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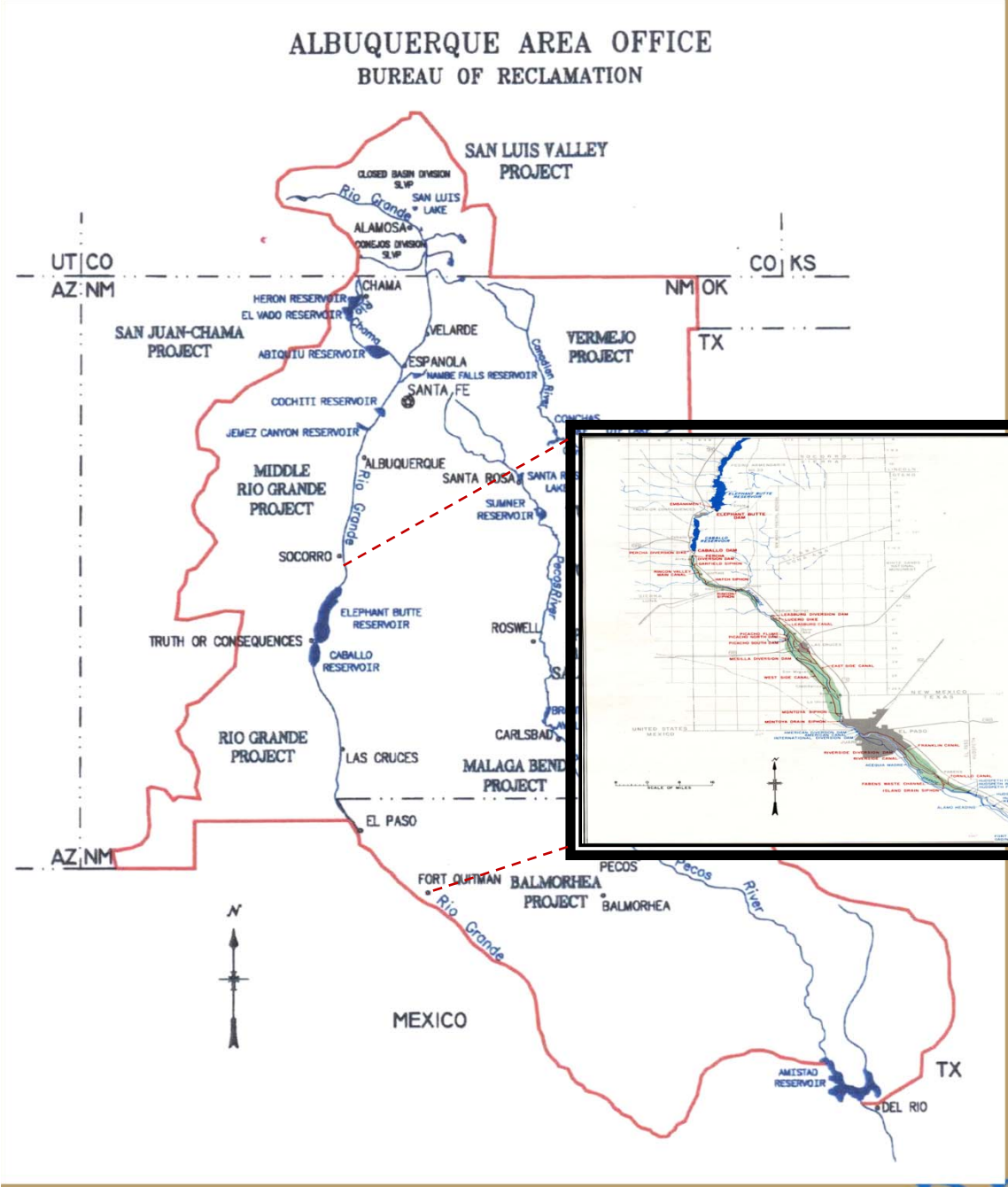
Managing Water in the West

RIO GRANDE PROJECT

Bureau of Reclamation
10737 Gateway Blvd. West, Suite 350
El Paso, TX 79935

IBWC Citizens Forum Meeting
April 13, 2017

U.S. Department of the Interior
Bureau of Reclamation



RIO GRANDE PROJECT

CURRENT HYDROLOGIC CONDITIONS OF UPPER RIO GRANDE BASIN

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NRCS – RG Basin Reports

April 5,2017	SWE	Total Precip	March 15,2016	SWE	Total Precip
Basin	%Avg	%Avg		%Avg	%Avg
Rio Chama	146	136		78	85
Upper Rio Grande	125	109		87	88
Sangre De Cristo Mtn Range	105	108		90	107
Jemez River Basin	76	108		69	101

* = Analysis may not provide a valid measure of conditions

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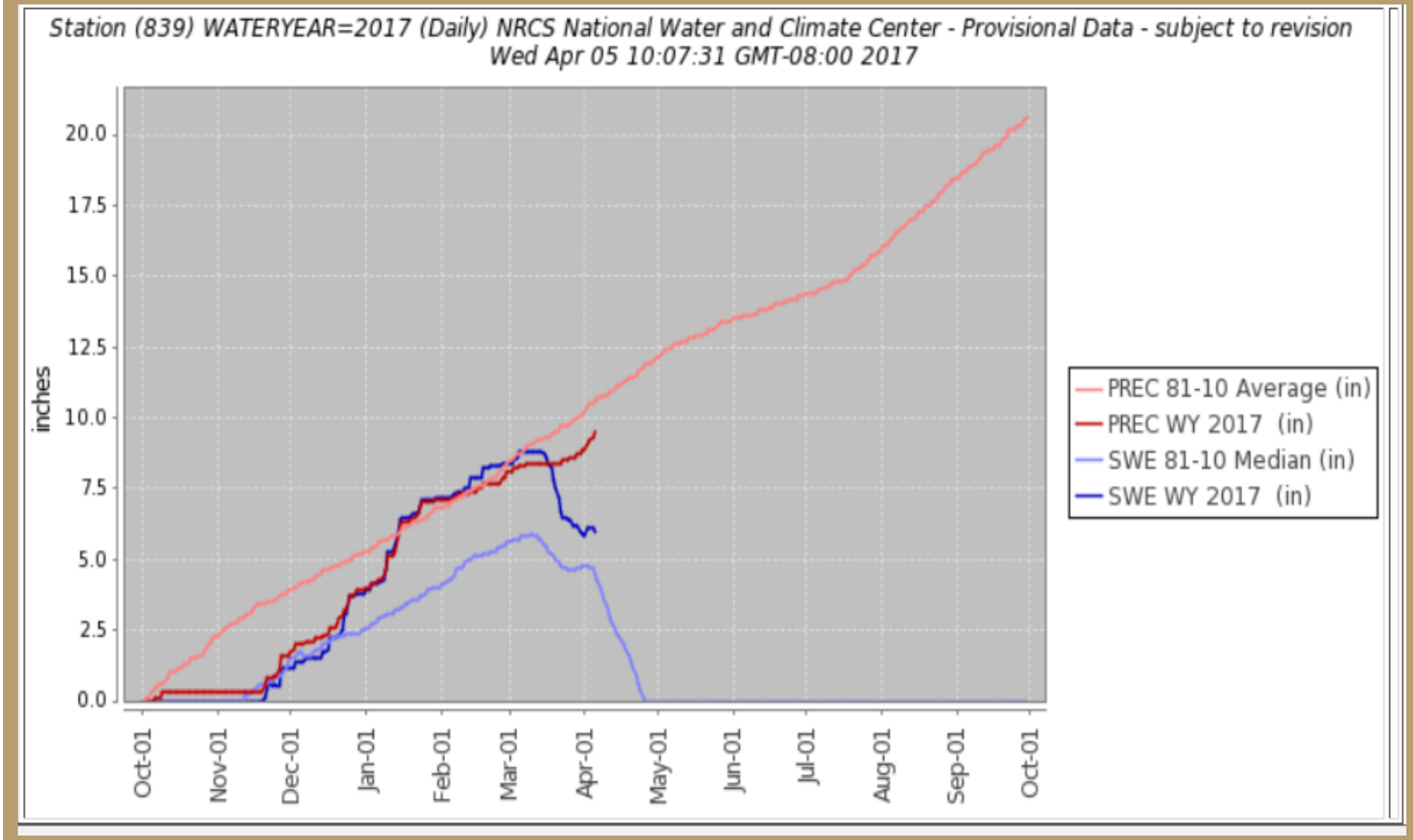
Upper Rio Grande Basin



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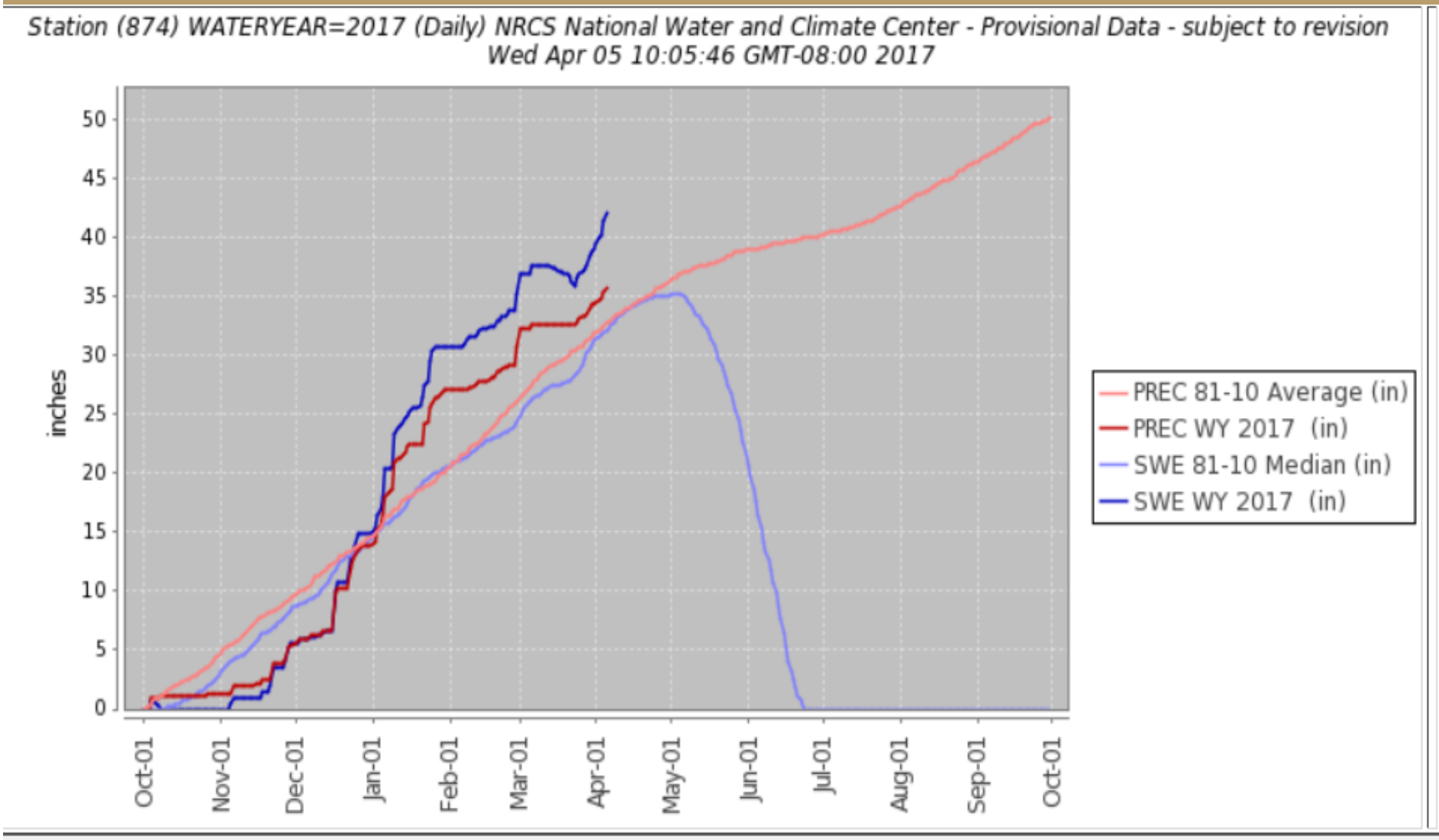
Wolf Creek Summit



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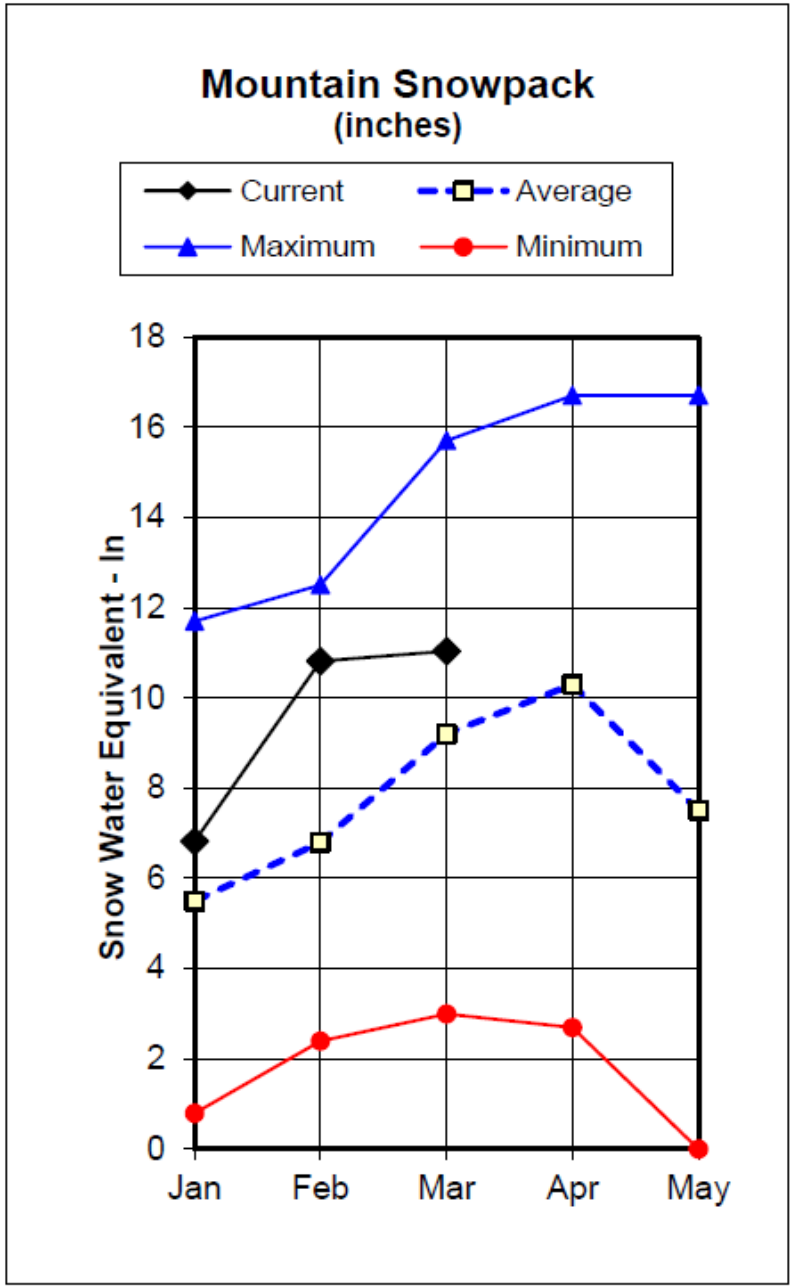

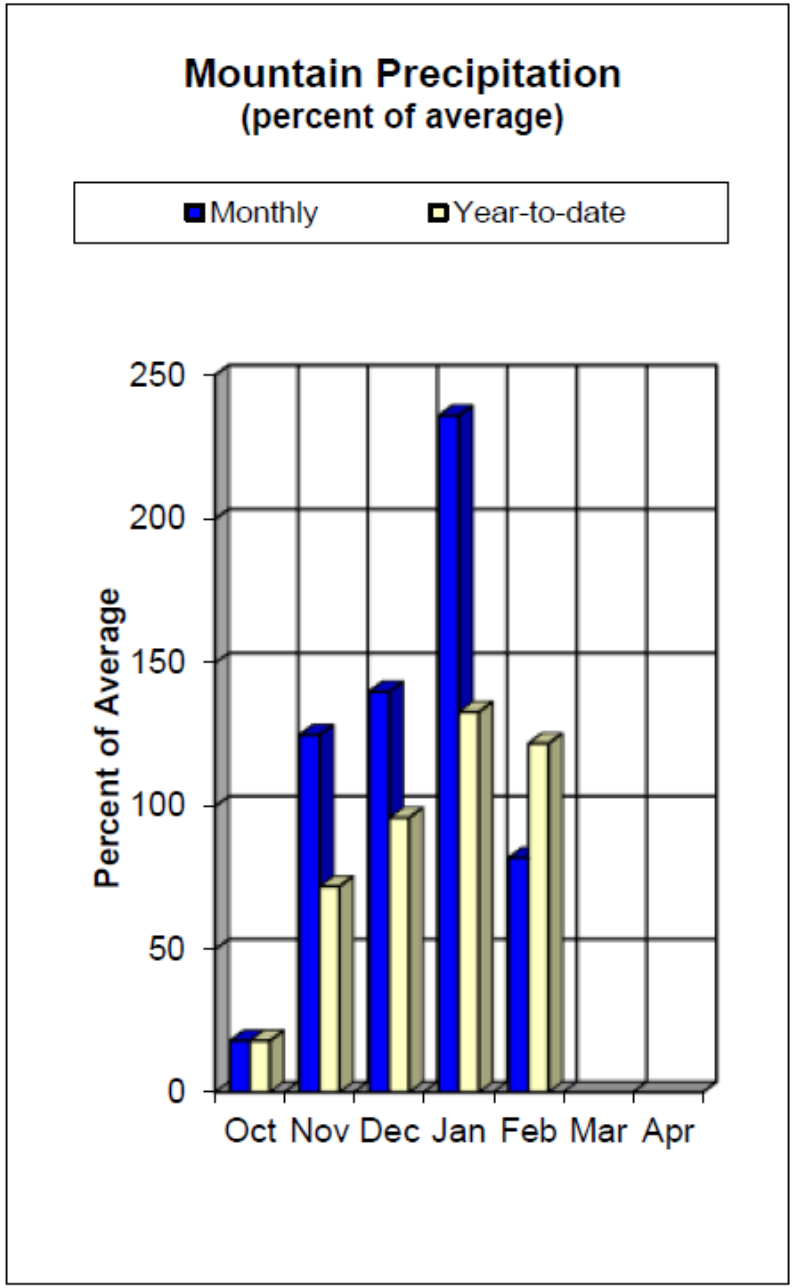

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EL NIÑO/SOUTHERN OSCILLATION (ENSO)

DIAGNOSTIC DISCUSSION

March 9, 2017

ENSO Alert System Status: Not active

Synopsis: ENSO-neutral conditions are favored to continue through at least the Northern Hemisphere spring 2017, with increasing chances for El Niño development into the fall.

ENSO-neutral conditions continued during February, with near-average sea surface temperatures (SSTs) across the central equatorial Pacific and above-average SSTs in the eastern Pacific

Most models predict the continuation of ENSO-neutral (3-month average Niño-3.4 index between -0.5°C and 0.5°C) through the early Northern Hemisphere summer (May-July). However, some dynamical model forecasts, including the NCEP CFSv2, anticipate an onset of El Niño as soon as the late Northern Hemisphere spring (March-May 2017).

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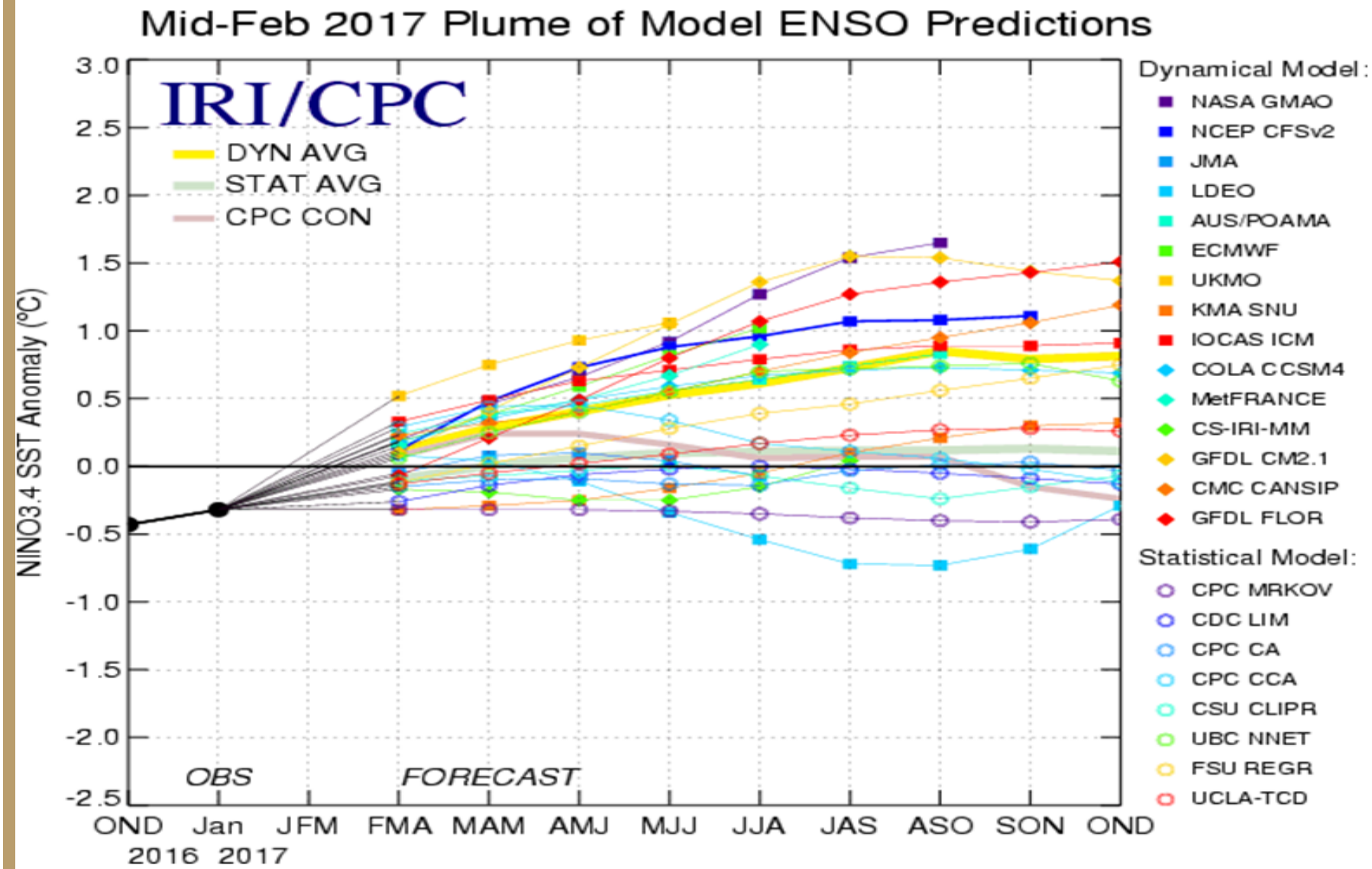

Figure 6. Forecasts of sea surface temperature (SST) anomalies for the Niño 3.4 region (5°N-5°S, 120°W-170°W). Figure updated 15 February 2017.

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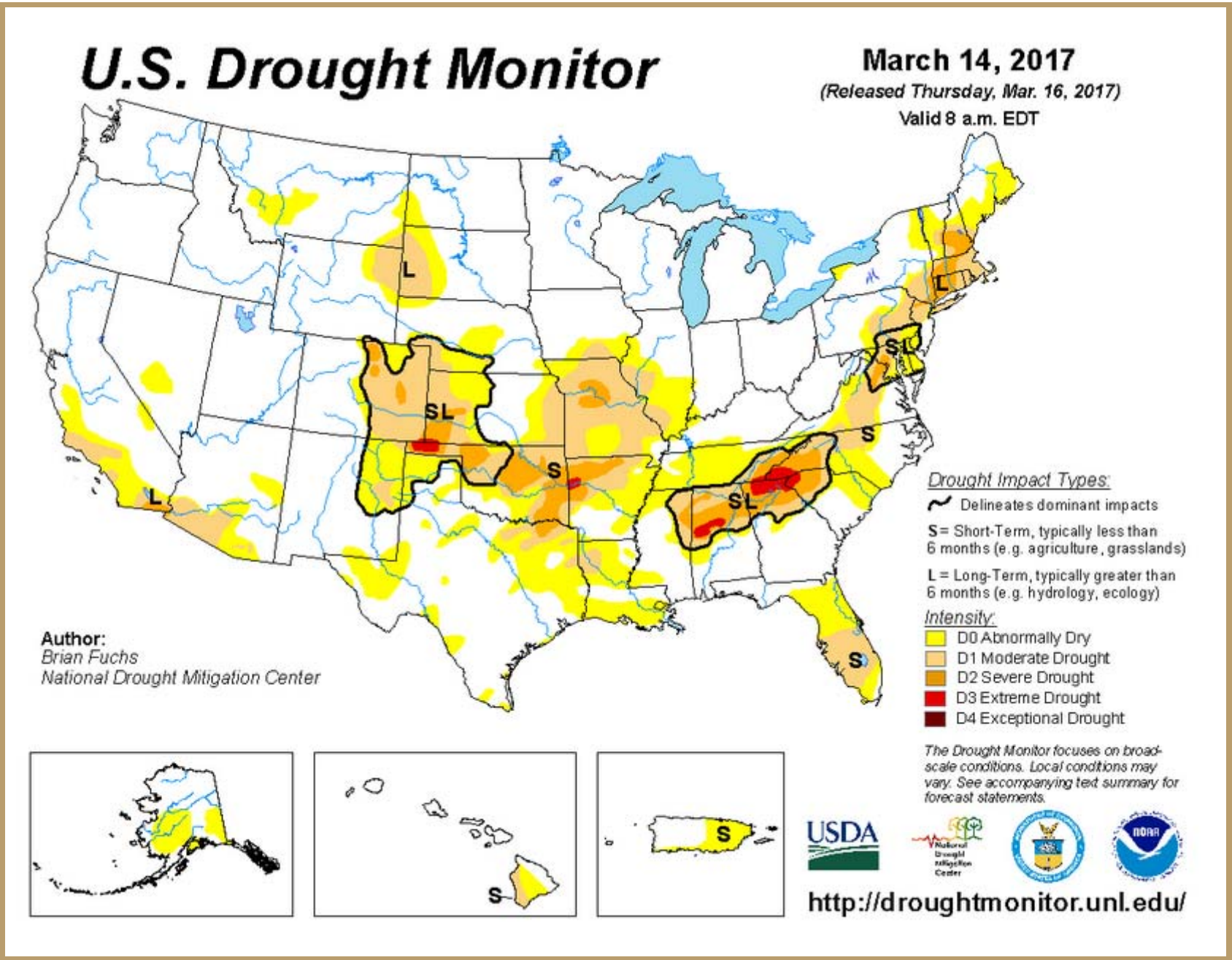

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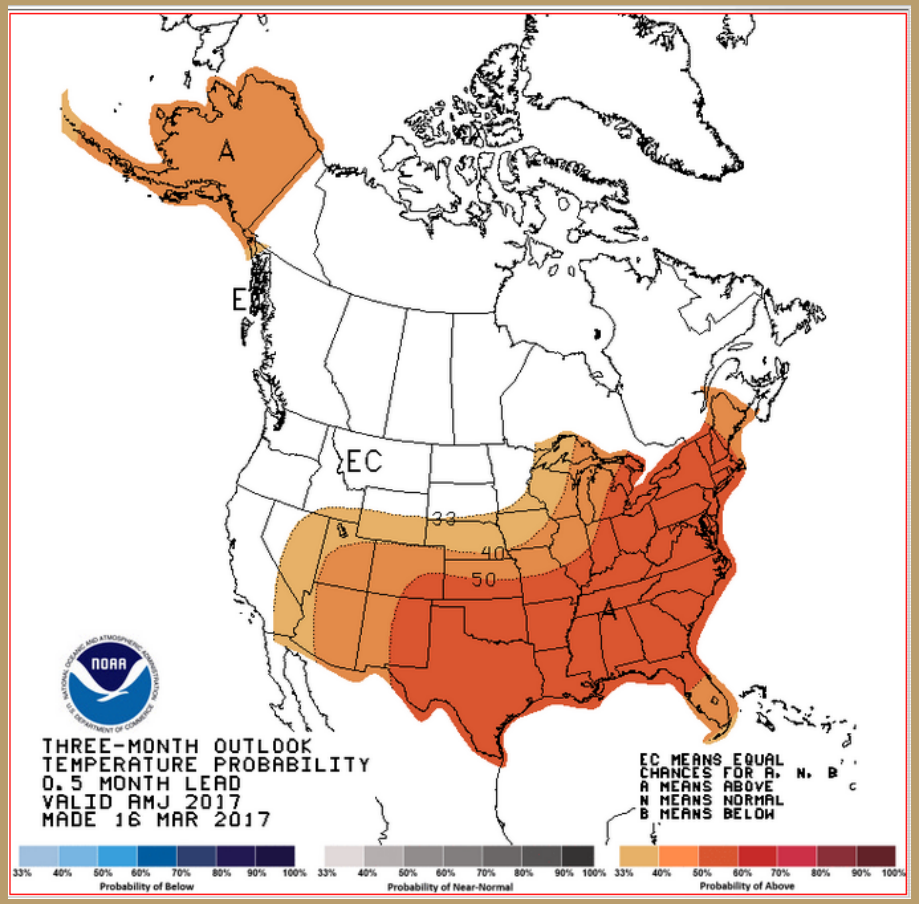

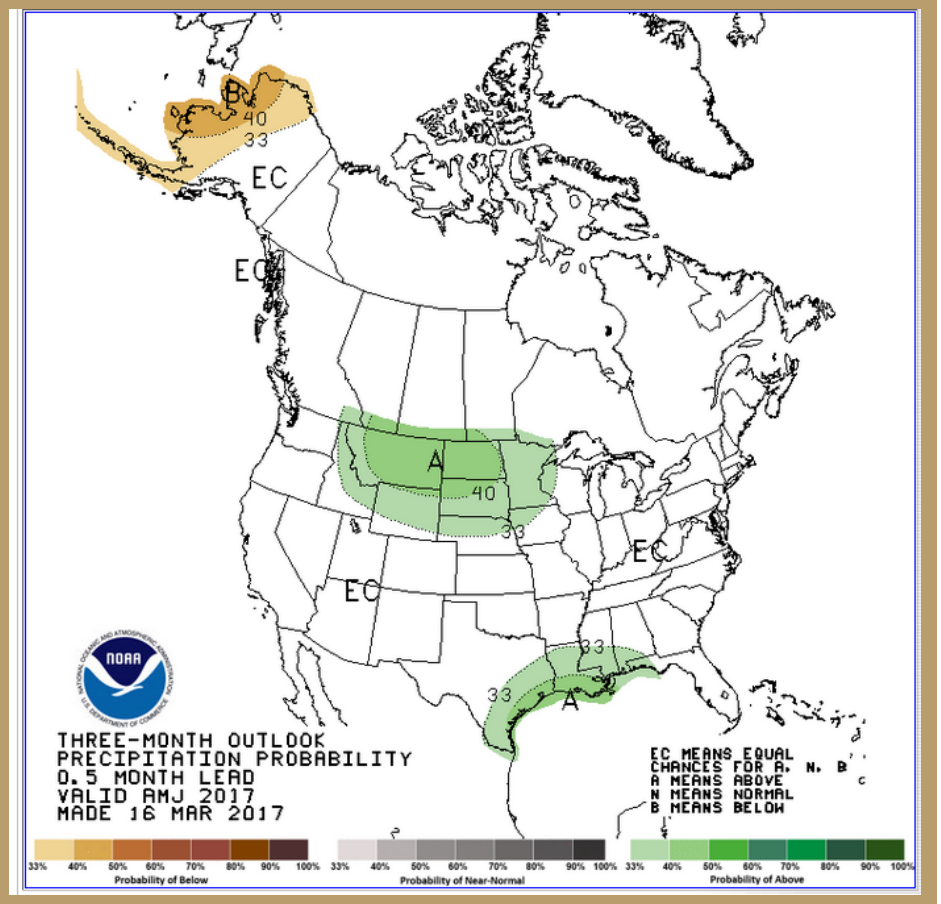

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BOR_ 5-Apr-17

BOR_RGP_DAILY REPORT

RESERVOIR DATA	ELEVATION (FT*)	RELEASE (CFS**)	2017 STORAGE (AF*)	2016 STO	COMP INFLOW (CFS)**	
ELEPHANT BUTTE RES.	4325.5	1355	324,746	396,215	3091	948
CABALLO RESERVOIR	4151.76	1700	74,365	40,794	1438	
Total Rio Grande Project Storage :			399111	437009		
Rio Grande Compact Credit Water :			7,284			
San Juan - Chama Water :			460			
RGC Usable Water:***			391367	421,618		

* Midnight reading of the previous day.

** 24-hr avg for previous day.

RIVER GAGING STATIONS	TIME	GH (ft)	Spot Readings FLOW (cfs) ORDER	Spot Readings FLOW (cfs) ACTUAL	24-hr Average FLOW (cfs) ORDER	24-hr Average FLOW (cfs) ACTUAL
OTOWI FLOW	7:00 AM	N/A	N/A	3280	N/A	3350
COCHITI REL	7:00 AM	N/A	N/A	3568	N/A	3586
SAN MARCIAL FLOODWAY	7:00 AM	18.11	N/A	3,210	N/A	3170
SAN MARCIAL CONV. CHANNEL	7:00 AM	10.66	N/A	291	N/A	291
TOTAL	7:00 AM			3501	N/A	3461
RG AT NARROWS IN EB RES.	7:00 AM	7.59	N/A	3160	N/A	3165
BELOW ELEPHANT BUTTE DAM	7:00 AM	4.84	N/A	1,350	N/A	1,355
BELOW CABALLO DAM	7:00 AM	5.91	1,600	1,586	1,700	1,700
BELOW LEASBURG DAM	7:00 AM	0.98	1,243	1,211	1,247	1,225
BELOW MESILLA DAM	7:00 AM	2.47	996	996	996	961
COURCHESNE BRIDGE	7:00 AM	1.49	554	554	487	487
AMERICAN CANAL	7:00 AM	2.77	713	713	466	466
FT. QUITMAN	7:00 AM	2.48	N/A	76	N/A	76

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USGS 08313000 RIO GRANDE AT OTOWI BRIDGE, NM
USGS 08359500 RIO GRANDE AT NARROWS IN ELEPHANT BUTTE RES., NM

Otowi -----
EB Narrows ------
Discharge in CFS

USGS 08313000 RIO GRANDE AT OTOWI BRIDGE, NM
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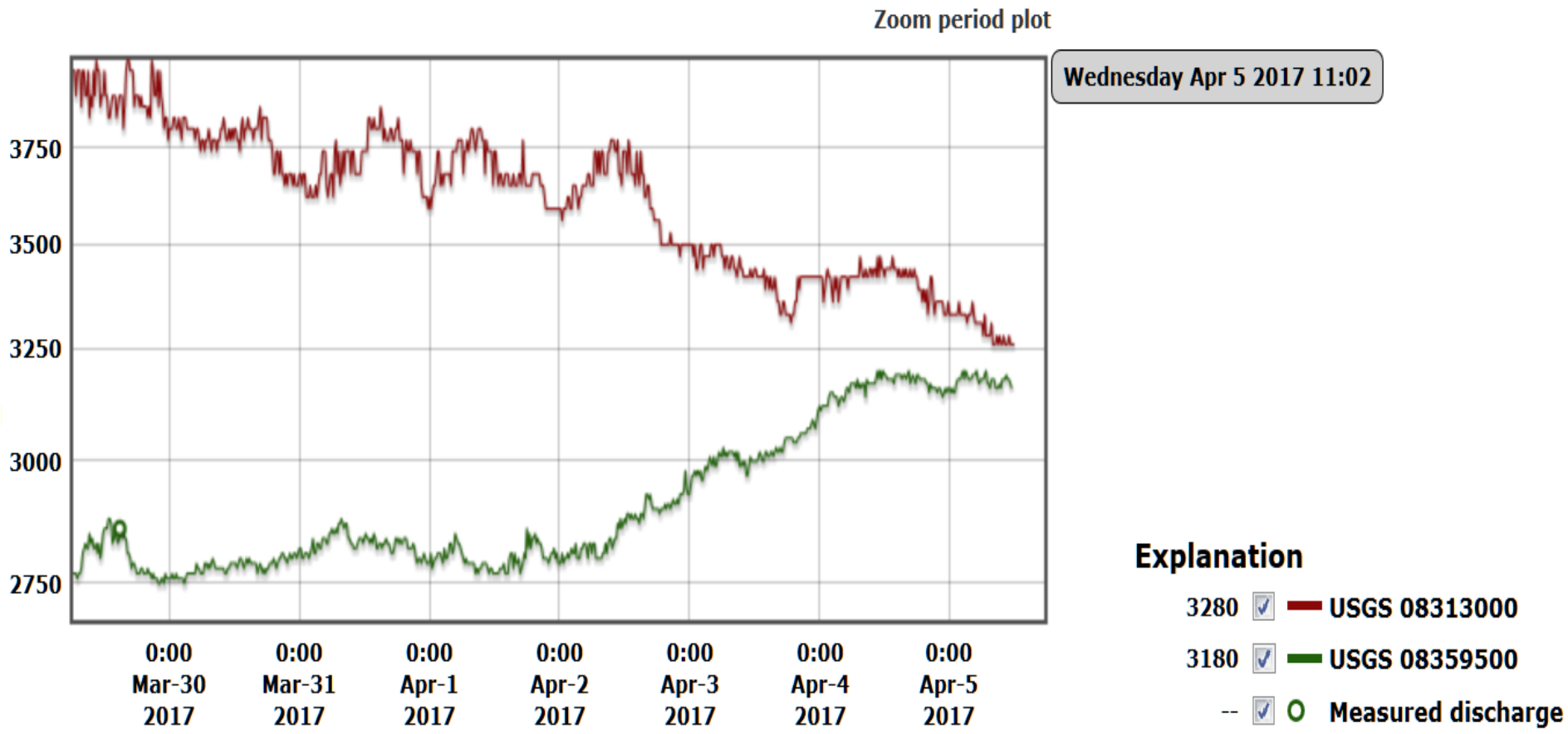

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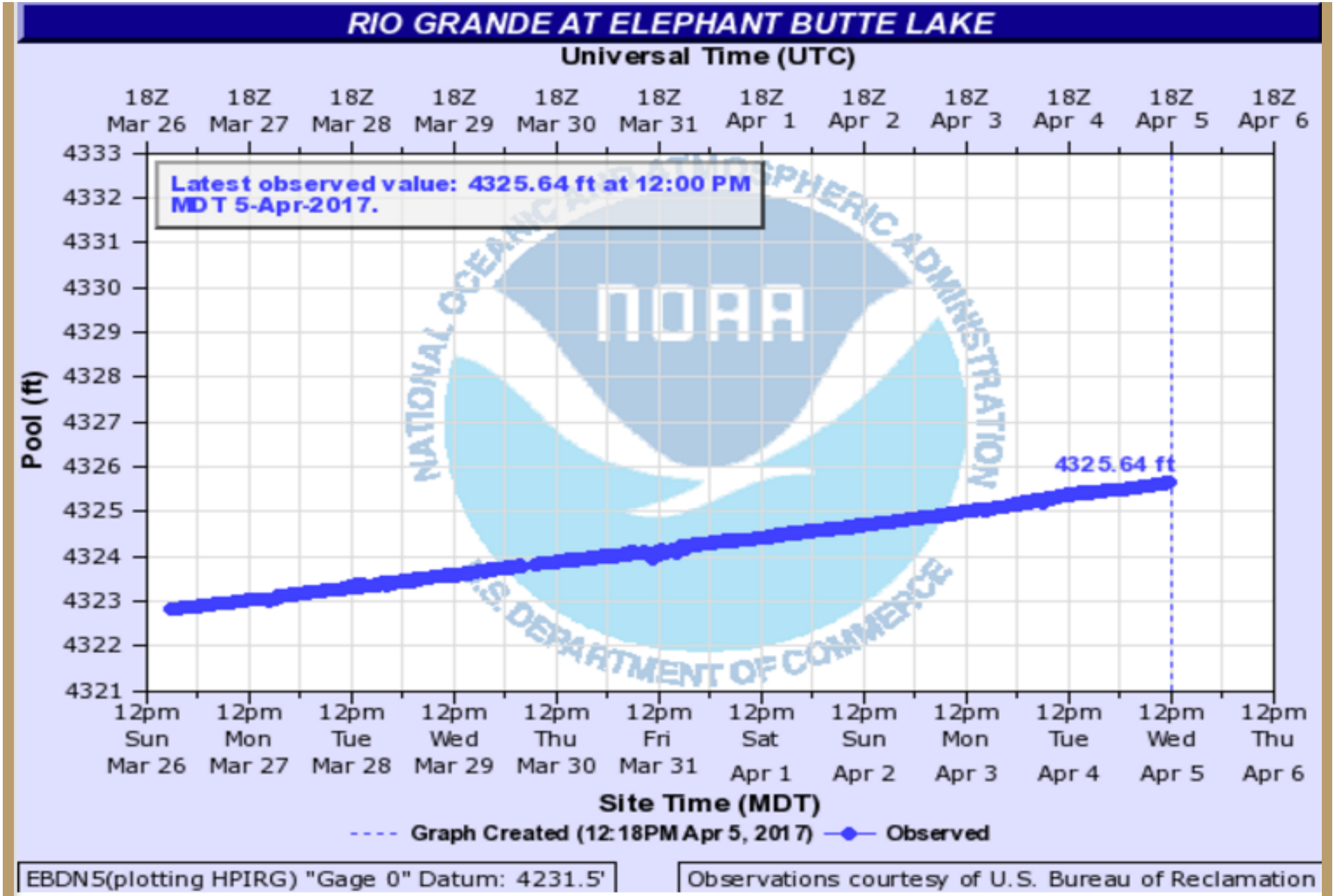

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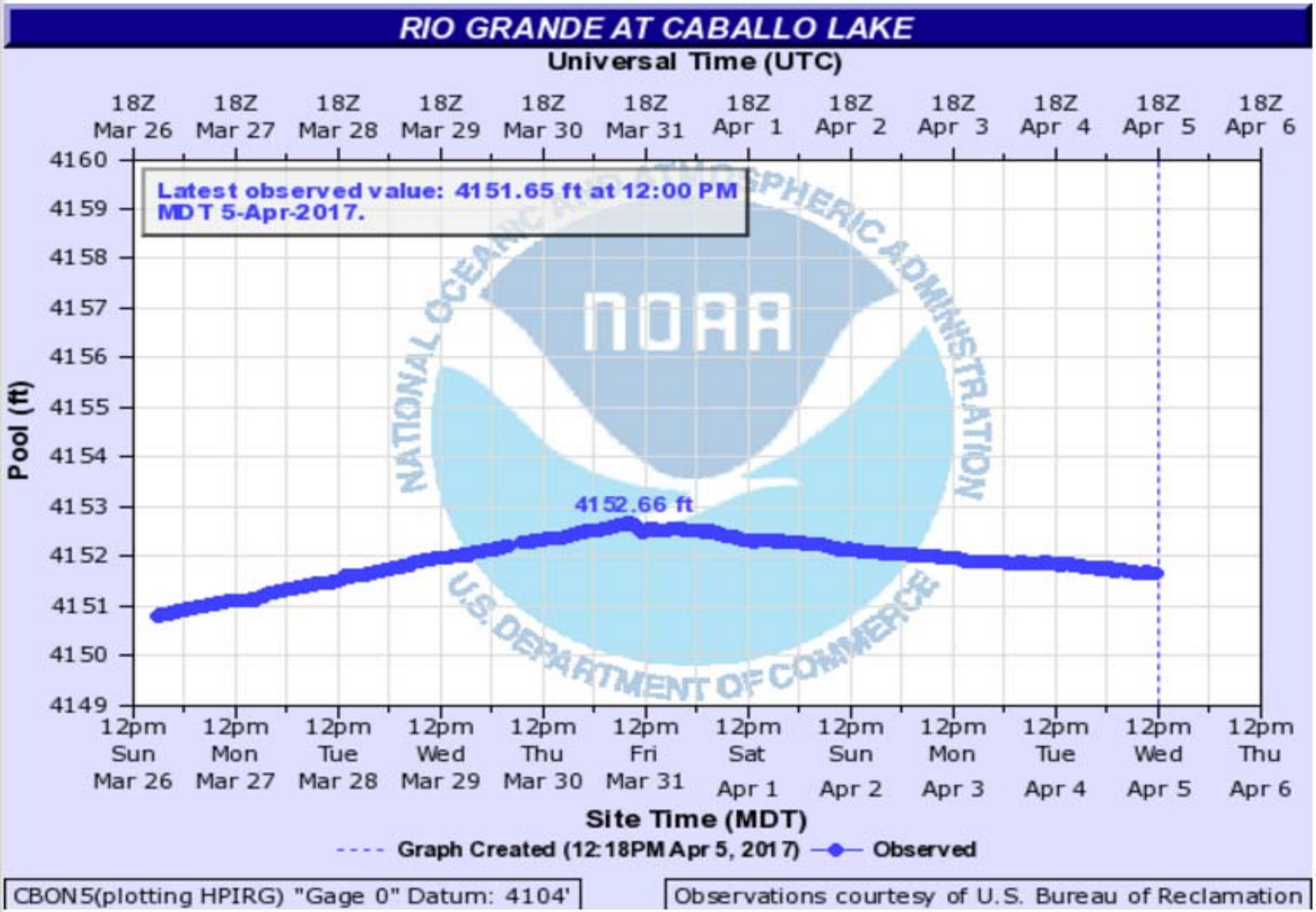

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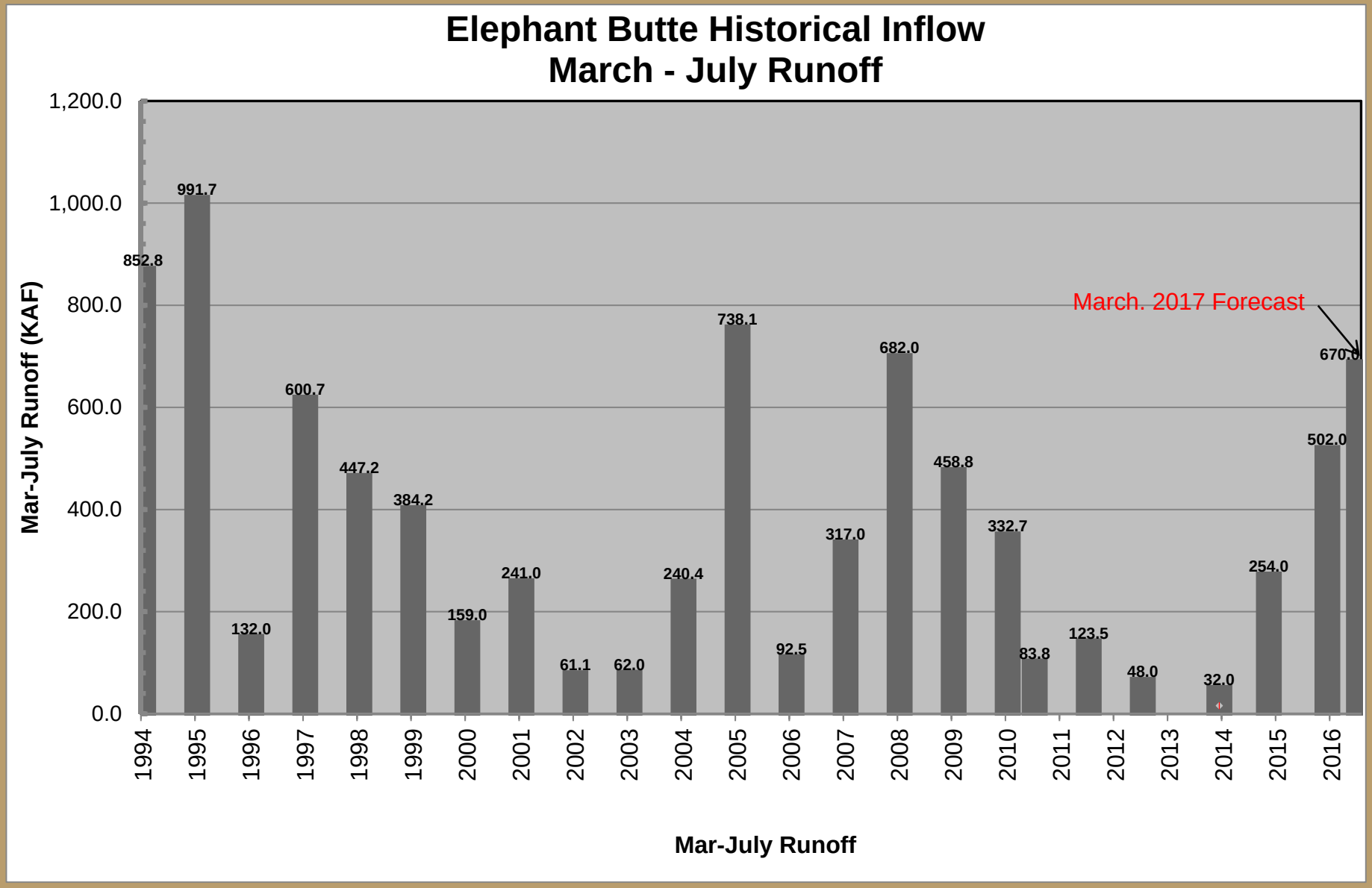

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2016 Rio Grande Project Operations Coordination

Projected initial allocation delivery to canal headings:

EBID	April 15th
EP#1	April 4th
Mexico	April 10th

Projected close of irrigation season:

EBID	TBD
EP#1	TBD
Mexico	TBD

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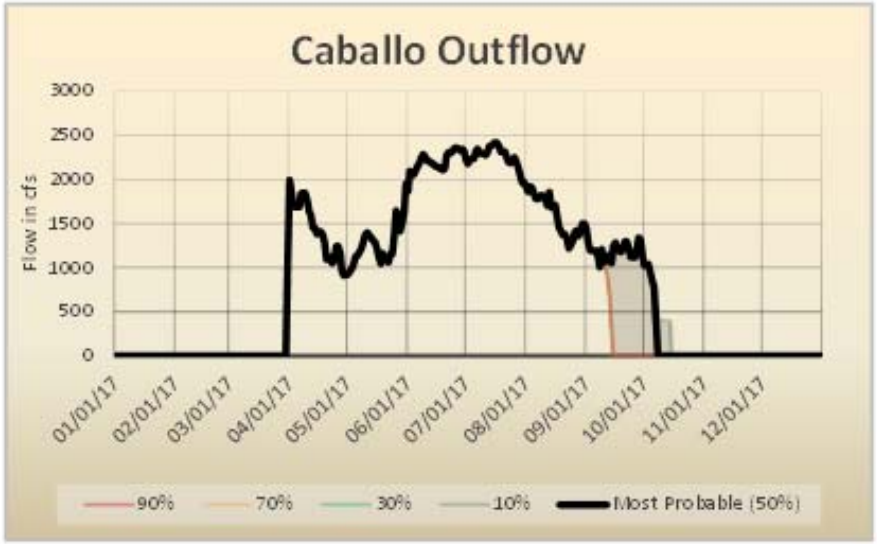

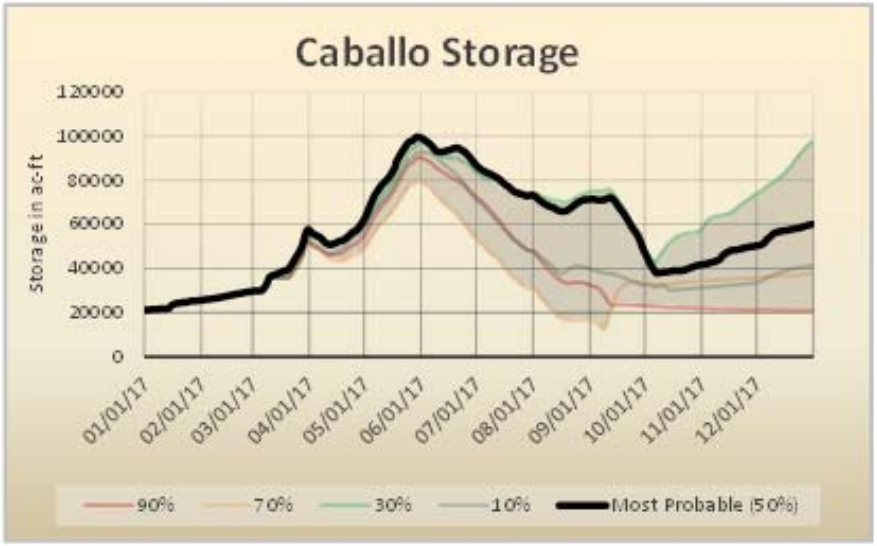

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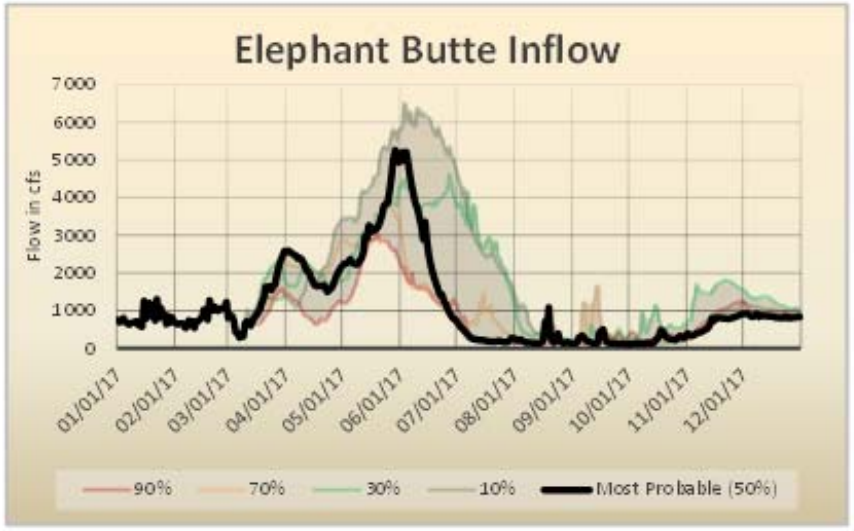

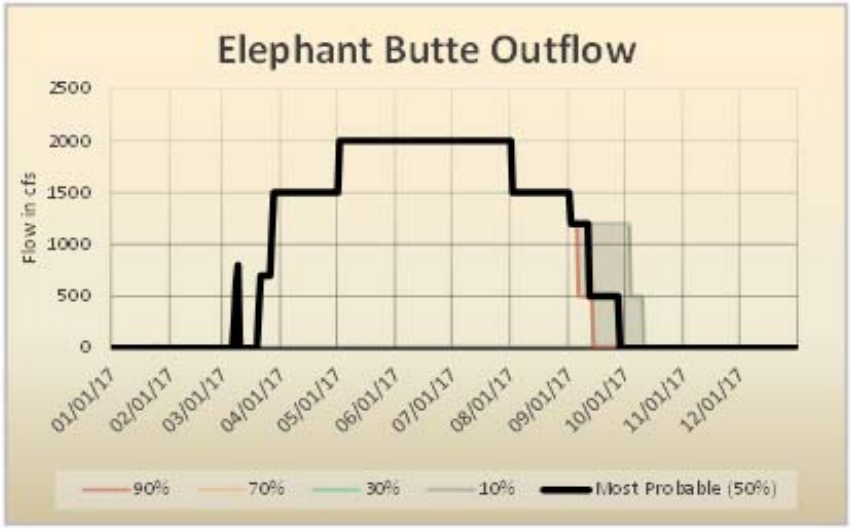

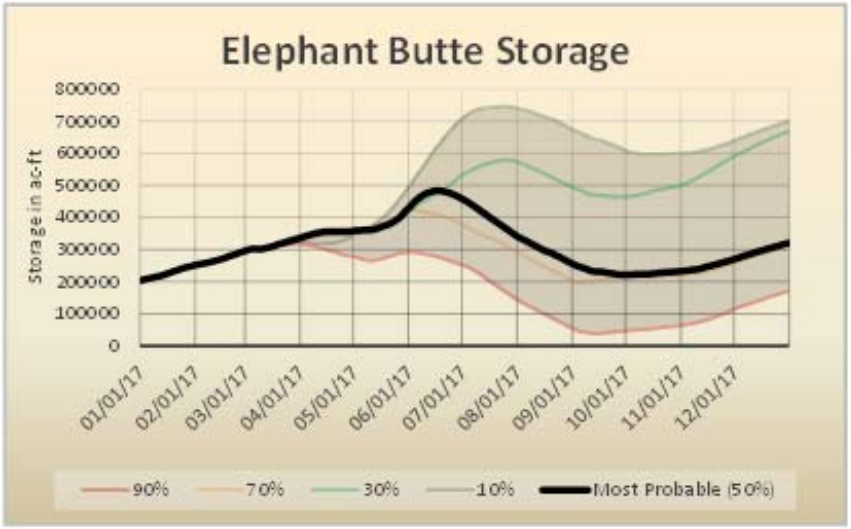

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1	Rio Grande Project Allocation for 2017 (Data as of March 20, 2017)	ac-ft
2	Elephant Butte Reservoir Storage	290,951
3	Caballo Reservoir Storage	55,562
4	Total Rio Grande Project Storage	346,513
5	Estimated Rio Grande Compact Credit Waters	-7,203
6	Estimated San Juan-Chama Water	-460
7	Water Released from Storage	0
8	Total Usable Water Available for Release	338,850
9	Carryover Obligation using Estimated Diversion Ratio	62,829
10	Estimate End-of-Season Adjustment of Project Water for Reservoir Evaporation/Dead storage	-5,000
11	Total Usable Water Available for Current Year Allocation	271,021
12	EBID Allocation Balance (Previous Year)	3,226
13	EPCWID Allocation Balance (Previous Year)	50,179
14	EBID Allocation Balance (End-of-Year)	0
15	EPCWID Allocation Balance (End-of-Year)	0
16	Storage for EBID and EPCWID Allocation Balance (End-of-Year)	0
17	Current Usable Water	333,850
18	End-of-Year Release for Diversion Ratio	333,850
19	D1 Delivery	173,486
20	Mexico's Current Diversion Allocation	19,688
21	Multiyear Extreme Drought D2 Correction Factor	1.00
22	Gross D2 Diversion Allocation	272,601
23	EPCWID ACE Conservation Credit (evaluation postponed until EOY)	
24	Net D2 Current Year Diversion Allocation for EBID and EPCWID	252,913
25	D2 Current Year Diversion Allocation for EPCWID	109,324
26	Total EPCWID Diversion Allocation (w/o Conservation Credit)	159,503
27	EPCWID Diversion (w/o Conservation Credit or 67/155ths of Row 32)##	159,503
28	Diversion Ratio	0.8500
29	Diversion Ratio Adjustment	-50,078
30	Sum of Release and Diversion Ratio Adjustment	283,773
31	EBID D2 Current Year Diversion Allocation	143,589
32	Difference between EBID Diversion Ratio Allocation and D2 Diversion Allocation	0
33	EBID Diversion Ratio Allocation	101,356
34	EBID Diversion Allocation	101,356
35	Total EBID Diversion Allocation (includes 88/155th of Value in Row 32)##	104,582
36	Total EPCWID Allocation (includes Row 21 and 67/155th of Value in Row 32)##	159,503
37	District to District Allocation Transfer (OA 1.11 Excess Carryover Balance)	0
38	Total EBID Diversion Allocation (After Transfer)	104,582
39	Total EPCWID Allocation (After Transfer)	159,503
40	Total EBID, EPCWID, and Mexico Allocation	283,773

February allotment at
32.81% of a full supply

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Summary

•Total storage for the Project is 110,222 AF lower than it was the same time last year. Usable Project storage is 102,845 AF less than it was at the same time last year.

•Streamflow forecast for March at San Marcial is at 670,000 AF or 131% of the 30 year average.
All models indicate that La Niña will weaken, with a transition to ENSO-neutral during the late spring or early summer 2016. Thereafter, the chance of EL Niño conditions increases into the fall. Most models predict the continuation of ENSO-neutral (3-month average Niño-3.4 index between -0.5°C and 0.5°C) through the early Northern Hemisphere summer (May-July). However, some dynamical model forecasts, including the NCEP CFSv2, anticipate an onset of El Niño as soon as the late Northern Hemisphere spring (March-May 2017).

•2017 Rio Grande Project irrigation season started on March 31.

• Flow to El Paso arrived in 2.5 days indicating fewer losses with the river behaving in mid season form.

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Questions?

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