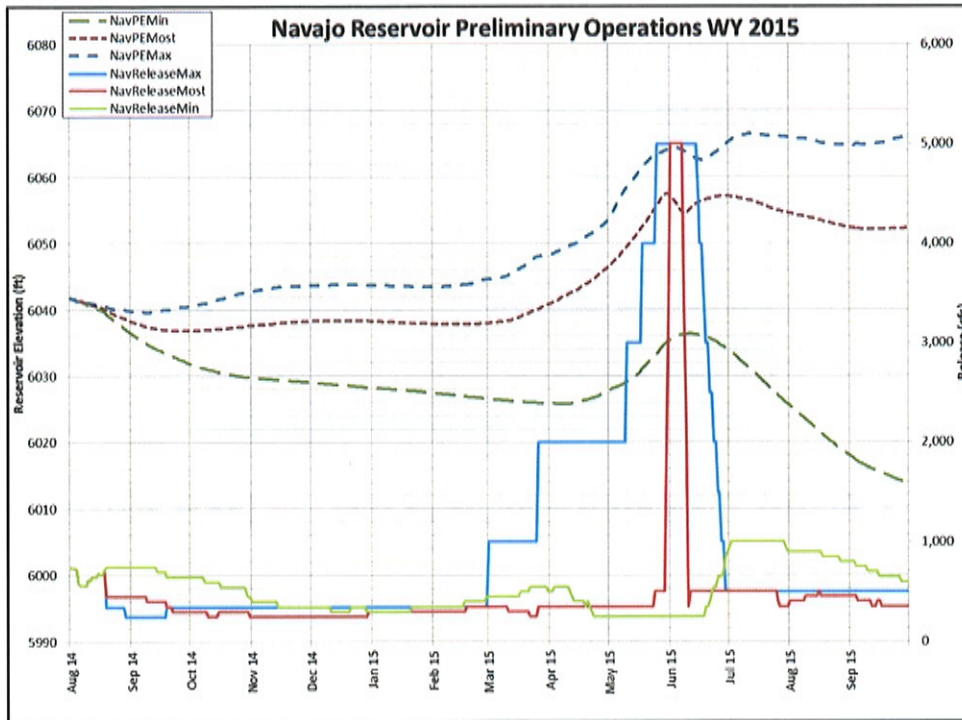
MIN? MOST? MAX?

- **MINIMUM Probable Forecast (90% Exceedance Probability):**
This means that the forecast hydrology has a 90% chance of being exceeded.
- **MOST Probable Forecast (50% Exceedance Probability):** This means that the forecast hydrology has a 50% chance of being exceeded. It is the median forecast.
- **MAXIMUM Probable Forecast (10% Exceedance Probability):**
This means that the forecast hydrology has a 10% chance of being exceeded.

These forecasts only encompass 80% of the total range of likelihoods! The actual could be 10% below the minimum or 10% above the maximum!







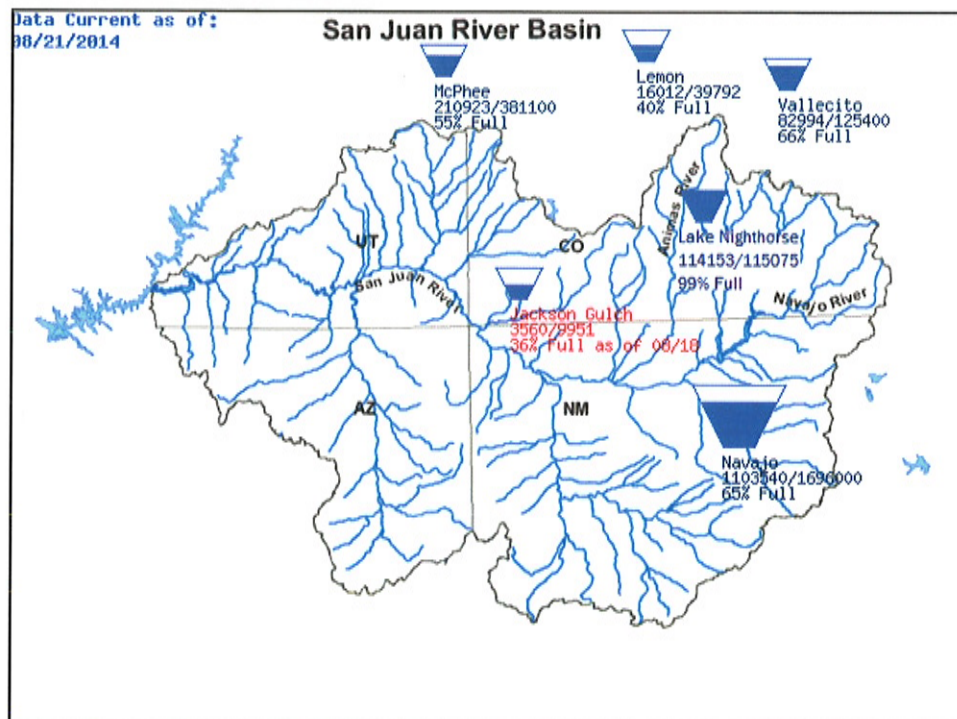
Slide from Aug 2013 Operations Meeting

Water Year 2014 Forecasts

(as of August 19th 2013 CBRFC Forecast)

Forecast	April - July	
	Volume (af)	% of avg
MIN	291,000	39%
MOST	600,000	81%
MAX	737,000	100%

Actual 2014 April – July: 428,086 af (58% avg)



Nighthorse

- Elevation = 6881.38 ft
- Storage = 114,153 af (99% Full)
- Release = 0 cfs
- Pumping = 0 cfs

Vallecito

- Elevation = 7647.71 ft
- Storage = 81,534 af (65% Full, 107.7% of average)
- Release = 557 cfs
- Inflow = 208 cfs
- April-July Inflow = 149,000 AF (77% avg)

Lemon

- Elevation = 8099.63 ft
- Storage = 15,613 af (39% Full, 66% of average)
- Release = 148 cfs
- Inflow = 54 cfs
- April-July Inflow = 37,000 AF (67% avg)

Navajo Maintenance Activities

- Completed: Rock fall mitigation and concrete repairs to spillway
- September 8th: Security fence along frontage road begins (1 month). New fence will not block pedestrian access to river.
- September 13th: Right groin rehabilitation work beginning

How You Can Access Information

Bureau of Reclamation
www.usbr.gov/uc

USGS
<http://water.usgs.gov/nwis>

Colorado Basin River Forecast Center
www.cbrfc.noaa.gov



Reclamation Contacts:

Ryan Christianson

970-248-0652 rchristianson@usbr.gov

Susan Novak Behery

970-385-6560 sbehery@usbr.gov

Ruth Swickard

970-385-6523 rswickard@usbr.gov

Summary

- WY2014 had below average snowpack for most of the year
- WY2014 April – July Inflow was 58% of average (428 Kaf)
- No Spring Peak Release was conducted
- One of the SJRIP flow goals were met (2500 cfs)
- Minimum Summer Release = 250 cfs, Current Release = 750 cfs
- Release will continue to be that which is necessary to target the minimum target base flows while recovering the reservoir.
- Most Probable April – July hydrologic forecast for 2015 is 85% of average.
- A 1-week at 5,000 cfs spring peak release is forecast for spring 2015 under the Most Probable forecasted operations.
- Typically the CBRFC hydrologic forecasting skill for the coming snow year is very low during the August forecasts. ESP Forecast for WY2015 shows a wide variance.
- Current models show a 65% chance of a weak or moderate El Nino forming this winter. Impacts on the basin are uncertain.
- **Next Operations Meeting: Tuesday, January 20, 2015**

