

RECLAMATION

Managing Water in the West

RIO GRANDE PROJECT

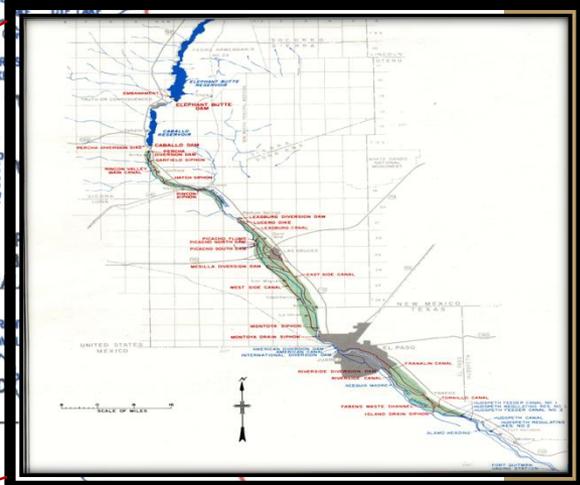
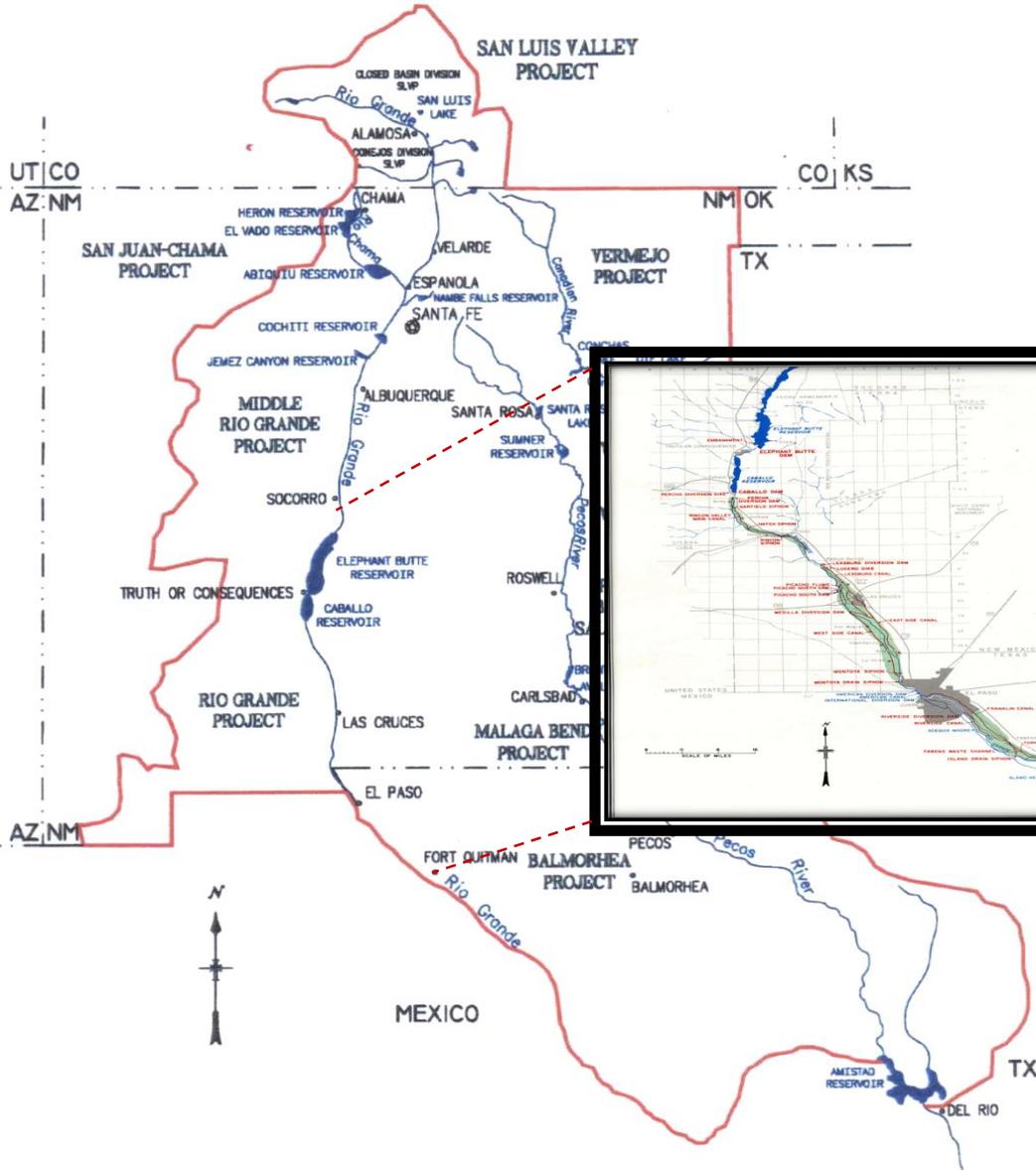
Bureau of Reclamation
10737 Gateway Blvd. West, Suite 350
El Paso, TX 79935

Rio Grande Citizens Forum
April 23, 2015



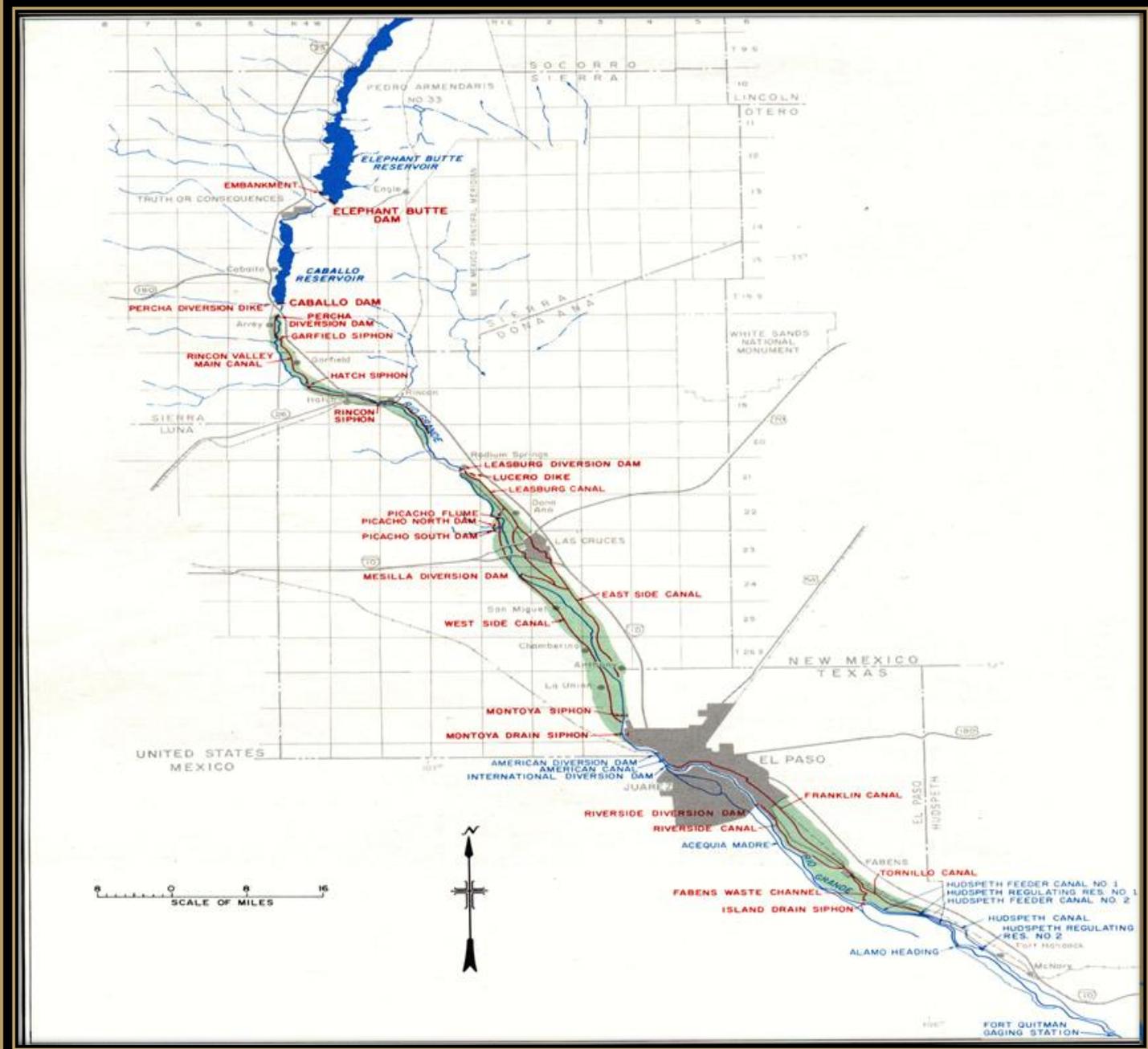
U.S. Department of the Interior
Bureau of Reclamation

ALBUQUERQUE AREA OFFICE
BUREAU OF RECLAMATION



RIO GRANDE PROJECT

CURRENT HYDROLOGIC CONDITIONS OF UPPER RIO GRANDE BASIN



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Bureau of Reclamation

Rio Grande Project

- Authorized by Congress in 1905
- Appropriated all the unappropriated water of the Rio Grande for Project use.
- Irrigates 159,650 Acres in New Mexico and Texas
- Generates electric power at Elephant Butte Dam
- Under a full allocation delivers 60,000 ac/ft per year under the 1906 Treaty with Mexico
- Delivers water for municipal and industrial use to the city of El Paso, TX as part of the allocation to El Paso County Water Improvement District allocation.
- Hudspeth Conservation and Reclamation District uses water coming out of the Project under a separate contract.

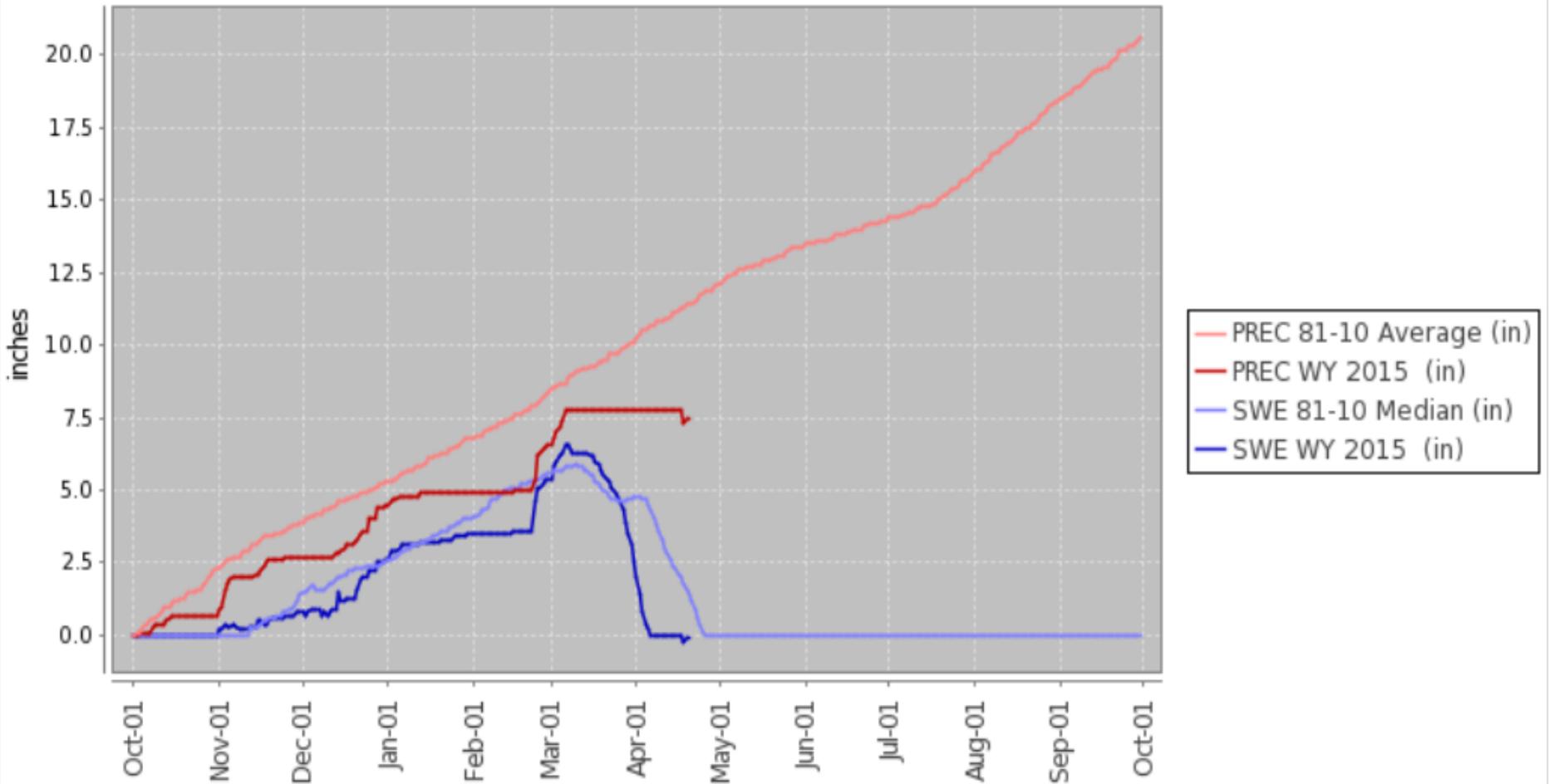
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NRCS – RG Basin Reports

	March 17, 2015	SWE	Total Precip	April 17, 2015	SWE	Total Precip
Basin	%Avg	%Avg	%Avg	%Avg	%Avg	%Avg
Rio Chama	80	86	37	75		
Upper Rio Grande	72	73	41	58		
Sangre De Cristo Mtn Range	89	97	40	87		
Jemez River	65	91	0	61		

Upper Rio Grande Basin

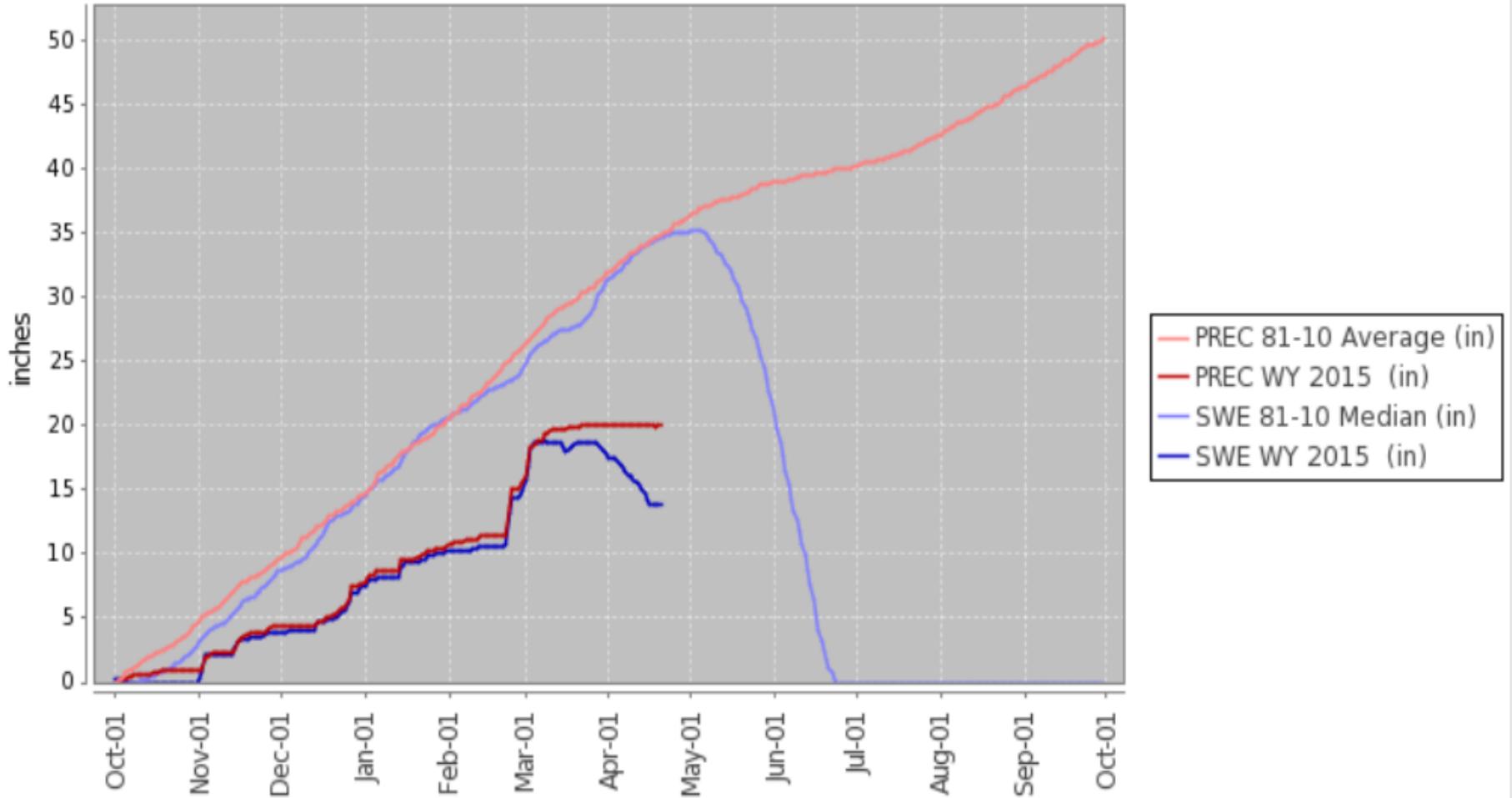
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Mon Apr 20 10:47:29 PDT 2015



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Wolf Creek Summit

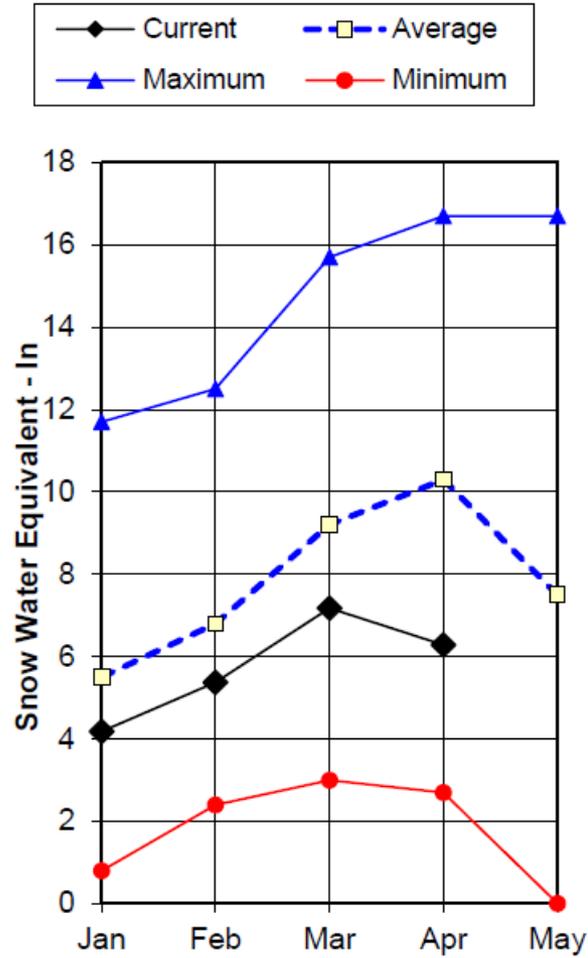
Station (874) WATERYEAR=2015 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
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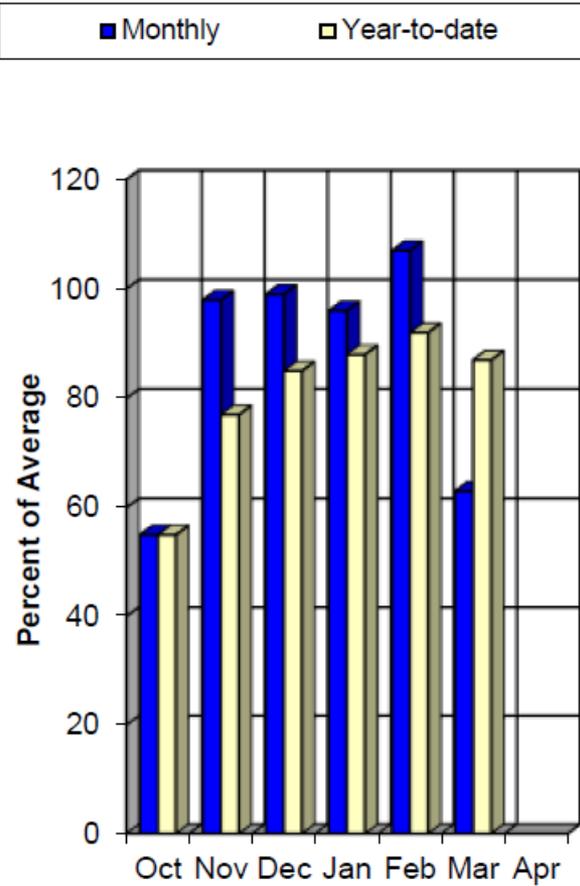
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Rio Grande Basin
 Water Supply Outlook Report
 As of April 1, 2015

**Mountain Snowpack
 (inches)**



**Mountain Precipitation
 (percent of average)**



EL NIÑO/SOUTHERN OSCILLATION (ENSO)

DIAGNOSTIC DISCUSSION

5 March 2015

ENSO Alert System Status: [El Niño Watch](#)

El Niño conditions are present.*

Positive equatorial sea surface temperature (SST) anomalies continue across most of the Pacific Ocean. There is an approximately 70% chance that El Niño conditions will continue through Northern Hemisphere summer 2015, and a greater than 60% it will last through autumn.

IRI/CPC Pacific Niño 3.4 SST Model Outlook

About half of the models indicate Niño 3.4 SST anomalies will remain greater than or equal to +0.5C through the end of 2015. Many other models (mostly statistical models) predict ENSO-neutral conditions.

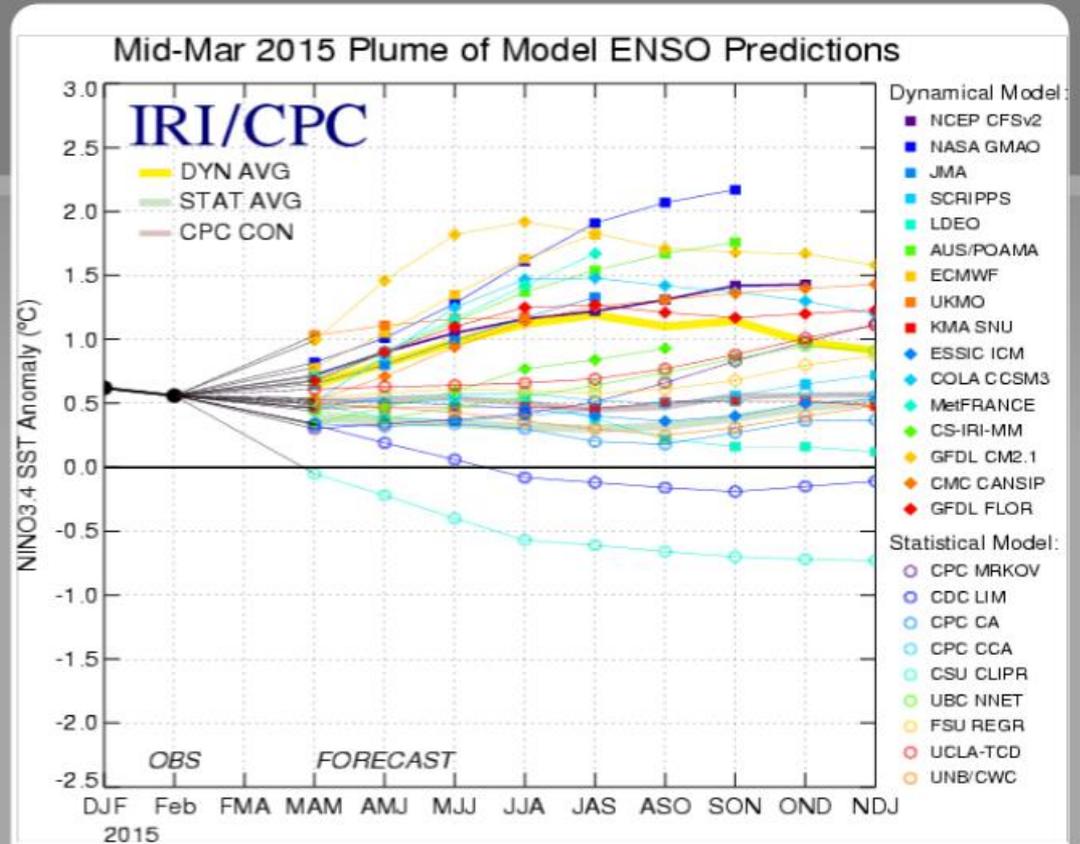


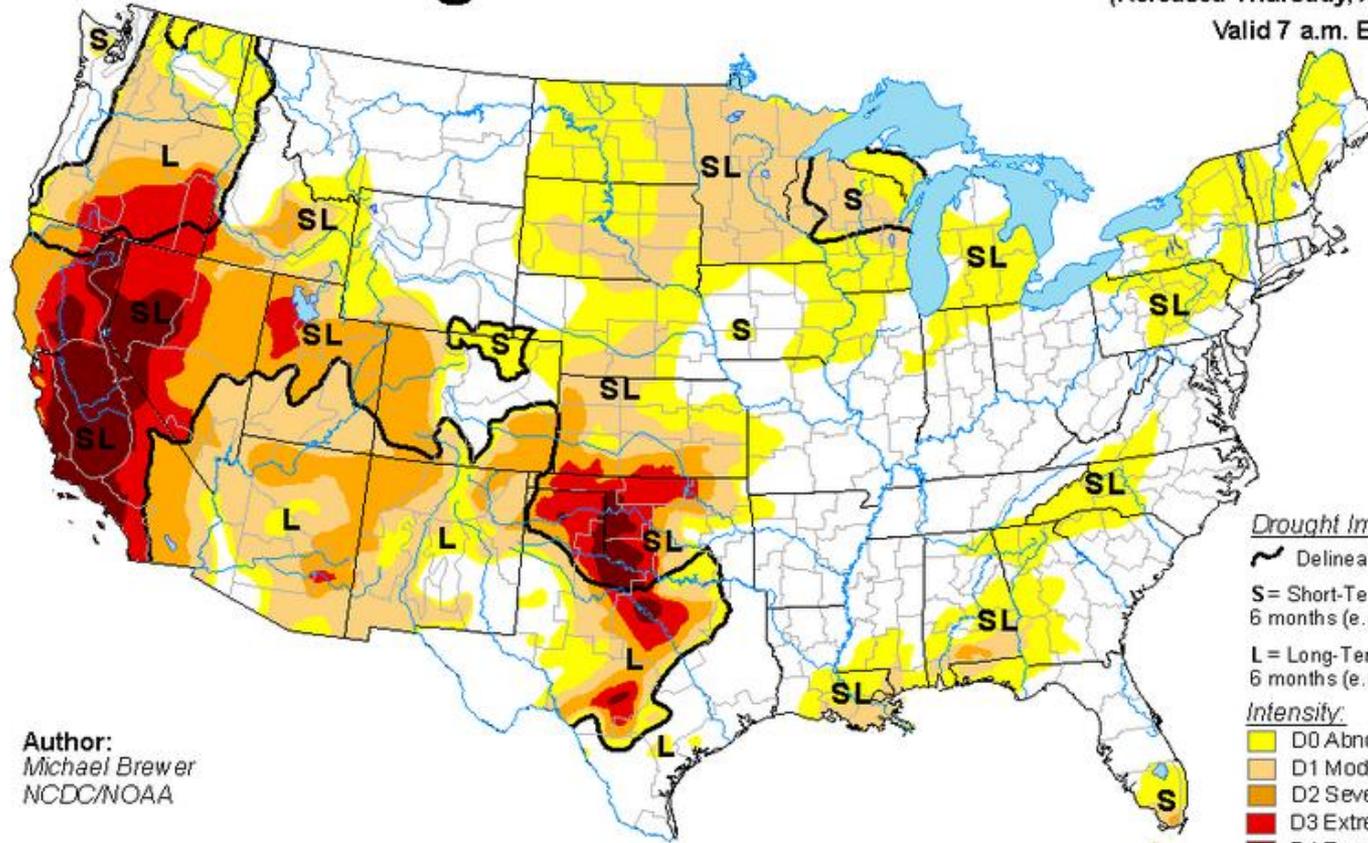
Figure provided by the International Research Institute (IRI) for Climate and Society (updated 17 March 2015).

U.S. Drought Monitor

April 7, 2015

(Released Thursday, Apr. 9, 2015)

Valid 7 a.m. EST



Author:
Michael Brewer
NCDC/NOAA

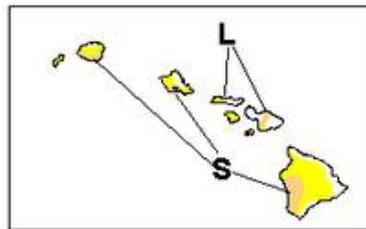
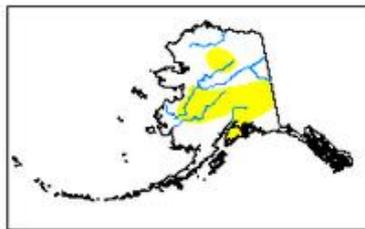
Drought Impact Types:

- Delineates dominant impacts
- S** = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L** = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>

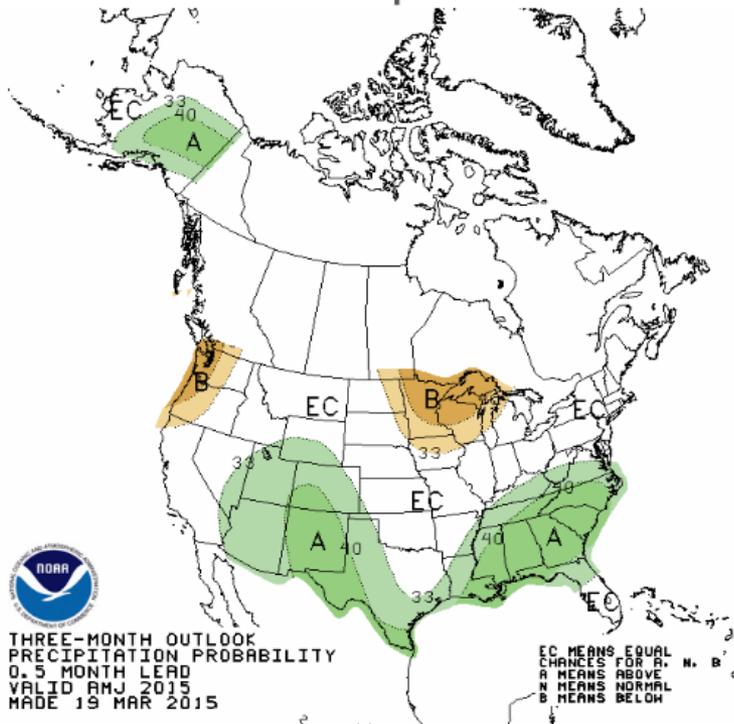
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U. S. Seasonal Outlooks

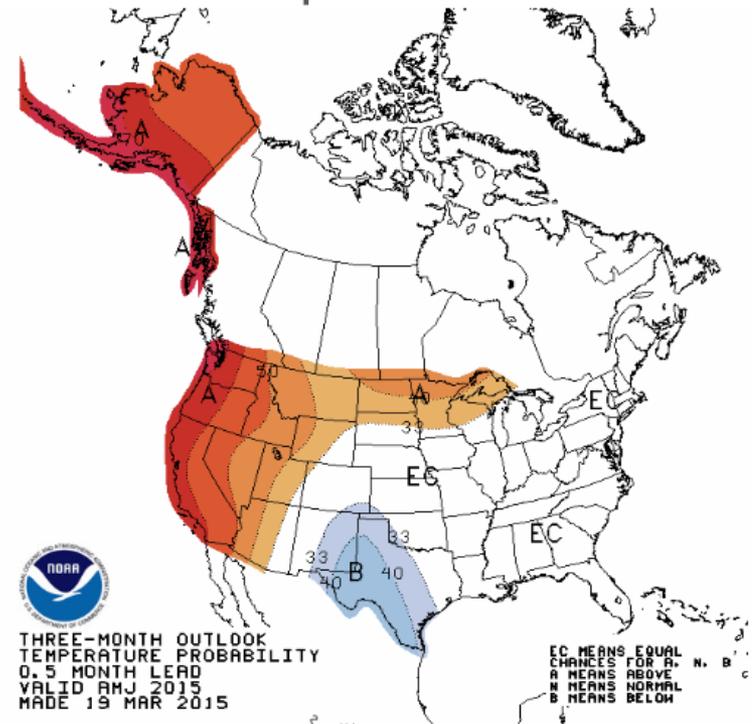
April - June 2015

The seasonal outlooks combine the effects of long-term trends, soil moisture, and, when appropriate, ENSO.

Precipitation



Temperature



Rio Grande Basin - Reservoir Data 04/20/2015

Reservoir Data	Elevation (FT*)	Releases (CFS**)	Storage (AF*)	Computed Inflow (CFS**)
Elephant Butte RES	4,331.56	1	389,233	114
Caballo Reservoir	4,142.34	1	35,612	1
Total Rio Grande Project Storage			424,845	
Rio Grande Compact Credit Water			16,278	
San Juan- Chama Water			3,511	
Rio Grande Compact Usable Water			405,056	

**** Unless otherwise noted: Preliminary Data ... All Data Subject To Revision ****

BASED ON 2015 MARCH THROUGH JULY WATER SUPPLY OUTLOOK REPORT OF

1-Apr

2015 MAR-JUL @ SAN MARCIAL (NRCS forecast) 36% of 30 yr

avg.

YEAR	COCHITI RELEAS	NET LOSSES	SAN MARCIA	<==== LOSSES	ELEPHANT BUTTE====> EVAP	CONTEN	RELEAS	<==== EVAP	CABALL LOSSES	IRRIG. DEMAN	EXCESS RELEAS	TOTAL RELEAS	CABALL CONTEN	YEAR
2014														2013
JAN	31	-11	42	7	2	312	0	0	0	0	0	0	40	JAN
FEB	35	-2	37	2	7	341	0	1	-1	0	0	0	40	FEB
MAR	47	21	26	-3	8	363	0	1	-1	0	0	0	40	MAR
APR	54	45	3	-5	12	364	0	2	-1	28	0	0	39	APR
MAY	31	61	30	-4	15	363	20	4	0	28	0	28	27	MAY
JUN	76	66	11	-5	3	226	144	2	0	138	0	138	31	JUN
JUL	57	42	16	-5	4	134	108	1	-2	108	0	108	32	JUL
AUG	53	21	32	-6	3	154	15	1	-6	29	0	29	22	AUG
SEP	39	23	16	-6	3	173	0	1	-10	0	0	0	31	SEP
OCT	36	24	12	0	1	184	0	1	-1	0	0	0	31	OCT
NOV	46	4	42	3	3	213	0	1	-1	0	0	0	32	NOV
DEC	49	1	48	2	2	257	0	1	-2	0	0	0	32	DEC
TOTAL AVG	614	294	319	-20	75	257	287	17	-25	303	0	303	33	TOTAL AVG
	325	234	92	182	--									

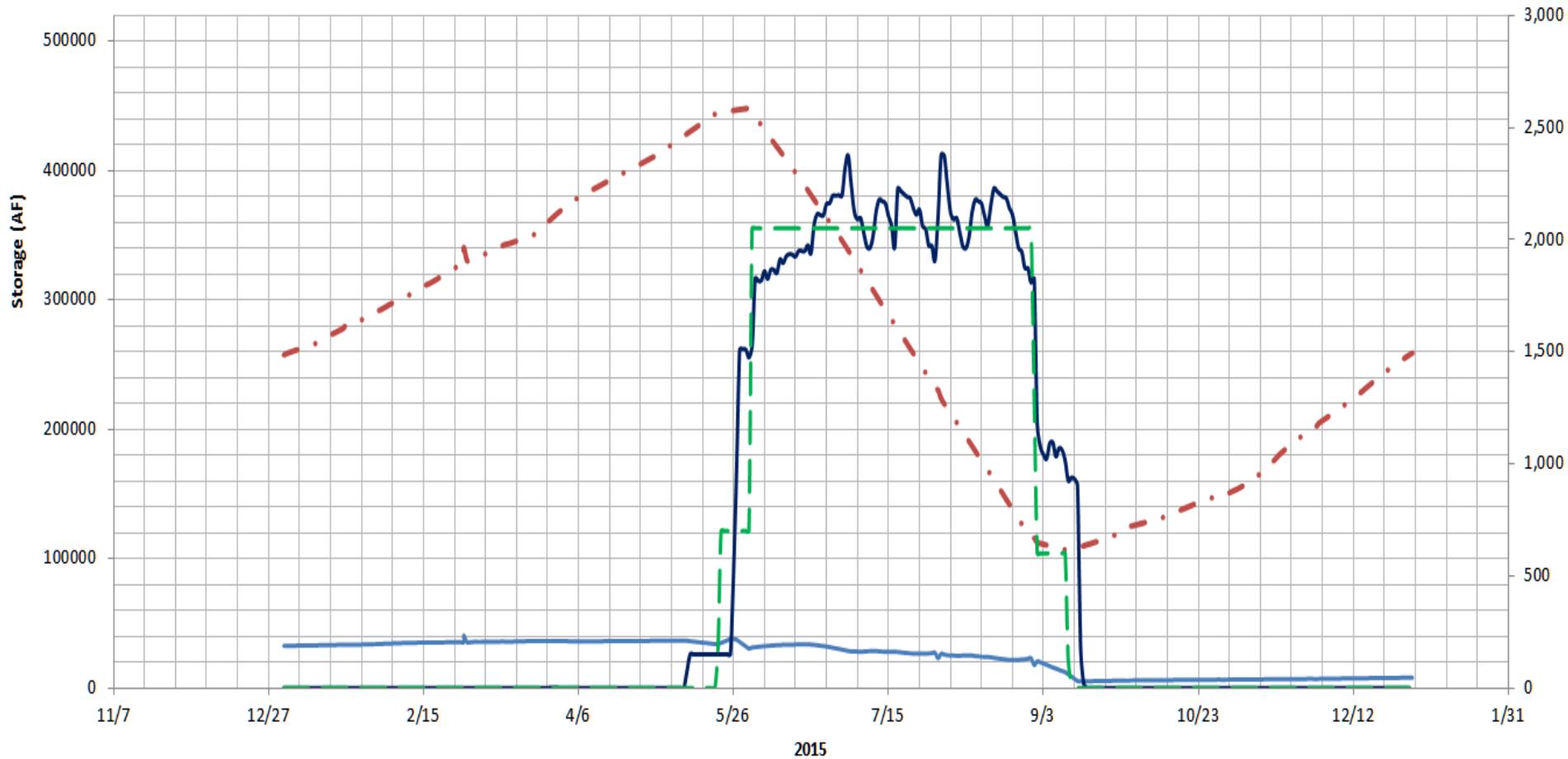
YEAR	COCHITI RELEAS	NET LOSSES	SAN MARCIA	<==== LOSSES	ELEPHANT BUTTE====> EVAP	CONTEN	RELEAS	<==== EVAP	CABALL LOSSES	IRRIG. DEMAN	EXCESS RELEAS	TOTAL RELEAS	CABALL CONTEN	YEAR
2015														2015
JAN	33	-2	35	-1	1	232	0	0	-1	0	0	0	32	JAN
FEB	38	-1	39	0	2	329	0	1	-3	0	0	0	35	FEB
MAR	72	33	39	-1	1	368	0	1	-2	0	0	0	36	MAR
APR	85	41	44	-2	4	410	0	2	-2	0	0	0	36	APR
MAY	170	112	58	-4	10	448	14	2	-1	19	0	19	30	MAY
JUN	140	112	28	-4	12	346	122	3	3	117	0	117	29	JUN
JUL	30	73	17	-1	10	228	126	1	-2	130	0	130	26	JUL
AUG	66	51	15	-5	10	113	125	1	0	129	0	129	21	AUG
SEP	48	22	26	-3	6	124	12	2	-3	29	0	29	5	SEP
OCT	42	14	28	-1	4	149	0	2	-3	0	0	0	6	OCT
NOV	50	-9	59	3	2	203	0	1	-2	0	0	0	7	NOV
DEC	52	-8	60	2	2	259	0	1	-2	0	0	0	8	DEC
TOTAL AVG	886	438	448	-17	64	272	399	17	-18	424	0	424	23	TOTAL AVG
	557	371	186	36.05%	--									

YEAR	COCHITI RELEAS	NET LOSSES	SAN MARCIA	<==== LOSSES	ELEPHANT BUTTE====> EVAP	CONTEN	RELEAS	<==== EVAP	CABALL LOSSES	IRRIG. DEMAN	EXCESS RELEAS	TOTAL RELEAS	CABALL CONTEN	YEAR
2016														2016
JAN	40	-7	47	0	3	302	1	0	-3	0	0	0	12	JAN
FEB	44	-4	48	0	4	345	1	1	1	0	0	0	11	FEB
MAR	75	15	60	-1	6	327	73	1	2	55	0	55	26	MAR
APR	157	47	110	-2	8	353	78	2	1	75	0	75	26	APR
MAY	250	75	175	-4	10	391	131	2	2	127	0	127	26	MAY
JUN	197	87	110	-4	12	361	132	3	3	127	0	127	25	JUN
JUL	119	63	56	-1	12	279	127	1	-1	127	0	127	25	JUL
AUG	78	34	44	-5	10	194	124	1	-4	127	0	127	25	AUG
SEP	55	23	32	-3	6	143	60	2	-2	60	0	60	25	SEP
OCT	47	17	30	-1	4	138	32	2	-2	48	0	48	3	OCT
NOV	52	-7	59	3	2	191	1	1	-2	0	0	0	11	NOV
DEC	53	-7	60	2	2	246	1	1	-4	0	0	0	15	DEC
TOTAL AVG	1167	336	831	-16	79	275	781	17	-9	766	0	766	20	TOTAL AVG
	798	287	511	100%	--									

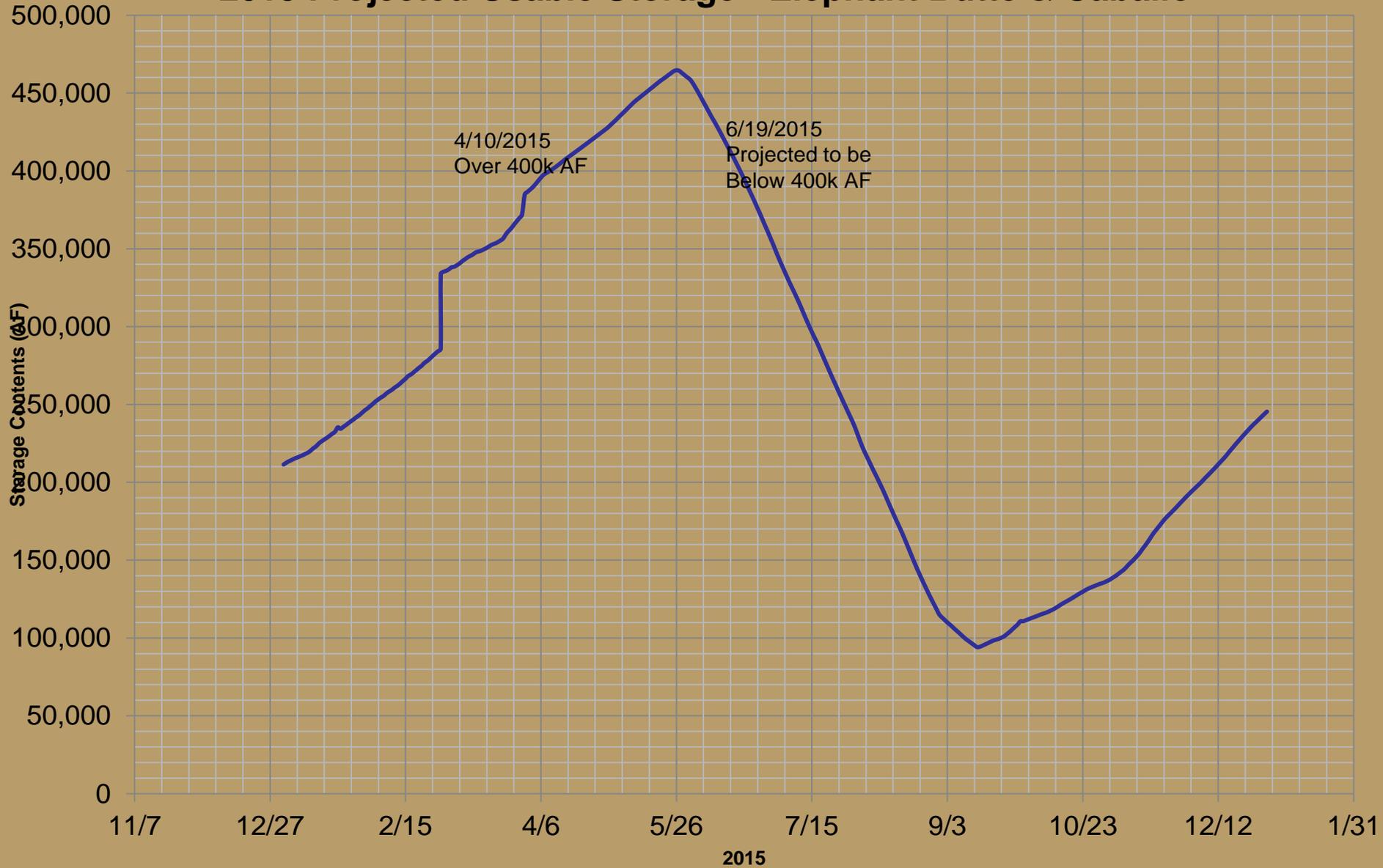


Caballo & EB Reservoir Estimated Storage & Release AF

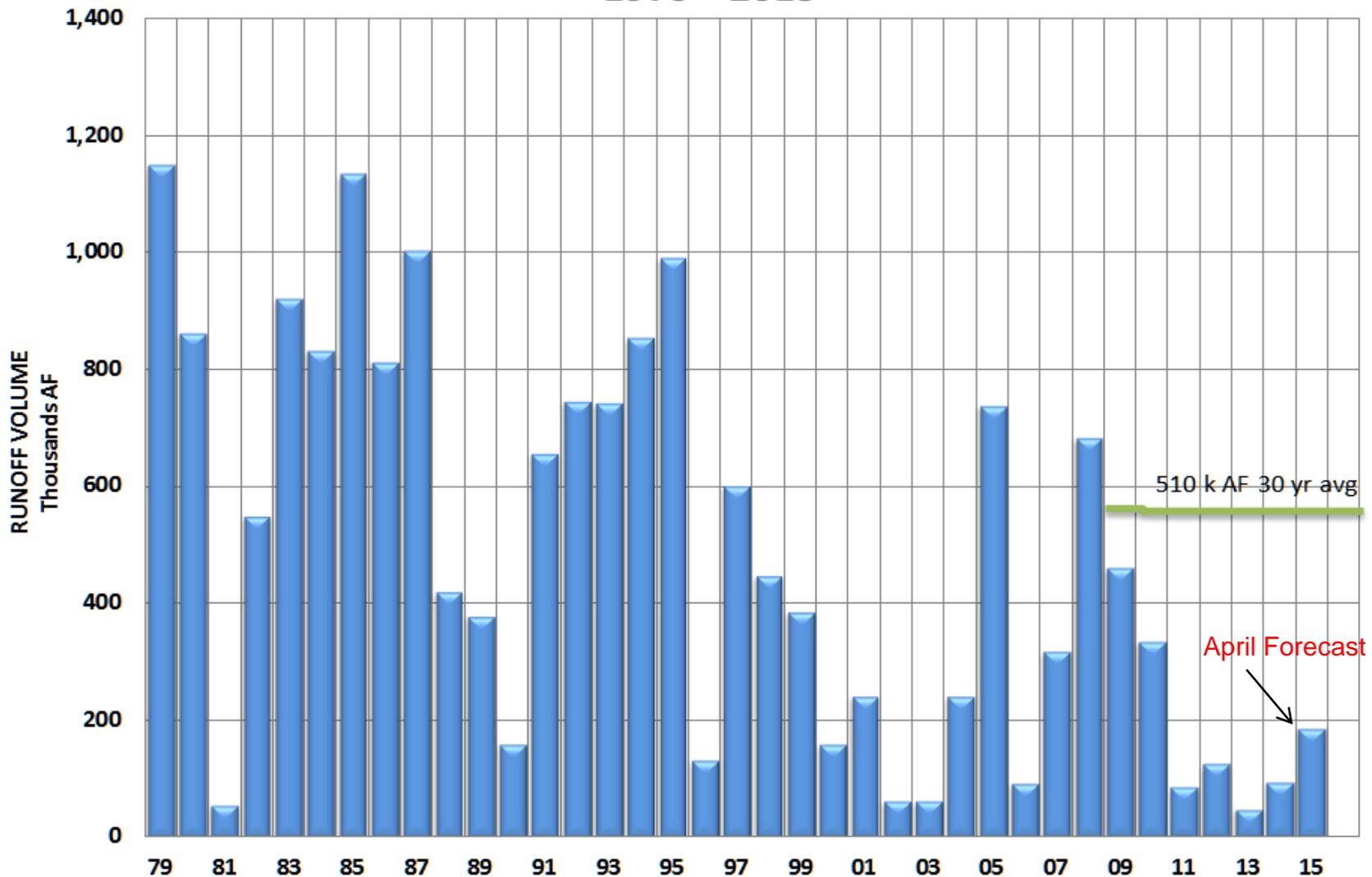
Caballo Elephant Butte Caballo Release EB Release



2015 Projected Usable Storage - Elephant Butte & Caballo



HISTORICAL RUNOFF - SAN MARCIAL 1979 - 2015



2015 Rio Grande Project Operations Coordination

Projected initial allocation delivery to canal headings

EBID	May 11 th	(Only on Arrey Canal)
EBID	June 1 st	(Entire District)
EP#1	June 1st	
Mexico	June 1st	

2015 Initial Allocation

(April 1, 2015 – Data)

- **Total Water Available – 349,033 KAF**

- **Allocation**

- **April**

- **Mexico – 22,568 -**

- **EBID –115,388 -**

- **EP#1 –128,176 -**

- **37.6 % of full allocation**

- ----Handouts Provided ----

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Summary

El Niño conditions are present.*

Positive equatorial sea surface temperature (SST) anomalies continue across most of the Pacific Ocean. There is an approximately 70% chance that El Niño conditions will continue through Northern Hemisphere summer 2015, and a greater than 60% it will last through autumn.

Low water storage and runoff conditions indicate a late start to the 2015 irrigation season.

* Note: These statements are updated once a month in association with the ENSO Diagnostics Discussion:
http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory

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Questions?



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Spring Run-off Forecast

