

Planned & Actual Water Production By Source (Acre-Feet)

Report Month:

September

Water Year: 2017

	Cachuma Project			Gibraltar Reservoir		Devil's Canyon	Mission Tunnel		Groundwater Production					Desalination		State Water		Net Overlap Water	Groundwater Recharge		Blend Water		Potable System Total		Recycled System		El Estero Process Usage		Water System Total	
	Plan	Act.	Balance	Plan	Act.	Actual	Plan	Act.	Plan	SU #1	Foot-hill Basin	Total Actual	SU#3 Actual	Plan	Act.	Plan	Act.	Act.	Injec.	Total Actual	Plan	Act.	Plan	Act.	Plan	Act.	Plan	Act.	Plan	Act.
2016 Oct	446	460	684	0	0	0	40	40	338	231	79	310	7	0	0	0	0	-13	0	0	0	0	824	797	84	73	15	17	923	886
Nov	380	400	253	0	0	0	44	26	268	207	75	282	5	0	0	0	0	-15	0	0	25	32	668	662	54	34	15	14	737	710
Dec	145	251	0	0	0	0	44	23	228	181	77	259	0	0	0	234	84	-10	0	0	25	4	627	602	37	29	15	13	680	644
2017 Jan	0	0	0	0	0	10	44	47	228	176	82	258	0	0	0	292	273	-10	0	0	25	0	540	578	19	12	15	16	573	606
Feb	0	0	0	0	0	69	44	69	228	121	66	187	0	0	0	267	197	-18	0	0	25	0	514	504	20	4	15	13	549	521
Mar	0	0	0	0	298	5	44	145	228	39	2	42	0	0	0	384	112	-10	0	0	25	0	632	590	19	27	15	18	666	635
Apr	0	0	3,311	0	412	0	44	102	186	0	0	0	0	260	0	221	210	-10	0	0	25	0	687	715	48	71	15	19	750	804
May	0	0	3,364	0	527	0	44	90	186	0	0	0	0	260	9	309	80	-12	0	0	25	1	775	693	76	94	15	19	866	806
Jun	0	0	3,424	0	382	0	44	65	186	0	0	0	0	260	62	300	252	-14	0	0	25	0	766	747	98	109	15	18	879	873
Jul	0	0	3,479	0	501	0	44	52	186	0	0	0	0	260	0	343	247	-22	0	0	25	1	809	777	119	128	15	19	943	925
Aug	0	0	3,537	0	529	0	44	58	186	0	0	0	0	260	0	385	210	-17	0	0	25	0	851	780	113	127	15	18	979	925
Sep	0	0	3,597	0	513	0	44	53	186	0	0	0	0	260	0	327	187	-25	0	0	25	0	793	728	114	99	15	17	922	844
Year to Date	972	1,111	3,597	0	3,161	83	529	769	2,634	956	382	1,338	12	1,633	71	3,063	1,853	-177	0	0	275	37	8,486	8,173	800	807	180	199	9,466	9,179
Annual Total	972			0			529		2,634					1,563		3,063				275		8,486		800		180		9,466		
Notes			*3										*6							*1	*5	*1	*2			*4				

A B C D E F G H I J K L M N O P Q R S T -U V -W X Y Z AA AB AC AD AE

- *1 Groundwater recharge & Blend Water not part of potable system use.
- *2 Based on 2013 total system production of 14,765 AF with 35% conservation through January and 40% through the remainder of the year.
- *3 Cachuma Balance: Net of entitlement, carryover, spills, & transfers, per COMB
- *4 Effective 2011 WY, Net Production to Distribution System (Meter Distr. Flow - EEWTP process water).
- *5 Planned blend water based on expected filter production
- *6 Groundwater from Storage Unit #3 is non-potable water serving recycled water demands.

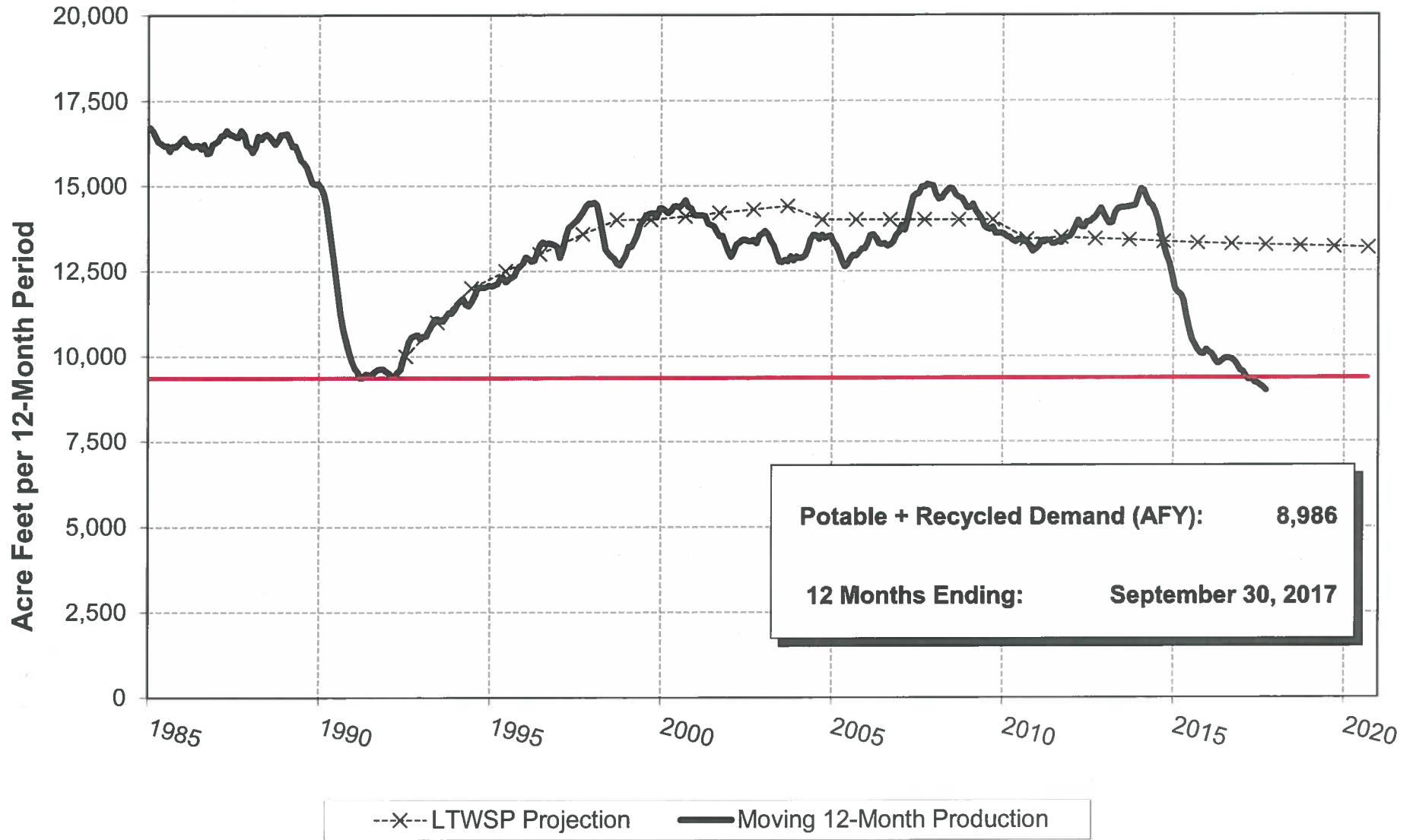
YTD Percent of Target:	96.3%	100.9%		97.0%
	Potable	Recycled		System

Potable System V = C+F+G+I+M+P+R+S-U-W

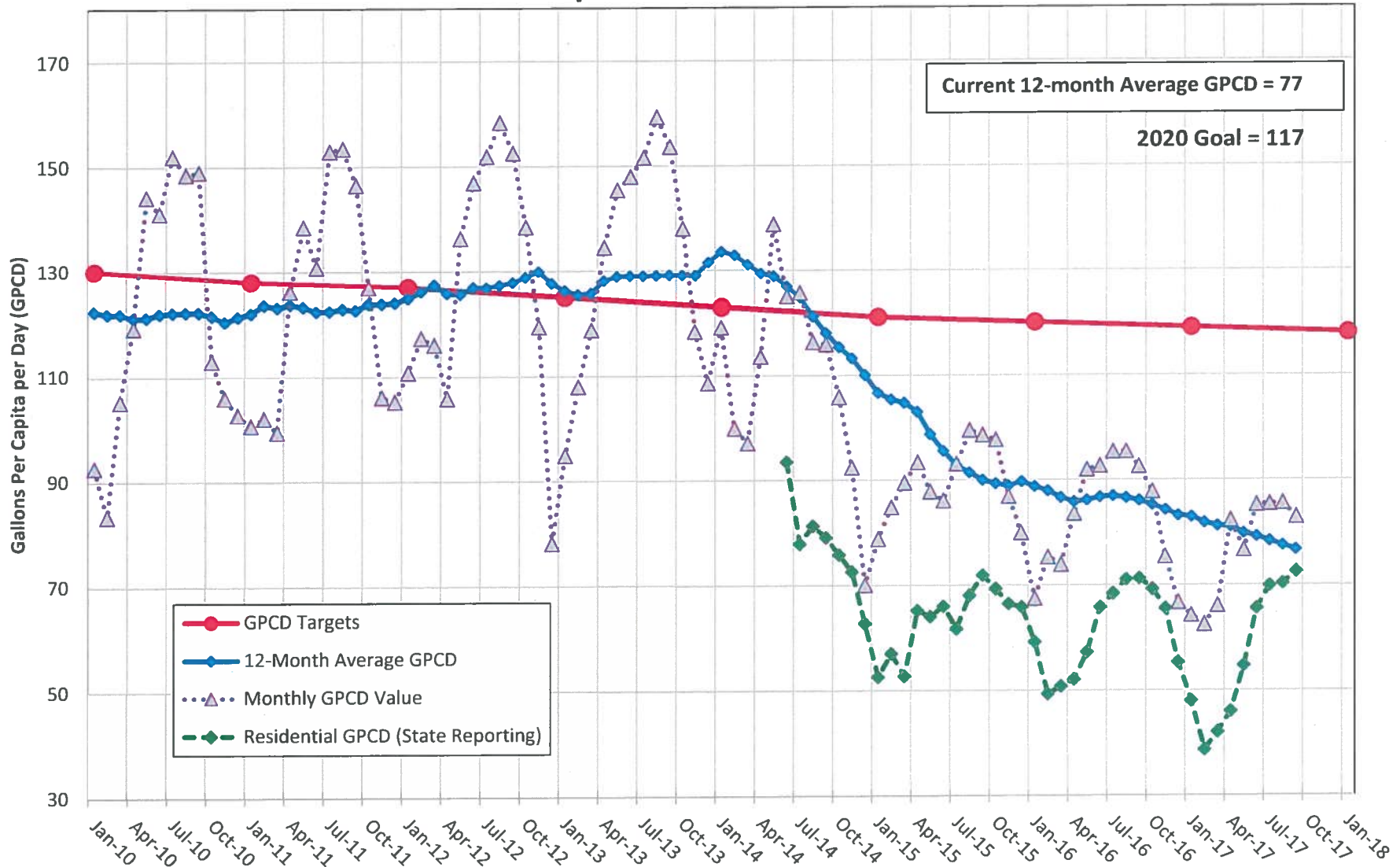
= Preliminary Data or Not Yet Available

City of Santa Barbara Water Demand

Moving 12-Month Production to Serve Potable + Recycled Systems



City of Santa Barbara Water Use in Gallons Per Capita per Day (GPCD) September 30, 2017

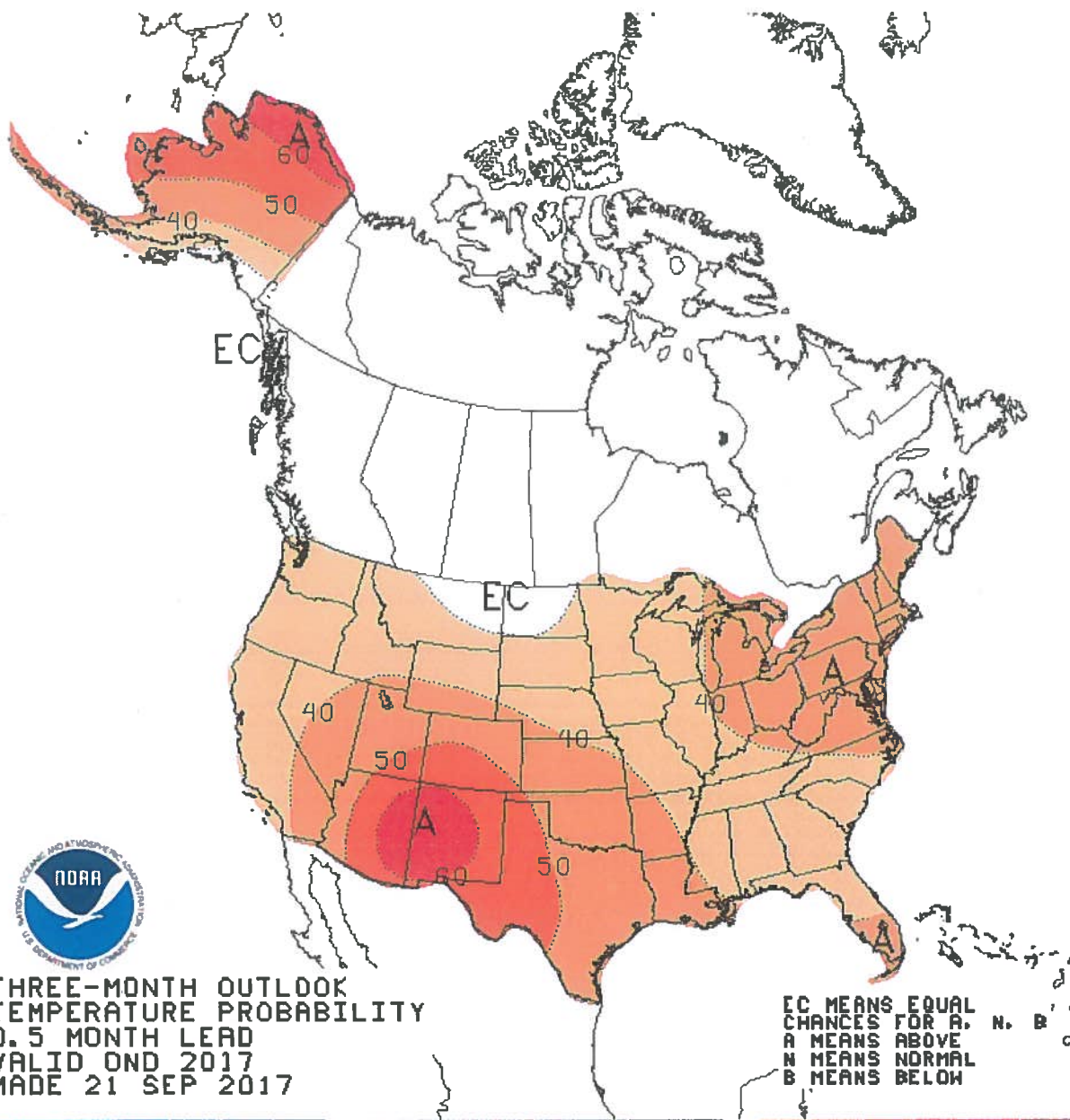


NOTE: The GPCD values above exclude blend water for recycled water production.

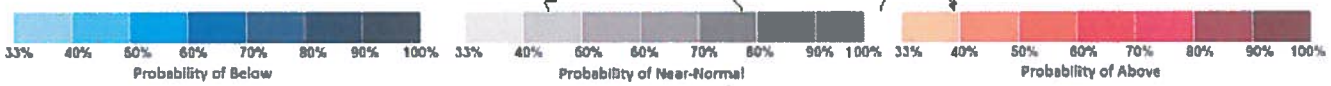
GIBRALTAR RAINFALL DATA

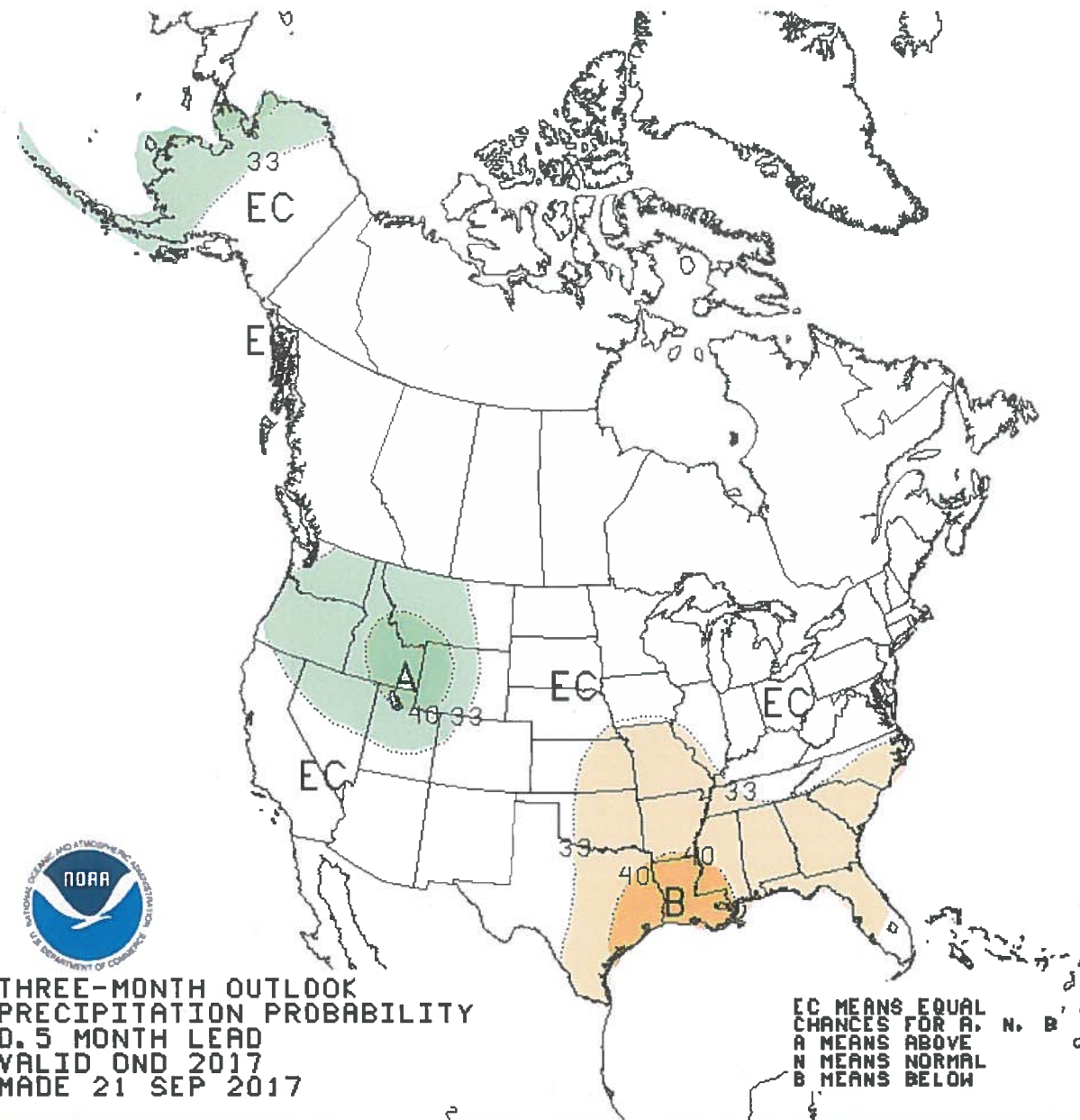
Gauge Location: Gibraltar Dam

Year	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Total
1965-66	0.00	17.00	9.36	2.24	0.86	0.24	0.00	0.00	0.00	0.00	0.00	0.00	29.70
1966-67	0.04	7.48	9.38	8.22	0.00	6.86	7.15	0.06	0.00	0.00	0.00	0.12	39.31
1967-68	0.00	5.11	1.51	1.84	1.30	3.50	1.67	0.00	0.00	0.00	0.00	0.00	14.93
1968-69	1.19	1.07	2.22	31.18	18.23	1.67	2.81	0.00	0.00	0.00	0.00	0.00	58.37
1969-70	0.00	2.59	0.31	4.34	3.57	6.58	0.00	0.00	0.00	0.00	0.00	0.00	17.39
1970-71	0.08	9.38	8.87	1.10	1.64	0.00	0.94	0.47	0.00	0.00	0.00	0.00	22.48
1971-72	0.47	1.09	13.20	0.19	0.32	0.00	0.24	0.11	0.00	0.00	0.00	0.00	15.62
1972-73	0.55	9.10	1.06	8.38	14.89	4.27	0.00	0.00	0.00	0.00	0.00	0.00	38.25
1973-74	0.70	3.19	2.83	12.26	0.05	5.35	0.85	0.02	0.00	0.00	0.00	0.00	25.25
1974-75	0.89	0.06	9.53	0.35	5.62	8.96	2.13	0.08	0.00	0.00	0.01	0.00	27.63
1975-76	0.40	0.44	0.22	0.00	10.93	2.02	1.08	0.00	0.00	0.00	0.05	4.28	19.42
1976-77	0.25	0.44	0.83	5.42	0.26	2.89	0.00	5.19	0.00	0.00	0.38	0.00	15.66
1977-78	0.00	0.14	9.23	1.91	14.42	18.28	4.27	0.00	0.00	0.00	0.00	1.63	49.88
1978-79	0.00	2.76	2.51	8.49	6.08	7.26	0.00	0.00	0.00	0.00	0.00	1.01	28.11
1979-80	0.58	0.96	2.02	8.13	17.69	4.39	1.10	0.24	0.00	0.00	0.00	0.00	35.11
1980-81	0.00	0.00	1.74	6.17	2.99	9.98	1.05	0.00	0.00	0.00	0.00	0.00	21.93
1981-82	0.38	2.57	0.47	6.14	0.65	7.55	5.30	0.05	0.00	0.00	0.00	1.70	24.81
1982-83	1.30	7.87	5.61	15.07	8.47	15.11	8.86	0.00	0.00	0.00	0.79	0.59	63.67
1983-84	5.57	4.18	6.75	0.25	0.08	0.95	0.24	0.00	0.00	0.00	0.07	0.28	18.37
1984-85	0.49	3.52	7.94	0.96	1.24	1.92	0.13	0.00	0.00	0.00	0.00	0.05	16.25
1985-86	0.42	7.14	1.11	3.24	10.61	6.77	1.51	0.00	0.00	0.00	0.00	0.84	31.64
1986-87	0.00	0.96	0.42	2.71	2.04	4.58	0.00	0.00	0.00	0.00	0.00	0.00	10.71
1987-88	1.60	1.52	4.67	5.19	4.12	2.60	5.14	0.06	0.05	0.00	0.00	0.00	24.95
1988-89	0.00	1.04	5.73	0.29	5.38	1.43	0.13	0.46	0.00	0.00	0.00	0.25	14.71
1989-90	0.79	0.58	0.00	5.61	3.33	0.27	0.24	0.78	0.00	0.00	0.00	0.20	11.80
1990-91	0.00	0.26	0.18	1.71	4.88	23.12	0.03	0.00	0.06	0.38	0.00	0.00	30.62
1991-92	0.33	0.13	7.54	4.72	18.82	7.28	0.04	0.16	0.00	0.07	0.00	0.00	39.09
1992-93	1.78	0.00	8.17	14.30	16.43	8.12	0.00	0.34	0.47	0.00	0.00	0.00	49.61
1993-94	0.19	1.51	2.42	1.74	9.76	2.72	0.65	0.51	0.00	0.00	0.00	0.09	19.59
1994-95	2.19	1.29	1.54	33.26	3.39	15.30	0.33	1.64	0.02	0.00	0.00	0.00	58.96
1995-96	0.00	0.18	2.85	2.93	10.30	2.21	1.00	0.39	0.00	0.00	0.00	0.00	19.86
1996-97	7.05	1.89	7.81	7.45	0.13	0.00	0.00	0.00	0.00	0.04	0.00	0.09	24.46
1997-98	0.00	5.48	10.17	6.64	34.63	4.47	4.43	6.62	0.03	0.00	0.00	0.55	73.02
1998-99	0.13	1.30	0.79	4.25	2.24	4.55	2.97	0.00	0.13	0.24	0.00	0.03	16.63
1999-00	0.00	1.65	0.00	2.25	16.70	3.73	5.36	0.03	0.19	0.00	0.00	0.00	29.91
2000-01	4.04	0.00	0.15	11.24	8.85	13.59	2.96	0.01	0.00	0.01	0.00	0.00	40.85
2001-02	0.65	4.48	2.89	1.03	0.33	0.84	0.08	0.09	0.00	0.00	0.00	0.06	10.45
2002-03	0.00	4.61	6.45	0.12	5.26	4.43	4.97	2.82	0.00	0.06	0.00	0.00	28.72
2003-04	0.00	2.29	3.10	0.42	8.50	0.43	0.00	0.00	0.00	0.00	0.00	0.00	14.74
2004-05	8.39	0.46	17.37	21.54	15.65	3.58	1.14	1.46	0.00	0.00	0.00	0.14	69.73
2005-06	0.60	1.43	0.68	9.67	5.41	5.22	8.15	1.29	0.00	0.00	0.10	0.00	32.55
2006-07	0.37	0.23	1.63	2.62	3.40	0.16	0.81	0.00	0.00	0.00	0.02	0.85	10.09
2007-08	0.38	0.10	4.09	23.84	3.11	0.00	0.15	0.27	0.00	0.00	0.10	0.00	32.04
2008-09	0.06	2.22	4.07	1.00	7.95	0.90	0.35	0.01	0.09	0.00	0.00	0.00	16.65
2009-10	5.81	0.00	5.19	11.89	6.90	0.69	4.44	0.08	0.00	0.00	0.00	0.00	35.00
2010-11	2.03	2.04	14.04	2.06	5.12	14.95	0.00	1.18	0.51	0.00	0.00	0.00	41.93
2011-12	0.74	3.00	0.36	1.22	0.47	5.89	3.08	0.00	0.00	0.00	0.00	0.04	14.80
2012-13	0.34	2.60	2.68	1.39	0.24	1.02	0.00	0.61	0.00	0.00	0.00	0.00	8.88
2013-14	0.08	1.21	0.29	0.00	5.07	5.16	0.66	0.57	0.00	0.00	0.00	0.00	13.04
2014-15	0.00	1.21	7.88	0.87	0.73	0.60	0.36	0.62	0.98	0.00	0.00	0.16	13.41
2015-16	0.23	0.36	0.71	4.66	2.66	4.22	0.27	0.13	0.00	0.00	0.00	0.00	13.24
2016-17	1.20	1.26	3.10	11.51	14.23	1.24	0.21	0.45	0.00	0.00	0.02	0.23	33.45
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Total
50 yr avg	1.05	2.14	4.10	6.27	6.90	5.02	1.60	0.53	0.05	0.02	0.03	0.26	28.08
50 yr median	0.38	1.30	2.76	3.75	5.10	3.98	0.66	0.07	0.00	0.00	0.00	0.00	24.88
Average YTD:	1.05	3.18	7.28	13.55	20.45	25.47	27.07	27.61	27.66	27.67	27.70	27.97	
Actual YTD:	1.20	2.46	5.56	17.07	31.30	32.54	32.75	33.20	33.20	33.20	33.22	33.45	



THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID OND 2017
MADE 21 SEP 2017



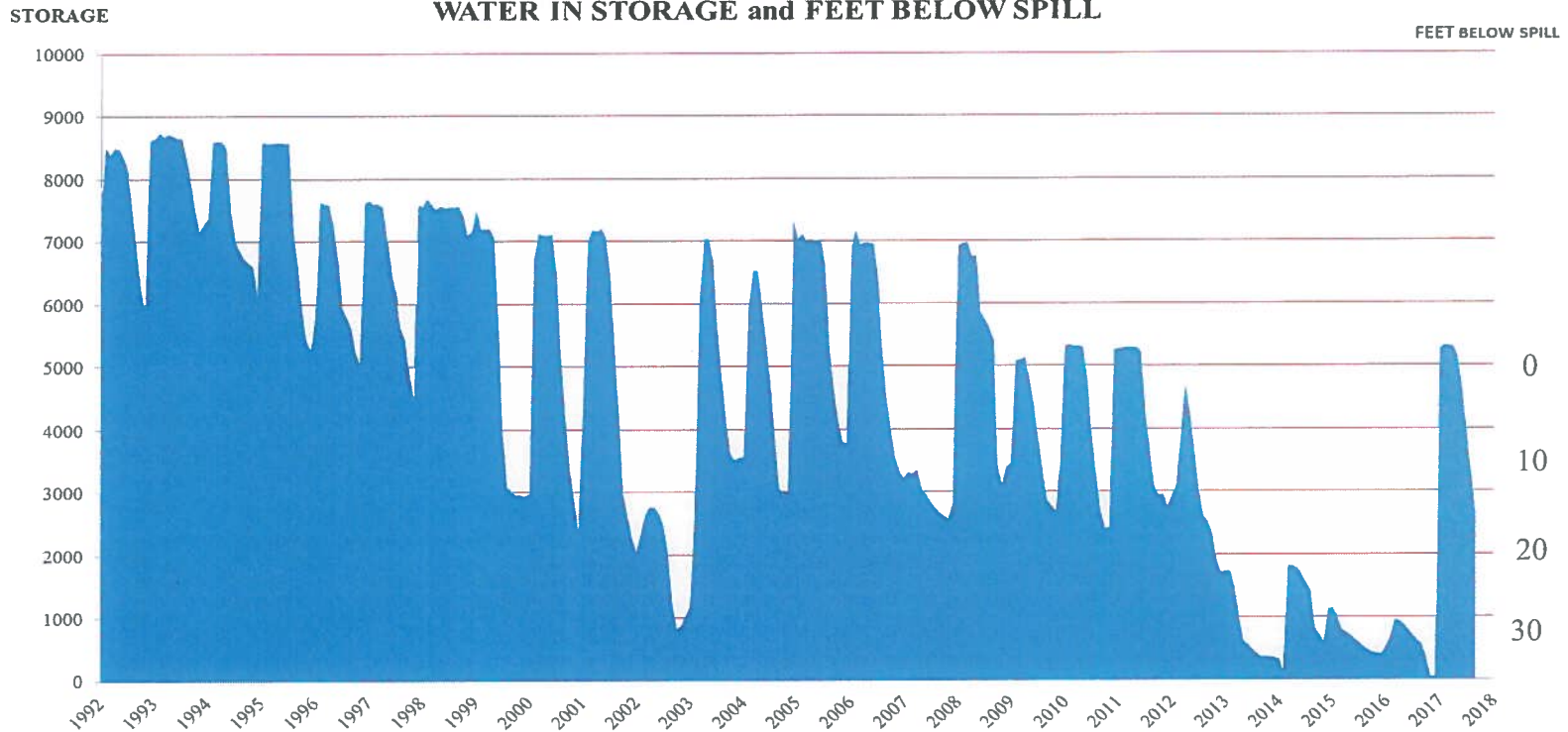


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID O/N/D 2017
MADE 21 SEP 2017

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



GIBRALTAR RESERVOIR HYDROGRAPH WATER IN STORAGE and FEET BELOW SPILL



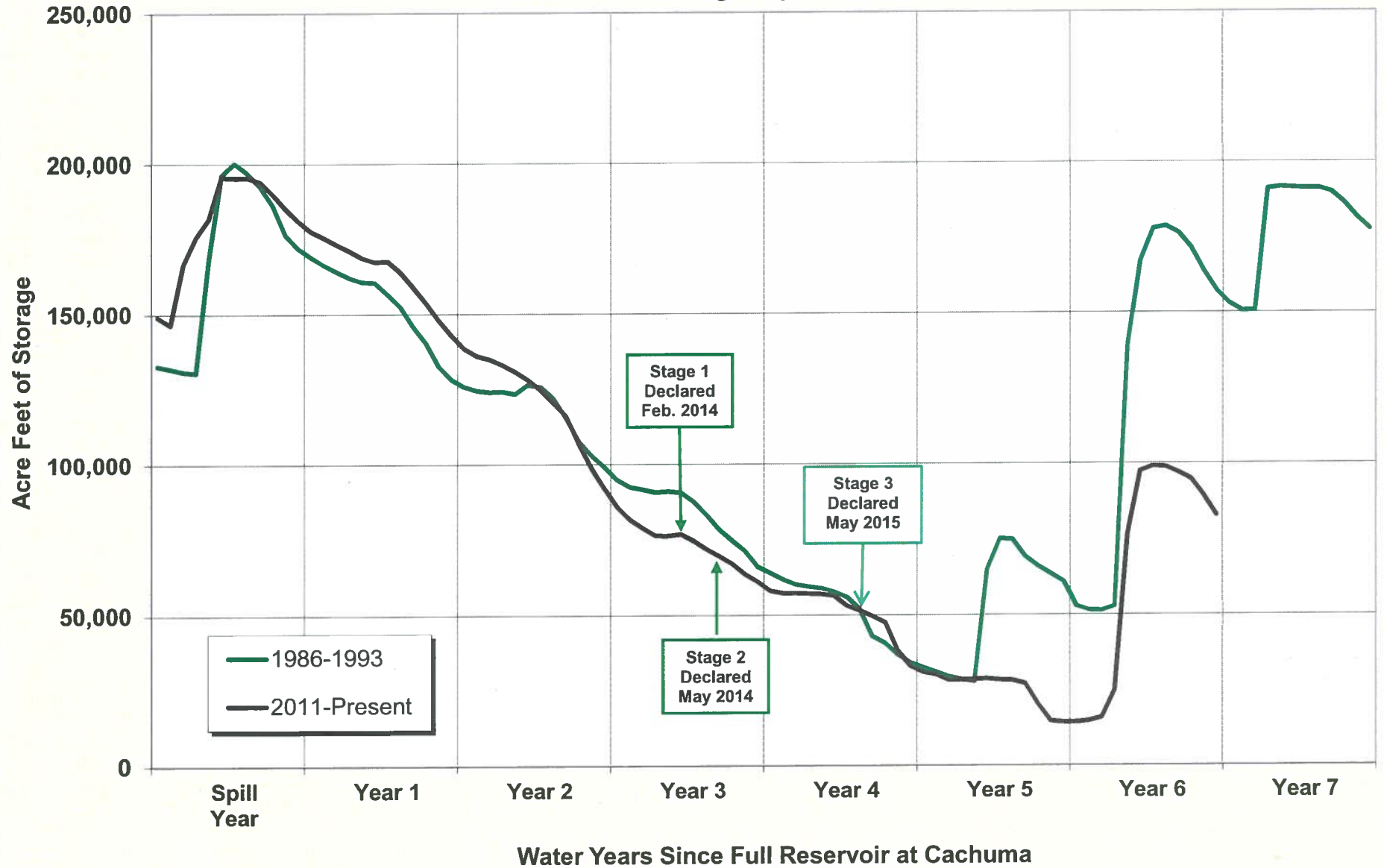
<u>ELEV.</u>	<u>STATUS</u>	<u>CAPACITY (AF)</u>
1,400.00	Reservoir is Full	5,246
1,376.48	First 16" Intake Valve	1,156
1,361.82	Second 16" Intake Valve	0
1,300.00	Reservoir is Empty	0

January 1993 - February 1996... Reflects use of M,N&S 1992 Gib. Area/Capacity Survey @ 8,618 AF
 February 1996 - October 1998... Reflects use of M,N&S 1996 Gib. Area/Capacity Survey @ 7,631 AF
 October 1998 - December 2001... Reflects use of M,N&S 1998 Gib. Area/Capacity Survey @ 7,261 AF
 January 2002 - December 2004... Reflects use of M,N&S 2001 Gib. Area/Capacity Survey @ 7,096 AF
 January 2005 - November 2007... Reflects use of M,N&S 2004 Gib. Area/Capacity Survey @ 7,085 AF
 December 2007 - July 2008... Reflects use of M,N&S 2007 Gib. Area/Capacity Survey @ 6,784 AF
 August 2008 - May 2010... Reflects use of MN&S 2008 Gib. Area/Capacity Survey @ 5,303 AF
 June 2010 - September 2013... Reflects use of MN&S 2010 Gib. Area/Capacity Survey @ 5,251 AF
 October 2013 - September 2016... Reflects use of MN&S 2013 Gib. Area/Capacity Survey @ 5,246 AF
 October 2016 to present... Reflects use of MNS 2016 Gib. Area/Capacity Survey @ 5,272 AF

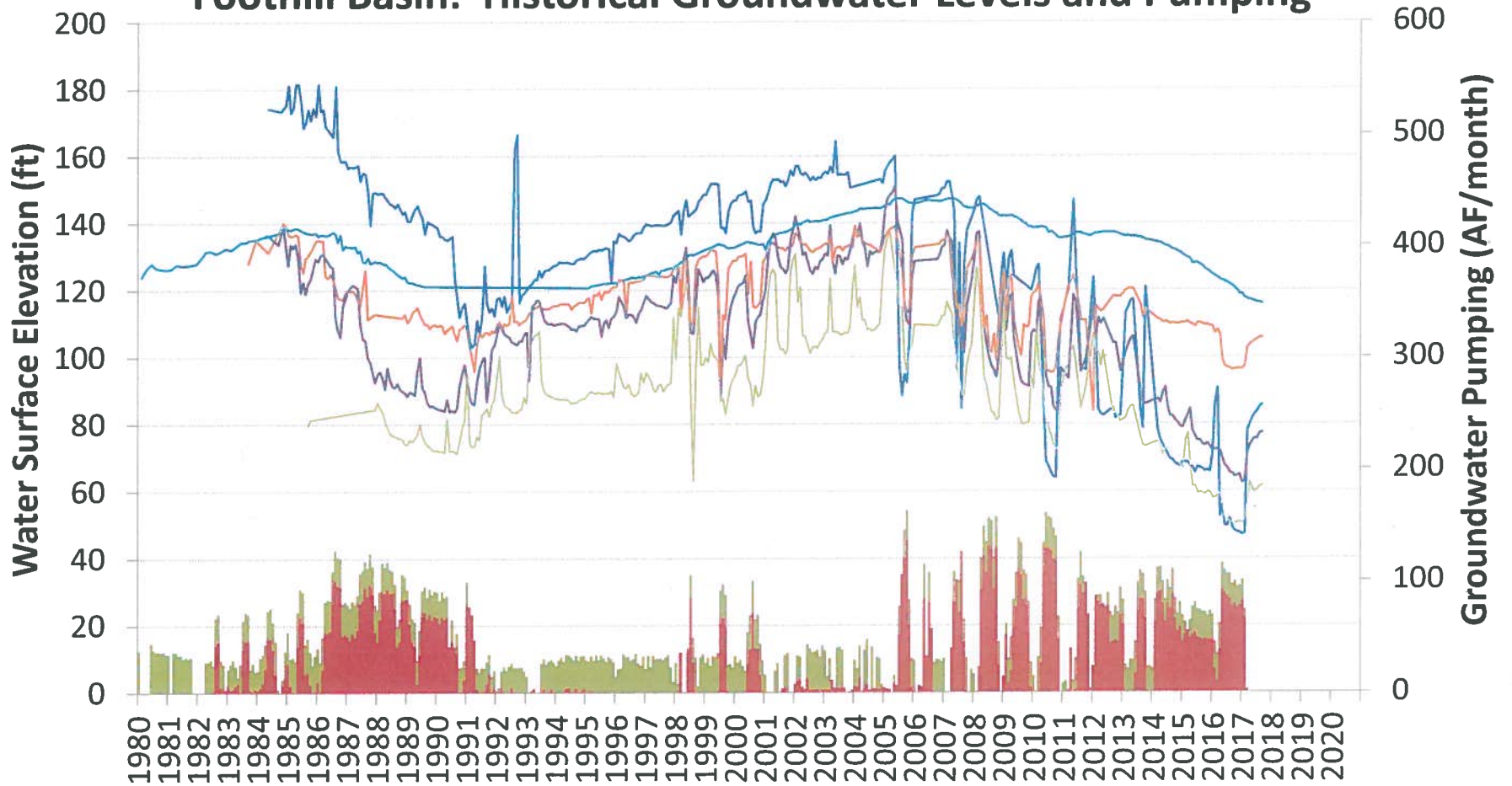
<u>TIME & DATE OF SPILL SINCE 1989</u>	
4:30 Am	March 19, 1991
9:09 Am	February 7, 1992
10:30 Am	January 7, 1993
6:45 Am	February 18, 1994
1:37 Pm	January 9, 1995
2:10 Pm	February 20, 1996
6:00 Am	December 22, 1996
3:00 Am	January 2, 1997
1:30 Pm	January 15, 1997
9:40 Am	December 6, 1997
4:30 Pm	February 6, 1999
8:00 Am	February 24, 2000
1:00 Am	February 15, 2001
1:30 Pm	April 14, 2003
5:00 Pm	December 29, 2004
8:30 Pm	January 2, 2006
1:00 Am	January 5, 2008
7:00 Pm	February 16, 2009
12:00 Noon	January 20, 2010
07:00 Am	December 20, 2010
01:00 Am	January 24, 2017

Cachuma Storage: Current Drought & 1986-93 Period

Data Shown Through September 30, 2017



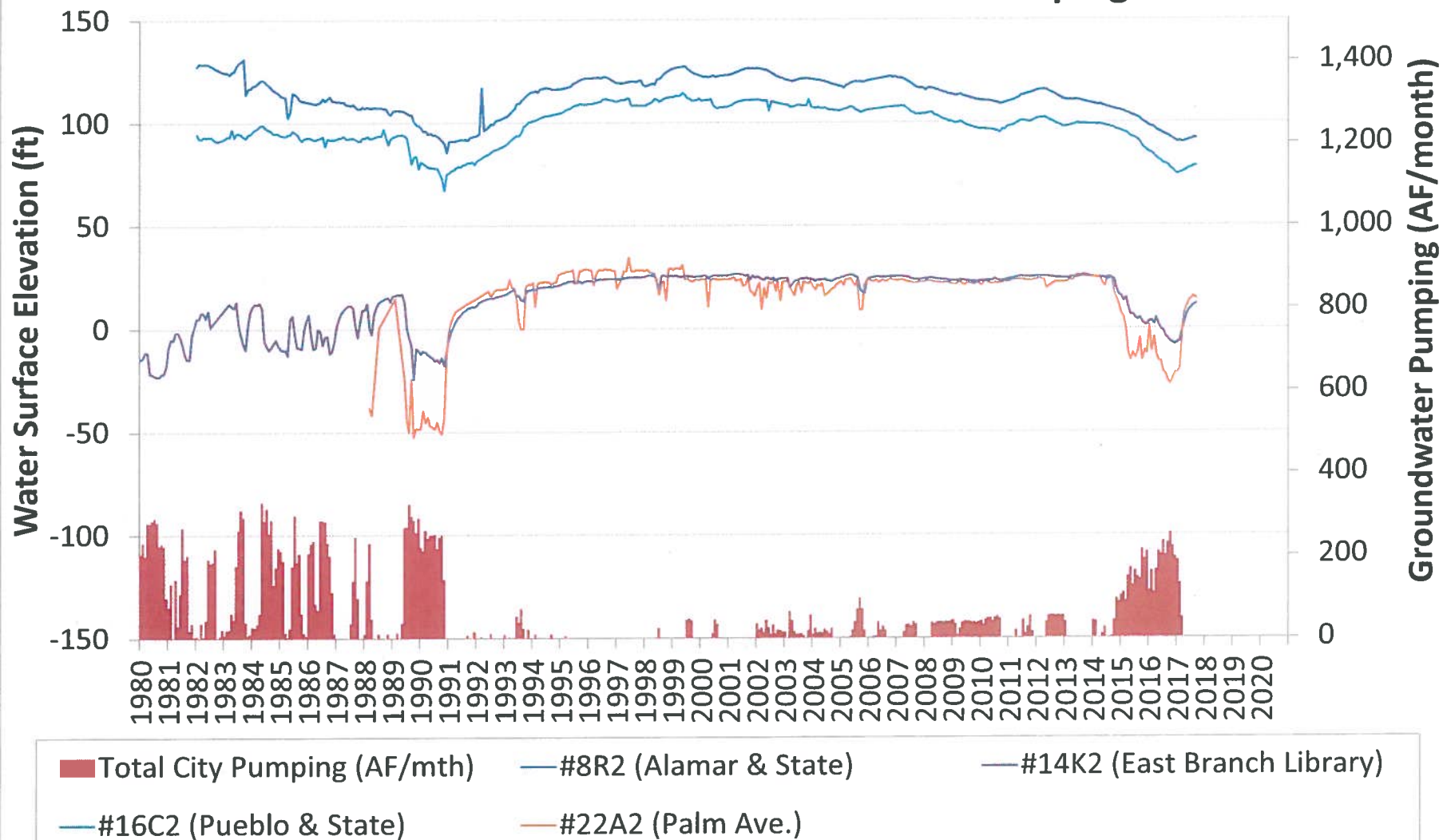
Foothill Basin: Historical Groundwater Levels and Pumping



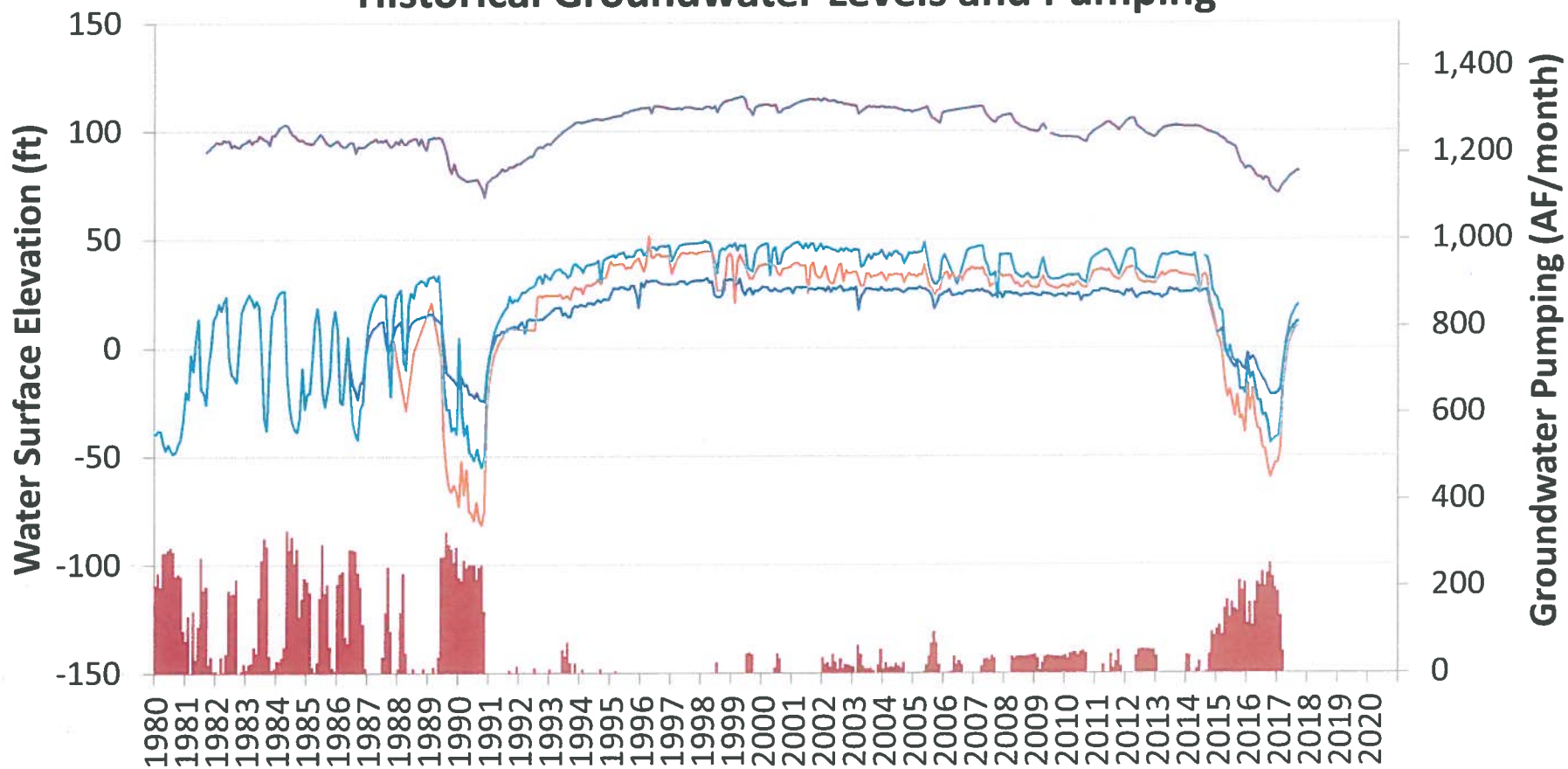
■ Non-City Pumping (AF/mth)
— #8E1 (San Roque #1)
— #12C2 (Lorraine)
— #12R3 (State & San Marcos Pass)

■ Total City Pumping (AF/mth)
— #12H4 (Clinic)
— #7R3 (Hitchcock)

Storage Unit #1, Upper Producing Zone: Historical Groundwater Levels and Pumping



Storage Unit #1, Lower Producing Zone: Historical Groundwater Levels and Pumping



■ Total City Pumping (AF/mth)

— #16C1 (Pueblo & State)

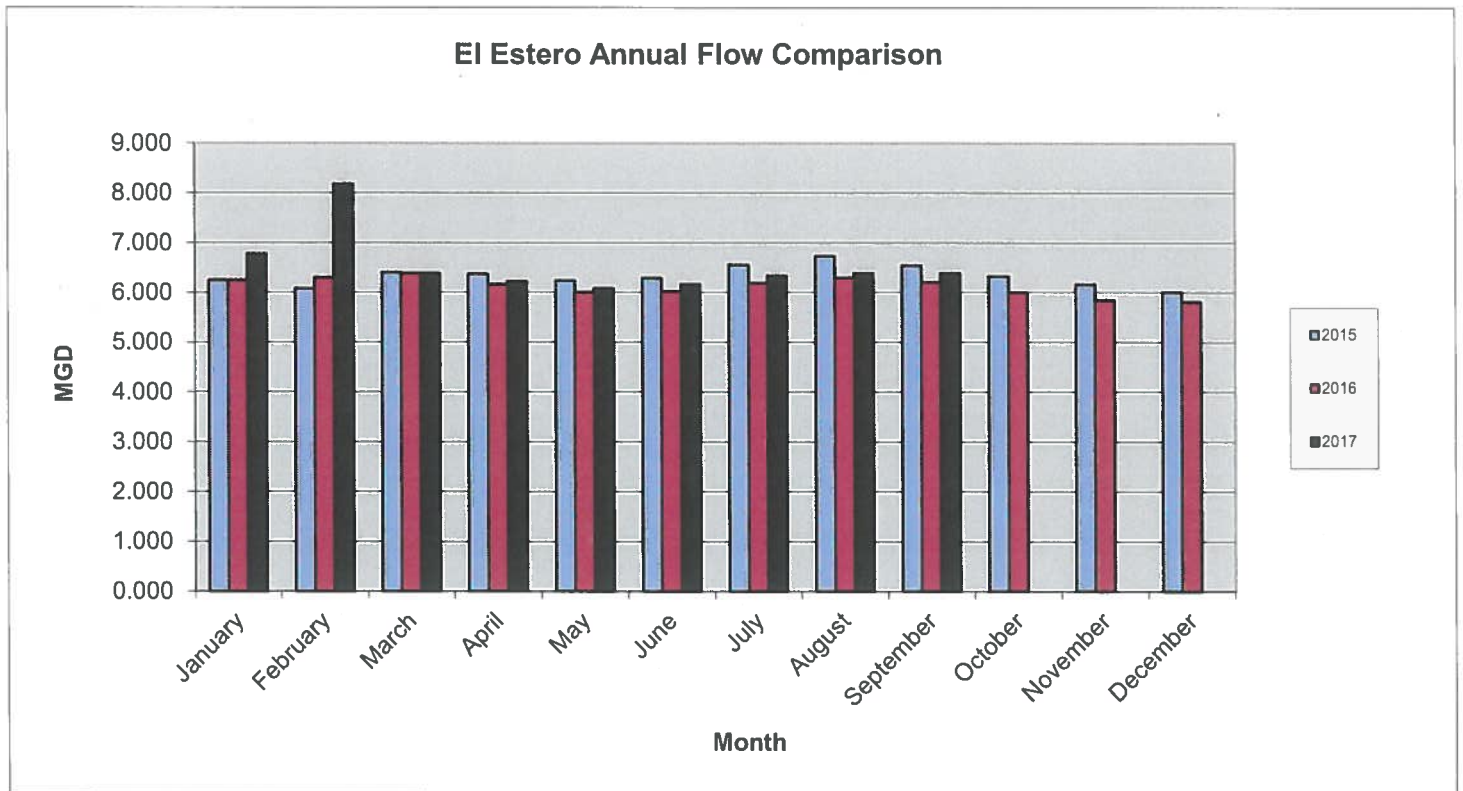
— #22A4 (Palm Avenue)

— #23E5 (El Estero WWTP)

— #16R1 (Spencer Adams Parking Lot)

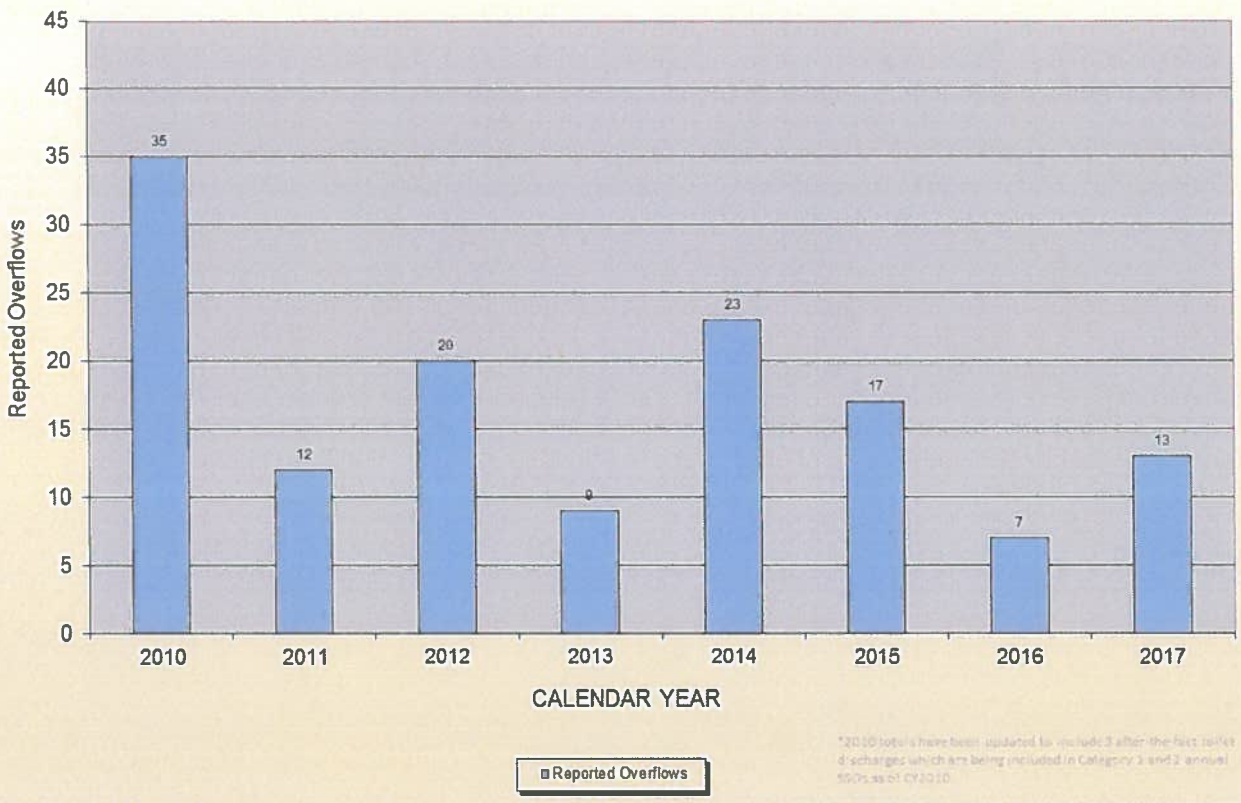
EL ESTERO INFLUENT FLOW COMPARISON

	2015	2016	2017
January	6.244	6.245	6.777
February	6.081	6.298	8.177
March	6.401	6.380	6.382
April	6.367	6.164	6.224
May	6.237	5.999	6.080
June	6.282	6.020	6.162
July	6.556	6.189	6.338
August	6.731	6.301	6.389
September	6.541	6.205	6.390
October	6.322	6.005	
November	6.162	5.843	
December	5.999	5.806	

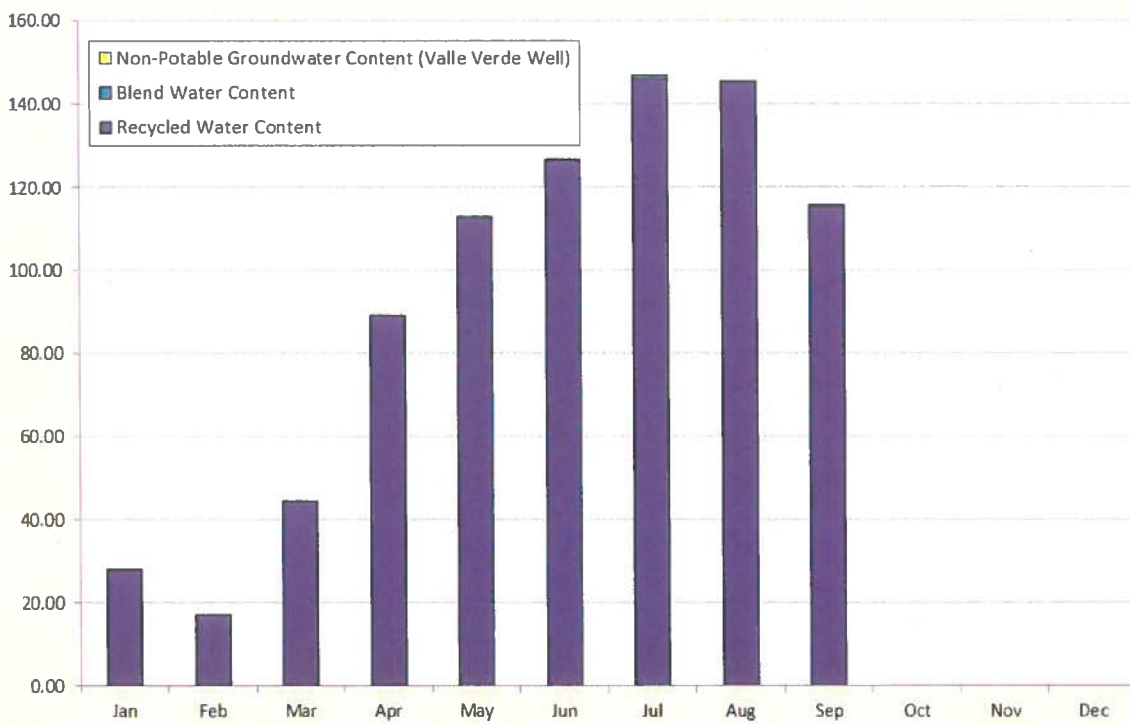


Annual Flow is Calculated Adjusted Influent Flow

CITY OF SANTA BARBARA
Graph of Annual SSO's (Category 1, 2, and 3) - Public Spills only
(as of 10/1/17)



Recycled Production by Source of Supply for 2017 (Acre-Feet)





City of Santa Barbara
Public Works Department

Interoffice Memorandum

DATE: October 12, 2017
TO: Joshua Haggmark, Water Resources Manager
FROM: Dakota Corey, Project Manager
SUBJECT: Warren Act Contract for USRYOA Pass Through Operations - Status

Following is the status of implementation of Pass Through Operations under the 1989 Upper Santa Ynez River Operations Agreement ("Pass Through Agreement"):

Reclamation's Environmental Assessment and Finding of No Significant Impact

City staff presented Reclamation with technical responses to their questions from the May 12th meeting with their Area Manager and staff, as well as a second set of responses to follow up questions from Reclamation staff. City staff is currently awaiting a response from the Area Manager regarding any remaining issues on Reclamation's EA and the proposed Warren Act Contract.

Warren Act Contract

In parallel with the above, negotiations continue on suitable language for the Warren Act contract. Staff is working to ensure that Reclamation's standard template is modified as necessary to reflect the unique provisions of the Pass Through Agreement. The effort has expanded to include consideration of Warren Act requirements associated with the conveyance of Gibraltar water through Cachuma Project facilities, specifically Lauro Reservoir.

cc: Kelley Dyer, Water Resources Supervisor

DC/