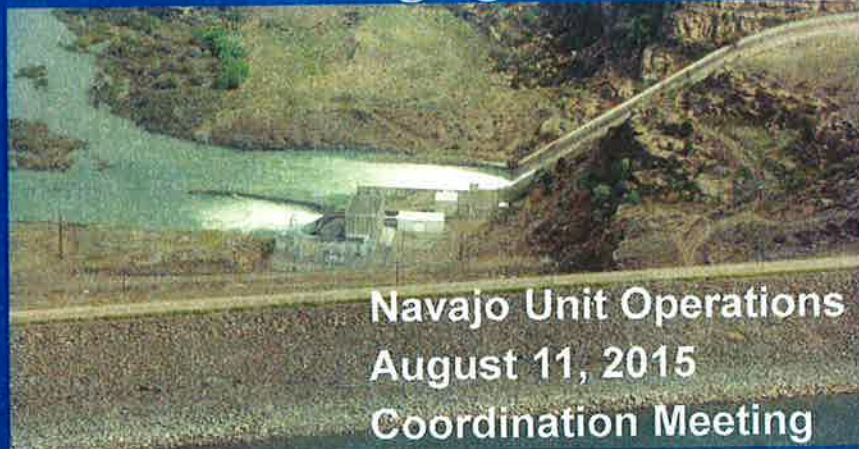


RECLAMATION

Managing Water in the West



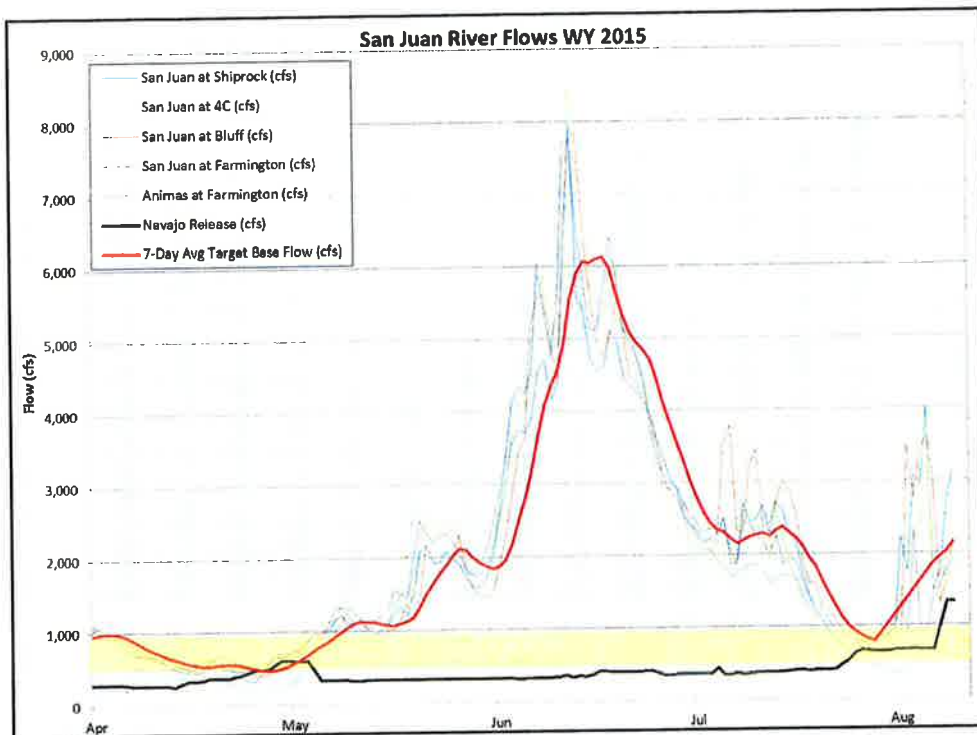
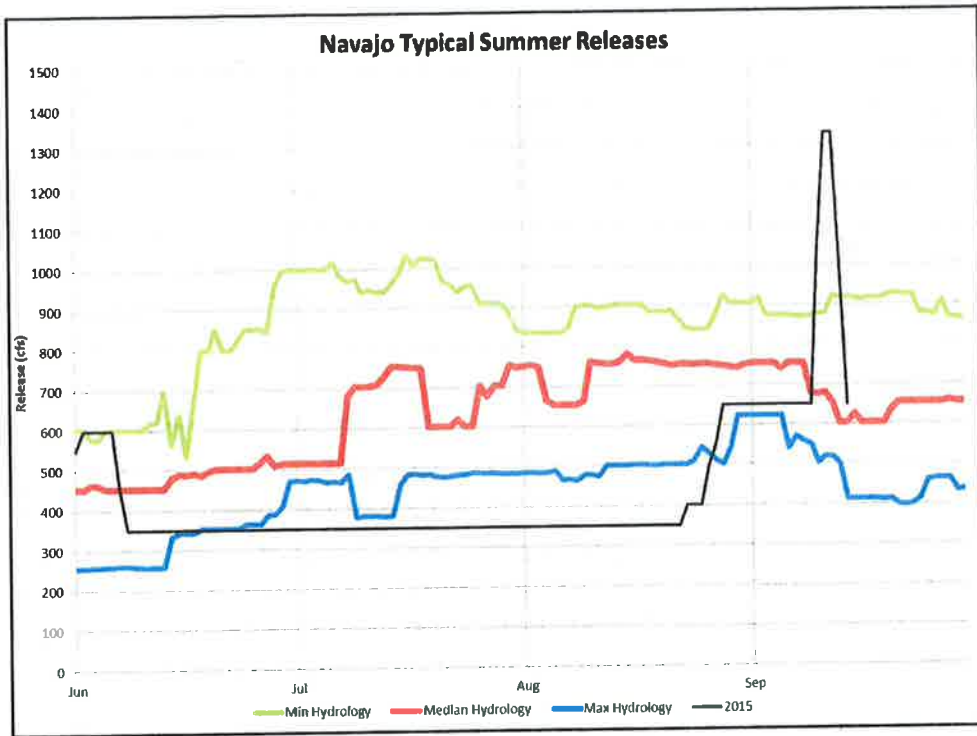
Navajo Unit Operations
August 11, 2015
Coordination Meeting






U.S. Department of the Interior
Bureau of Reclamation

AGENDA



- REVIEW OF WATER YEAR 2015 OPERATIONS
- GOLD KING MINE EVENT
- WEATHER DISCUSSION AND OUTLOOK- ALDIS STRAUTINS, NWS (GJ)
- WATER SUPPLY DISCUSSION AND OUTLOOK- ASHLEY NIELSON, CBRFC
- WY 2016 PROPOSED OPERATIONS
- NEARBY PROJECTS UPDATE
- FISH & WILDLIFE SERVICE/SAN JUAN RIP UPDATE
- SPECIAL PRESENTATION: SYSTEM CONSERVATION PILOT PROGRAM- KRISTIN GREEN, NMISC
- REPORTS FROM OTHER AGENCIES



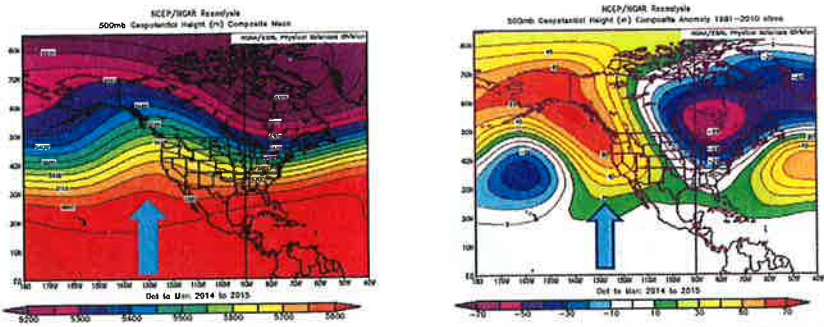
 **Weather Outlook**
August 11, 2015 



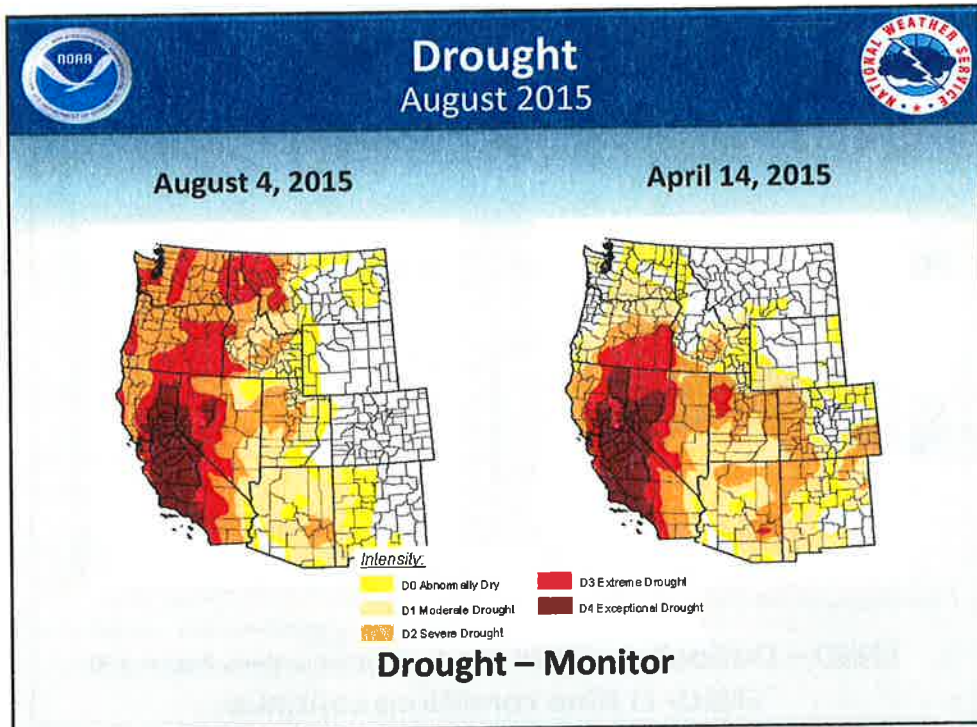
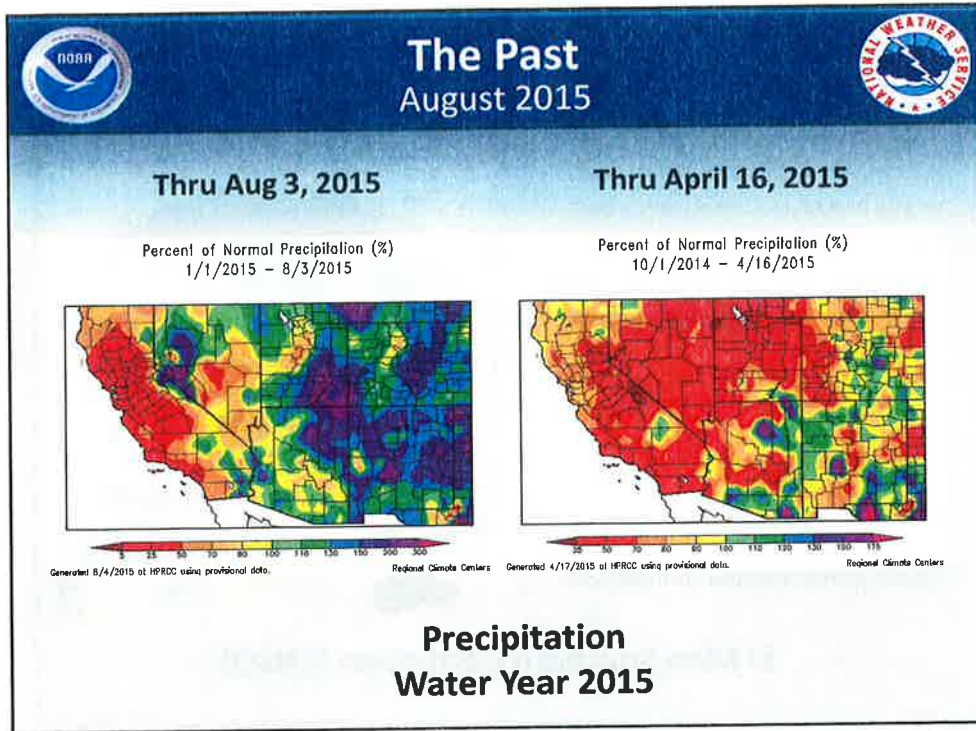
Aldis Strautins
National Weather Service
Grand Junction, CO
<http://www.weather.gov/gjt> or <http://www.weather.gov/abq>

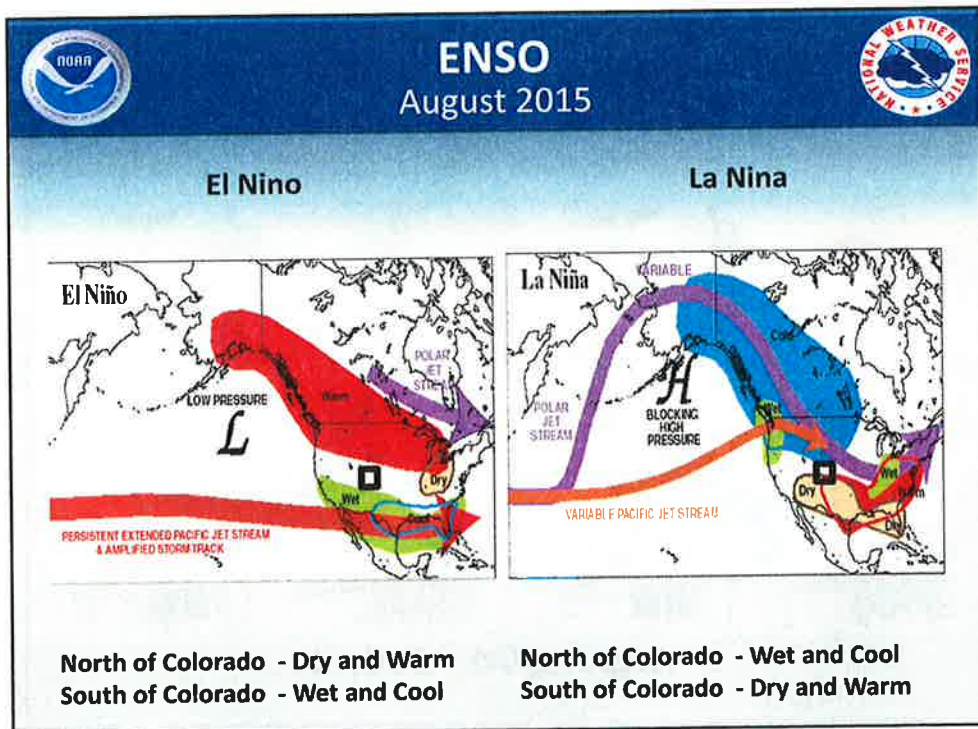
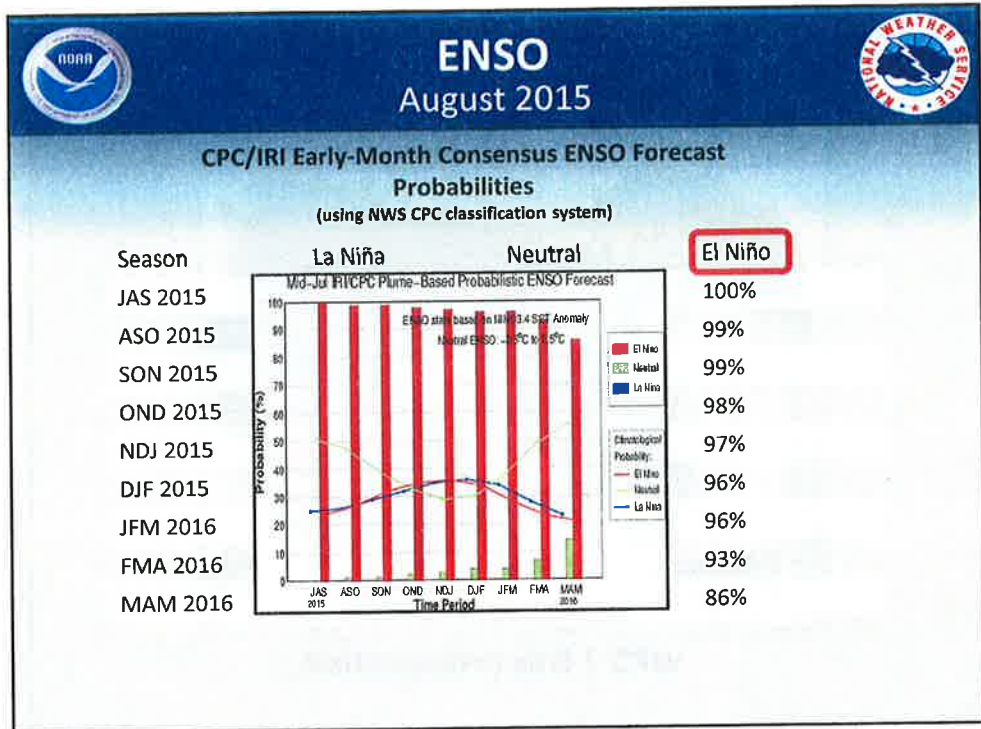
 **The Past**
August 2015 

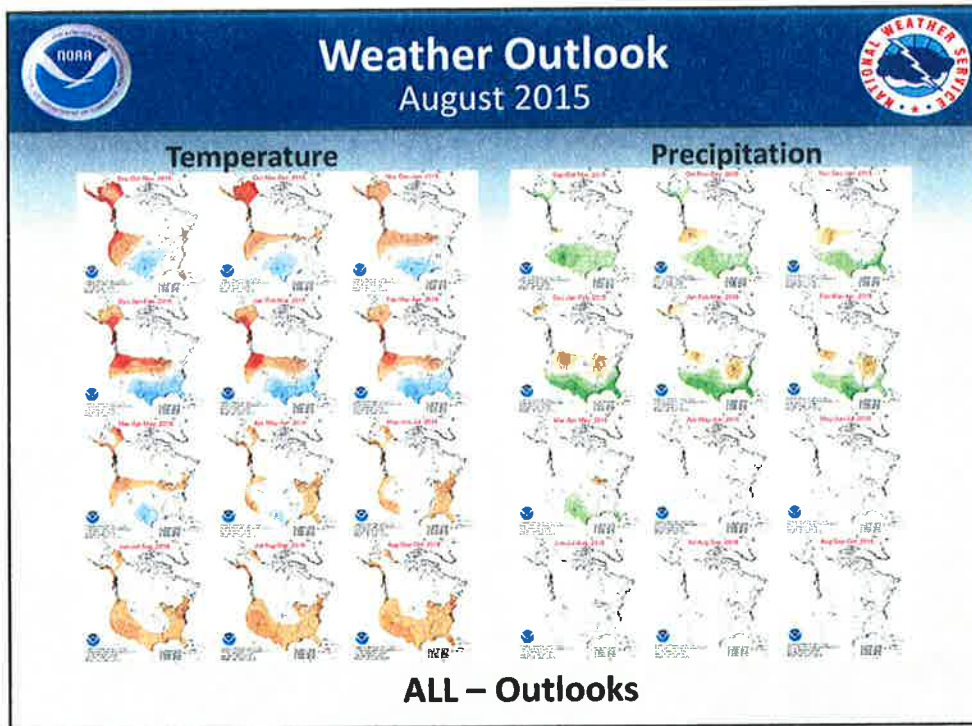
500mb composite mean **500mb composite Anomaly (1981-2010)**



Water Year 2015 (Oct-Mar)







Weather Outlook
August 2015

Aldis Strautins
NWS Grand Junction, CO
<http://www.weather.gov/gjt>
<http://www.weather.gov/abq>



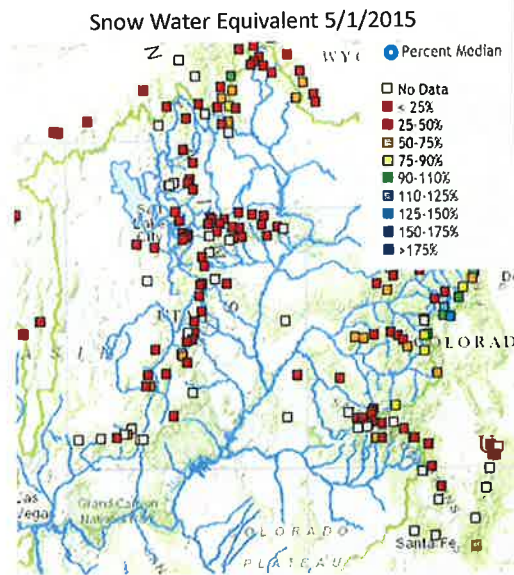
Looking Back - Where were we on May 1st 2015 ?

- Below average winter precipitation
- Below average soil moisture
- Record warm winter in many areas
- Early snow melt and very poor snow conditions as of May 1st.

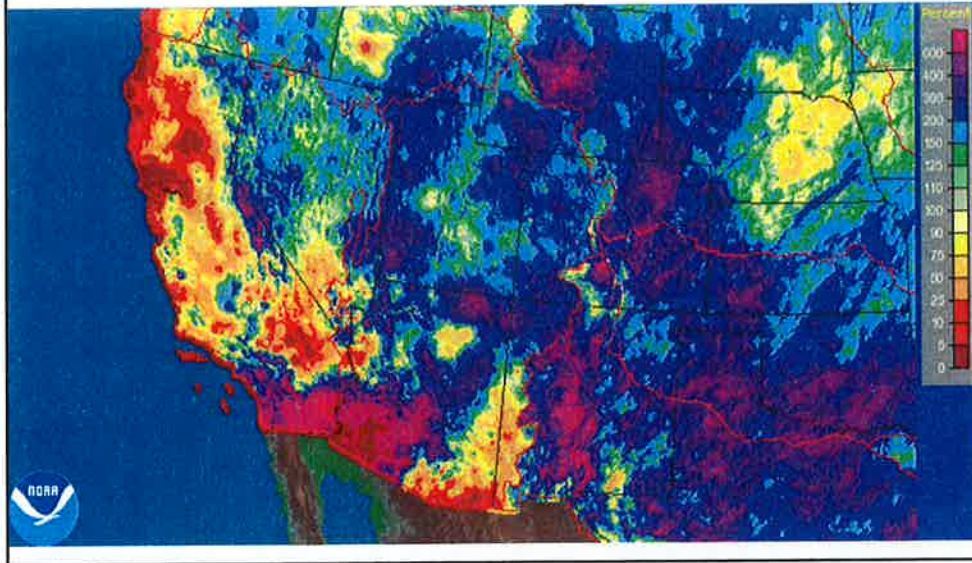
April observed runoff volumes:
 Navajo Inflow 80 KAF (47% avg)
 Animas River 34 KAF (64% avg)

Forecast Inflow for Navajo was 230 KAF (31% of average) the 3rd lowest on record (dating back to 1971).

Stage was set for a dismal year

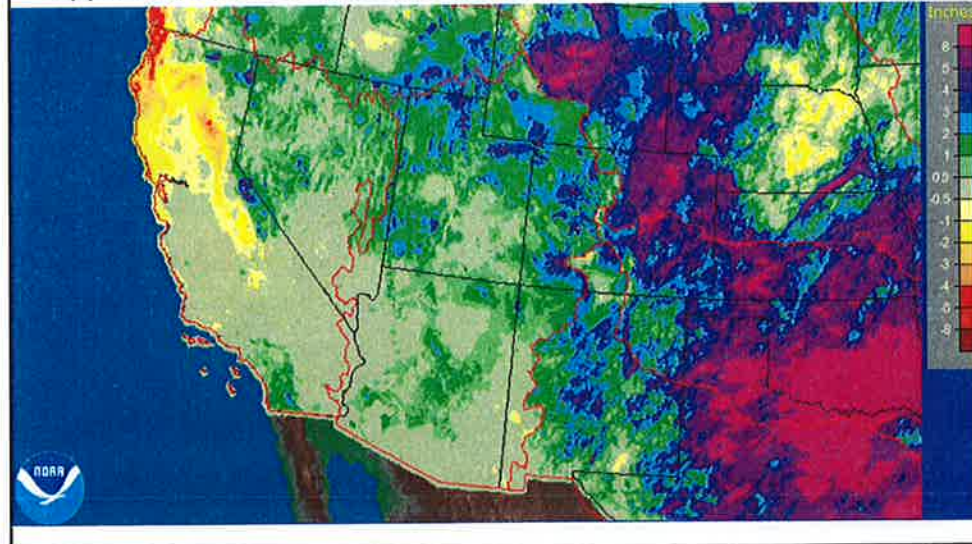


Just How Wet Was It? May Precipitation – Percent of Average



Just How Wet Was It? May Precipitation – Departure from Average

Upper San Juan Basin: 6-11 inches of observed precipitation in May



How the cool wet weather impacted the forecasts and observed runoff volumes:

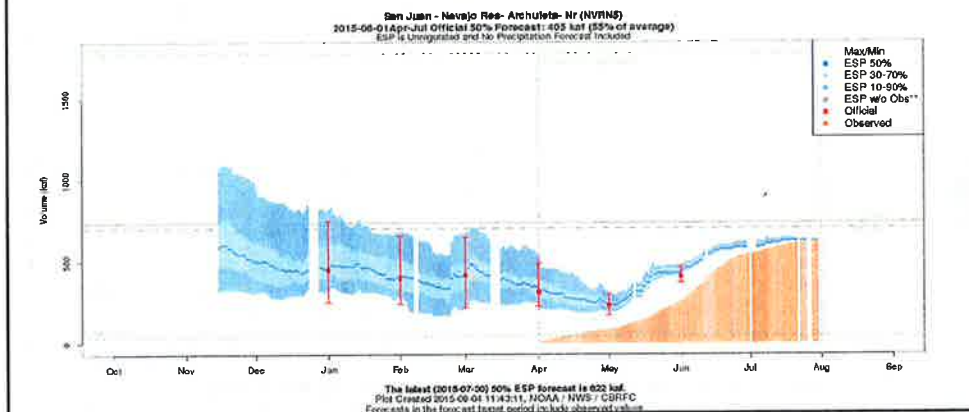
Water Supply Forecasts:

Include 5 days of forecast precipitation then uses climatology (historical average)
 Observed precipitation May-July was much above average so forecasts were low

High elevation snow held (increased) into early June – impacted runoff timing & volumes

Reduced demand (irrigation / diversions):

Not all are known but “typical” behavior is built into the model & forecasts
 Much less depletions to the river system also impact final runoff volumes



Model / Forecast Performance & Uncertainty

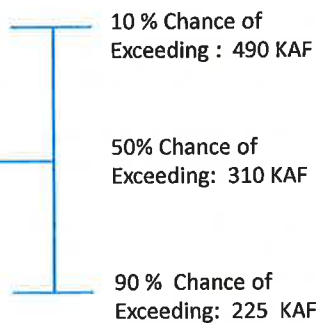
(Re-visiting the forecast presented in the April Meeting)

Navajo Reservoir Inflow Forecast Progression 2015

1st of month Forecasts

- Jan: 450 KAF (61%)
- Feb: 400 KAF (54%)
- Mar: 415 KAF (56%)
- Apr: 310 KAF (42%)**
- May: 230 KAF (31%)
- June: 405 KAF (55%)
- July: 600 KAF (81%)

April-July Observed
 619 KAF (84%)

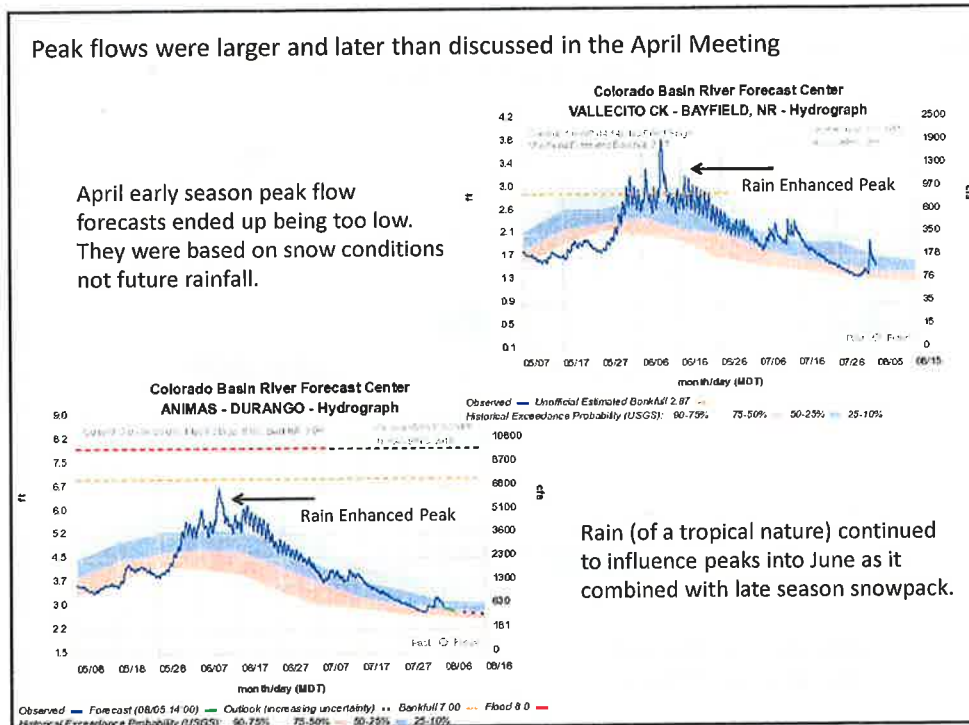
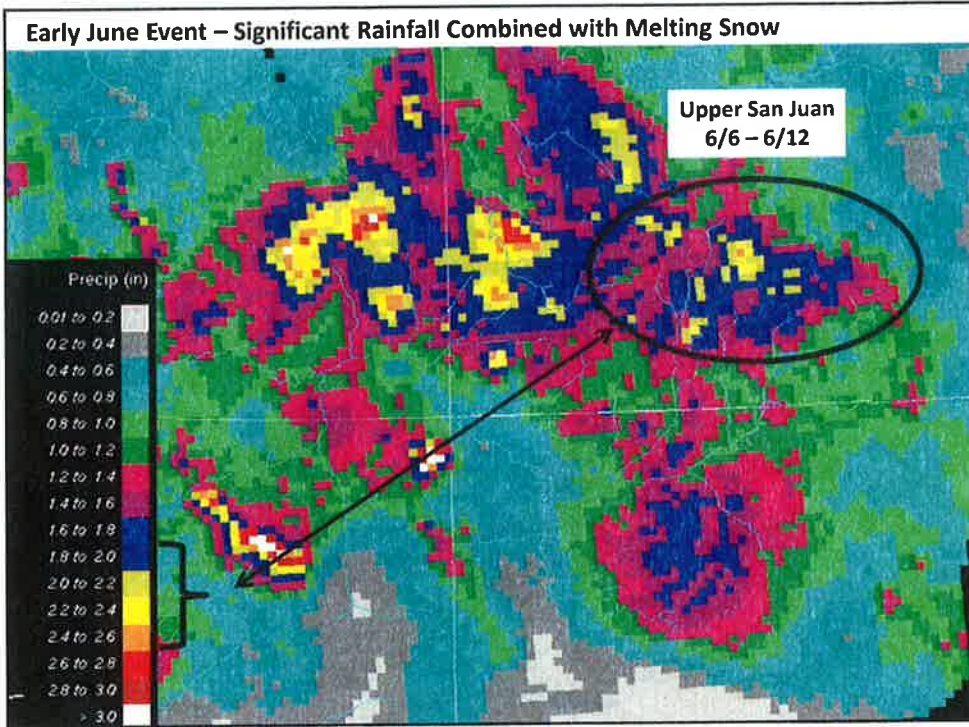


Highest Forecast Trace on April 1 was 698 KAF: (3% exceedance probability)

Second Highest Forecast Trace on April 1 was 584 KAF: (7% exceedance probability)

We would expect spring precipitation to be in that top 3-7% of record to reach the observed volume of 600 KAF.

So was it ?



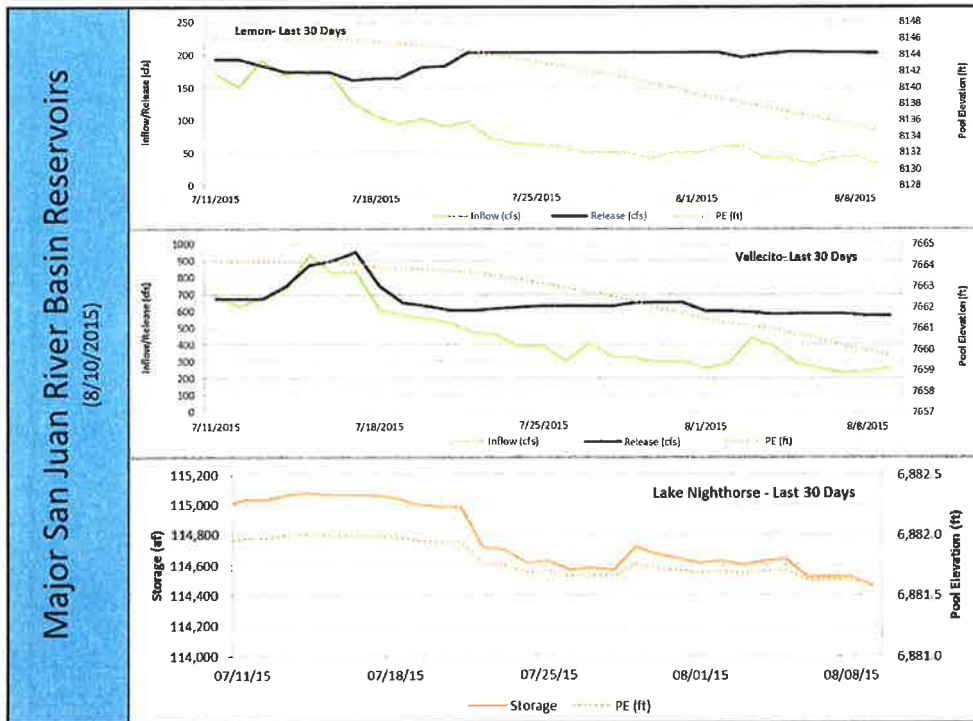
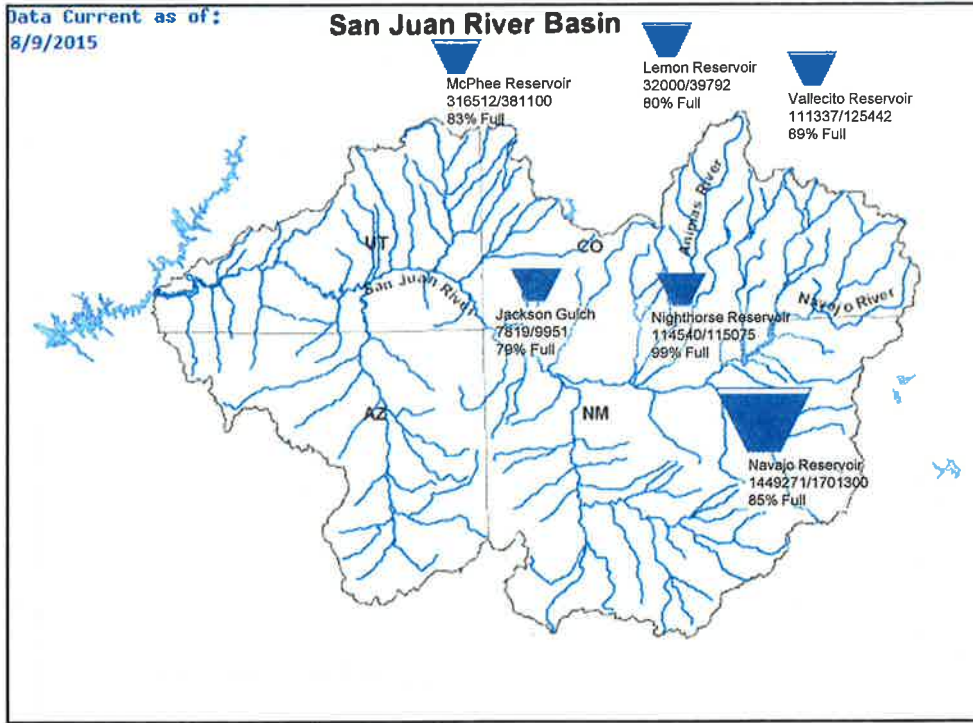
Interim Operation Method

- Flow Recommendations still in place, but not using decision tree to determine Spring Peak Releases.
- Available Water for Spring Peak Release calculated using End of Water Year Storage Target (EWYST) of 6063 ft (with 6050 option).
- These elevations were calculated to minimize the risks of both shortage and spill in the reservoir.
- Navajo will be operated to meet EWYST by the end of each water year (with all contracts and TBF met). Any volume over the EWYST is available for SPRs or other adaptive management.
- In dry years, reservoir may come short of EWYST.
- Risk of shortage is minimized in modeling.

Water Year 2016 Forecasts

(as of August 3rd CBRFC Forecast)

Forecast	Water Year		Preliminary April-July	
	Volume (af)	% of Avg	Volume (af)	% of Avg
MIN	470,000	44%	287,430	39%
MOST	696,000	90%	682,000	93%
MAX	1,590,000	148%	1,136,900	154%



Colorado River Basin System Conservation Pilot Program (SCPP)

Kristin Green

New Mexico Interstate Stream Commission



BACKGROUND

- Extended drought
- L. Powell and L. Mead could reach critically low levels
- At risk:
 - Water supplies,
 - hydropower production,
 - water quality,
 - recreation and
 - environmental resources
- Need collaborative action and response plan

TIMELINE

- SCPP Agreement - July 2014
- UCRC Agreement to facilitate SCPP - May 2015
- UCRC RFP – May 2015
- 1st round proposals – June 17, 2015
 - 15 proposals submitted
 - Moving forward on 10 projects (5 CO, 5 WY)
 - More than \$1 M remaining for 2nd round
- 2nd round proposals – November 1, 2015

8/11/2015

5

EXAMPLES

- Growing crops requiring less water
- Temporary fallowing of agricultural crops
- Upgrading to more efficient irrigation practices
- Municipal and industrial conservation and recycling projects

8/11/2015

6

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