

MEMORANDUM

TO: CITY COUNCIL

FROM: GEOFF ENGLISH, DIRECTOR OF PUBLIC WORKS *GE*

BY: SHANE TAYLOR, PUBLIC WORKS SUPERVISOR – UTILITIES

SUBJECT: MONTHLY WATER SUPPLY AND DEMAND UPDATE

DATE: APRIL 28, 2015

RECOMMENDATION:

It is recommended the City Council receive and review the monthly Water Supply and Demand Update report.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

The cost to provide the monthly Water Supply and Demand Update report is approximately \$500 in Consultant services and approximately two staff hours.

BACKGROUND:

The continuing severe drought is impacting the City's water supply and demand. As a result, the City Council adopted an Ordinance on February 24th to establish emergency water restrictions and regulations to better manage the City's water supply. It was recommended during this discussion that the City Council receive monthly updates on the current supply and demand statistics. This information will provide the Council with the data required to make decisions relating to Emergency Water Shortage Restrictions and Regulations.

ANALYSIS OF ISSUES:

The severe drought continues and current rainfall is 44% less than normal. Lopez Lake is currently at 38% capacity, approximately 18,500 Acre Foot (AF). The Low Reservoir Level Response Plan (LRRP) has been enacted, although at this time, there are no reductions to municipal water deliveries. The LRRP, as adopted by Council, automatic water delivery reduction triggers at 15,000 AF and 10,000 AF. The LRRP also has an Adaptive Management mechanism to allow the San Luis Obispo County Flood Control and Water Conservation District Zone 3 Technical Advisory Committee (TAC) to recommend alterations to the automatic triggers based on atmospheric and storage projections.

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At the TAC meeting on April 2, 2015, the TAC representatives recommended that the deliveries from the Water Treatment Plant be reduced by 10% starting April 1, 2015. This is in advance of the Lake reaching 15,000 AF of storage, which is the automatic reduction trigger. This recommendation will be discussed at a special TAC meeting in the coming weeks. The potential for a 10% delivery supply reduction will be presented to the Council if formally recommended by the Zone 3 TAC.

For the water year 2014/15, which ended March 31, 2015, the City's water use was 13% below water year 2013/14, based on total production. Based on current use and weather patterns, the lake is predicted to reach the 15,000 AF storage level in October 2015 unless the current weather pattern changes. The projected Lopez supply for water year 2015/16 for Arroyo Grande is 2,942 AF, which includes 883 AF of carry-over water. Based on meeting the Governor's Executive Order, the water demand for 2015/16 will be 2,400 AF. We will be able to meet the anticipated 2,400 AF demand in water year 2015/16 with minimal groundwater pumping and without the imposition of emergency water use restrictions.

Current ground water levels are the same as March 2014 levels. Minimal pumping of the City's entitlement from the Santa Maria Groundwater Basin (SMGB) is anticipated in water year 2015/16.

As previously requested by Council, staff will provide a report on Tuesday, May 26, 2015 for consideration of implementation of Stage I Emergency Water restrictions as outlined in Section 13.05 of the Arroyo Grande Municipal Code as amended by Ordinance on February 24, 2015. Consideration of Stage I Emergency Water restrictions on May 26, 2015 will allow for staff to include information related to the final version of the State mandated water reduction requirements. The final regulations will be adopted by the Water Quality Control Board on May 5th or 6th, 2015.

ADVANTAGES:

No advantages noted at this time.

DISADVANTAGES:

No disadvantages noted at this time.

ALTERNATIVES:

The following alternatives are provided for the Council's consideration:

1. Receive and review the monthly Water Supply and Demand Update report; or
2. Provide staff other direction.

ENVIRONMENTAL REVIEW:

No environmental review is required for this item.

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PUBLIC NOTIFICATION AND COMMENTS:

The Agenda was posted in front of City Hall on Thursday, April 23, 2015. The Agenda and staff report were posted on the City's website on Friday, April 24, 2015.

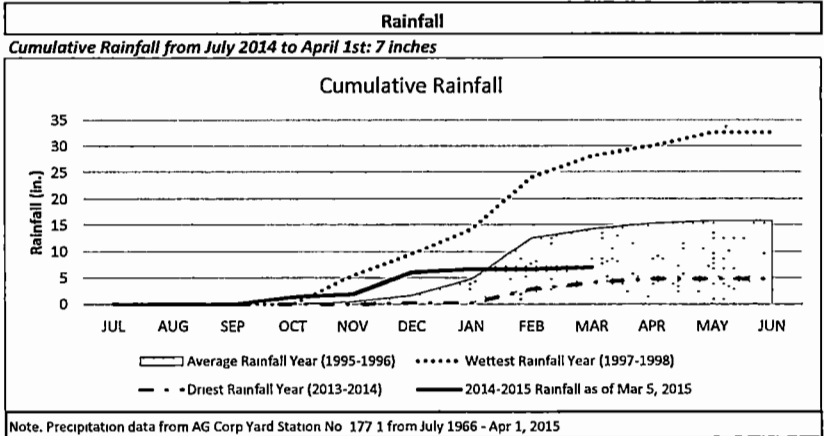
Attachments:

1. March 2015 Water Supply and Demand Charts
2. Lopez Reservoir Storage Projections

March 2015 Report-Revised 4-16-2015

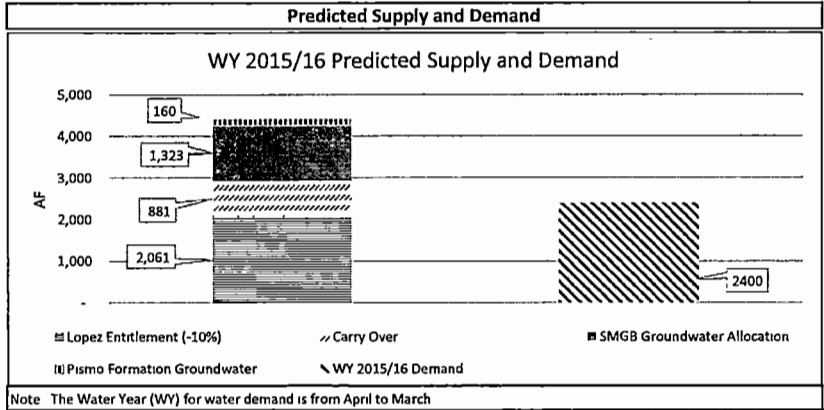
Lopez Water Deliveries														State Water Deliveries								Total Water Deliveries This Month					
Contractor	Ent	Surplus	Total	This Month				April to Present				Annual Request	This Month				January to Present										
				Usage	%	Usage	%	Usage	%	Usage	%		Usage	%	Usage	%	Usage	%	Usage	%	SWP Deliveries		Change in Storage				
Arroyo Grande	2290	1176.00	3466.00	0	0.0%	180.39	15.3%	2290.00	100.0%	294.85	25.1%	2584.85	74.6%													180.39	
OCS D	303	156.00	459.00	0.00	0.0%	0.00	0.0%	303.00	100.0%	23.54	15.1%	326.54	71.1%	750	50.34	6.7%					140.62	18.7%					50.34
Grover Beach	800	411.00	1211.00	40.07	5.0%	17.40	4.2%	800.00	100.0%	17.40	4.2%	817.40	67.5%													57.47	
Pismo Beach	892	458.20	1350.20	0.00	0.0%	0.00	0.0%	892.00	100.0%	458.20	100.0%	1350.20	100.0%	900	120.02	13.3%					267.4	29.7%				120.02	
CSA-12	245	125.80	370.80	11.72	4.8%	0.00	0.0%	131.19	53.5%	0.00	0.0%	131.19	35.4%	56.96	1.06	1.9%					3.13	5.5%				12.78	
San Miguelito														130	9.84	7.6%					24.09	18.5%				9.84	
Total	4530	2327	6957.00	51.79	1.1%	197.79	8.5%	4416.19	97.5%	793.99	34.1%	5210.18	76.0%	1836.96	181.26	9.9%	153	-28.26	435.24	23.7%	231.00	-204.2				430.84	
														Last Month Stored State Water		785.97		This Month Stored State Water		757.71							

City of Arroyo Grande Water Supply and Demand Update-March 2015



Water Demand

<u>Total City Demand (AF)</u>	
March 2014	197.2
March 2015	200.2
% Difference from 2014	2%
WY 2013/14 YTD	3,131.5
WY 2014/15 YTD	2,712.4
% Difference from WY 2013/14	-13%



Water Supply

Lopez Lake

	<u>March 2015</u>	<u>WY 14/15 Year to Date</u>	<u>Remaining Allocated Supply</u>
Lake Elevation (full at 522.37 ft)	479.21		
Storage (full at 49,200 AF)	18,563.3		
Storage - Percent Full	38%		
Status	Enacted		
Current Entitlement Reduction	0%		
Deliveries (AF)	180.4	2,584.85	881.15

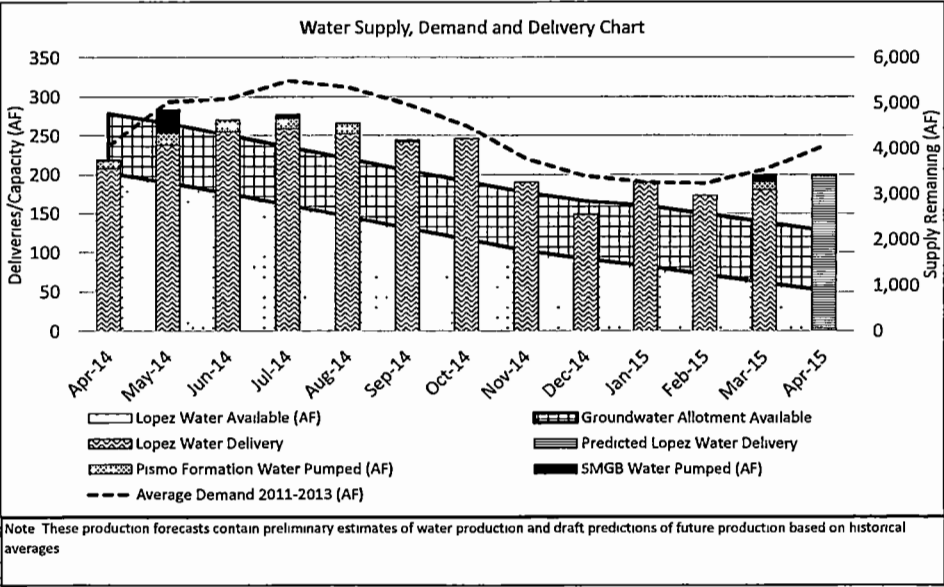
Note: The Water Year (WY) for Lopez Lake is from April to March. The actual amount of storage in Lopez at the end of March 2015 was 19,321 AF, however, the storage amount and storage percentage above were adjusted to account for the 757 71 AF of stored State Water Project water in the lake.

Groundwater

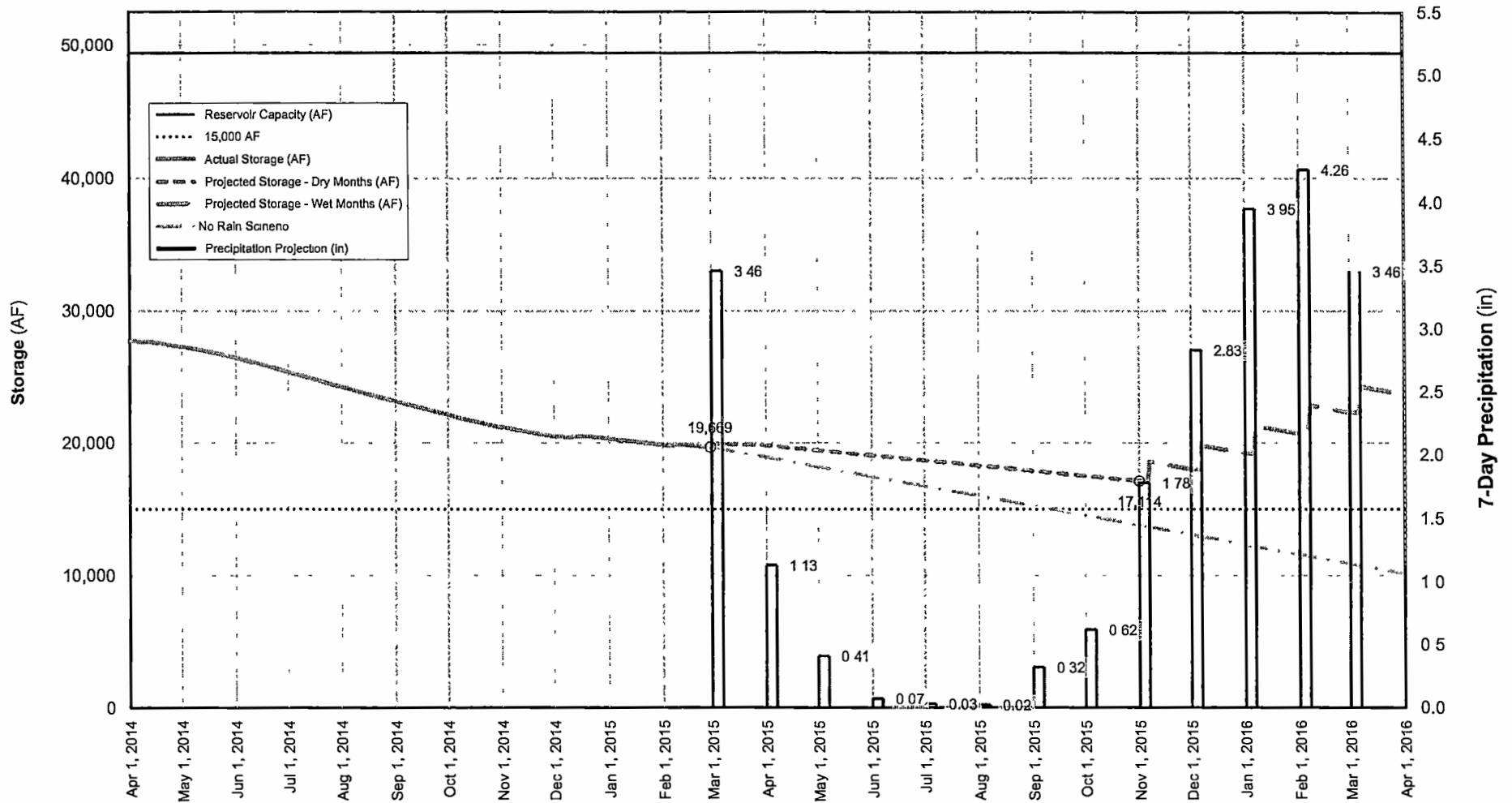
	<u>March 2015</u>	<u>Calendar Year to Date</u>	<u>Remaining Entitlement</u>
SMGB Production (AF)	9.7	9.7	1,313.3
Pismo Formation Production (AF)	10.0	10.0	NA

City SMGB average well levels for March 2015 were equal to March 2014

Note: Groundwater entitlement and production data is based on the calendar year



Lopez Reservoir Storage Projections - Revised: 2/28/2015
 (precipitation scenario source: www.LongRangeWeather.com)



Notes

- For "Dry Months", projected increases and/or decreases in storage estimated to mimic 2013 conditions.
- For "Wet Months", projected storage declines assume annual downstream release of 4,530 AFY and deliveries of 4,530 AFY.
- For "Wet Months", projected storage increases based on historic trends from actual storm data for the period of 12/1993 through 6/2011
- Storage projection for "Wet Months" assume that unsaturated conditions exist
- Monthly rainfall projections assumed to occur during the first week of each month through March 31, 2015.
- Assumed rainfall: 100% of average rainfall March 2015 - March 2015
- Average rainfall projection values provided by www.LongRangeWeather.com, and updated 12/3/2014.