

MEMORANDUM

TO: CITY COUNCIL

FROM: BILL ROBESON, PUBLIC WORKS DIRECTOR

BY: SHANE TAYLOR, UTILITIES MANAGER

SUBJECT: MONTHLY WATER SUPPLY AND DEMAND UPDATE

DATE: FEBRUARY 23, 2021

SUMMARY OF ACTION:

The update reports the water supply and demand for January 2021. Current Lopez Reservoir level and projected levels are provided in the attachments.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

Approximately two (2) hours of staff time is required to prepare the report.

RECOMMENDATION:

It is recommended the City Council receive and file the Monthly Water Supply and Demand Report.

BACKGROUND:

On April 25, 2017, the City Council, by Resolution, rescinded the Stage 1 Water Shortage Emergency along with related emergency water conservation measures and restrictions. During that public meeting, Council requested that staff continue preparing the monthly water supply and demand updates. Council urged citizens to continue to practice everyday water saving measures, and reiterated that the previously adopted water conservation measures were to remain in effect.

In January 2021, the City's water use was 165.1 acre-feet with a per capita use of 98 gallons per day/per person. There was a total of 5.75 inches of rainfall in January 2021. The water use for the current "rolling" water year from February 2020 to January 2021 was 2,347.9 acre-feet which equates to a per capita use of 119 gallons per day per person. There was a total of 15.57 inches of rain fall for this period.

ANALYSIS OF ISSUES:

The United States Drought Monitor, as of February 10, 2021, shows San Luis Obispo County as abnormally dry. Rainfall to date for the period July 1, 2020, through January 31, 2021, is 7.65 inches at the Corporation Yard rain gauge. Lopez Lake, as of February 10, 2021, is at 40.2% capacity (19,860 acre-feet of storage).

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The new water year began on April 1, 2020, and the City's current total available supply from Lopez is 2,290 acre-feet. In addition, the City has 1,323 acre-feet of ground water entitlement from the Santa Maria Basin, 200 acre-feet from the Pismo Formation, and an additional 111 acre-feet of surplus Lopez water. The projected water use for water year 2020/21 is 2,375 acre-feet based on current rainfall.

ADVANTAGES:

No advantages noted at this time.

DISADVANTAGES:

No disadvantages noted at this time.

ALTERNATIVES:

Not applicable at this time.

ENVIRONMENTAL REVIEW:

No environmental review is required for this item.

PUBLIC NOTIFICATION AND COMMENTS:

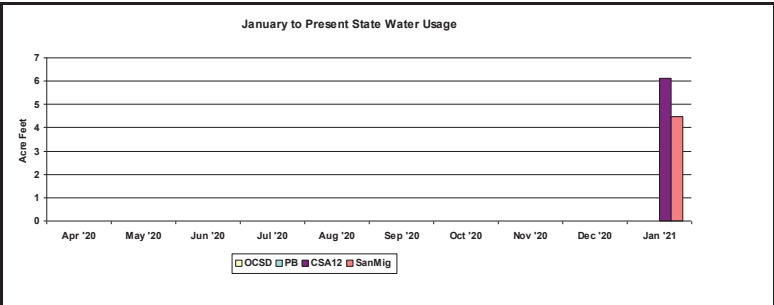
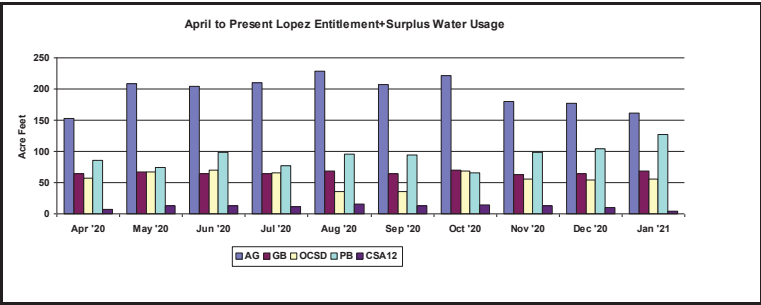
The Agenda was posted at City Hall and on the City's website in accordance with Government Code Section 54954.2.

Attachments:

1. Lopez Monthly Operations Report for January 2021
- 1.a. Lopez Monthly Operations Report for March 2020
2. Lopez Reservoir Storage Projection
3. Monthly Water Use Comparison
4. Monthly Monitoring Report for January 2021

San Luis Obispo County Flood Control and Water District
 Zone 3 - Lopez Project - Monthly Operations Report
 January, 2021

Contractor	Lopez Water Deliveries										State Water Deliveries							Total Water Deliveries This Month						
	Entl.	Surplus Water Declared	Surplus Requested	Total Available Water	This Month				April to Present						This Month				January to Present					
					Usage	%	Usage	%	Usage	%	Usage	%	Usage	%	Annual Request	Usage	% of Annual Request		SWP Deliveries	Change in Storage	Usage	% of Annual Request	SWP Deliveries	
Arroyo Grande	2290	911.00	111.00	2401.00	161.42	7.0%	0.00	0.0%	1952.13	85.2%	0.00	0.0%	1952.13	81.3%	74	63.41	1307.67	0	0.00	0.0%	0.00	0.0%	74.00	161.42
Oceano CSD	303	121.00	321.00	624.00	0.00	0.0%	55.48	17.3%	303.00	100.0%	263.68	82.1%	566.68	90.8%				0	0.00	0.0%	0.00	0.0%		55.48
Grover Beach	800	318.00	100.00	900.00	69.09	8.6%	0.00	0.0%	661.09	82.6%	0.00	0.0%	661.09	73.5%				25	0.00	0.0%	0.00	0.0%		69.09
Pismo Beach	892	355.00	655.00	1547.00	97.15	10.9%	29.28	4.5%	892.00	100.0%	29.28	4.5%	921.28	59.6%				96	6.13	6.4%	6.13	6.4%		126.43
CSA 12	245	98.00	0.00	245.00	4.22	1.7%	0.00	0.0%	113.43	46.3%	0.00	0.0%	113.43	46.3%				120	4.46	3.7%	4.46	3.7%		10.35
San Miguelito																							4.46	
Total	4530	1803.00	1187.00	5717.00	331.88	7.3%	84.76	7.1%	3921.65	86.6%	292.96	24.7%	4214.61	73.7%				241	10.59	4.4%	10.59	4.4%	74.00	427.23
															Last Month Stored State Water		1307.67		This Month Stored State Water			1371.08		



Note: Deliveries are in acre feet. One acre foot = 325, 850 gallons or 43, 560 cubic feet. Safe yield is 8,730 acre feet.

"Year to Date" is January to present for State water, April to present for Lopez deliveries, and July to present for rainfall.

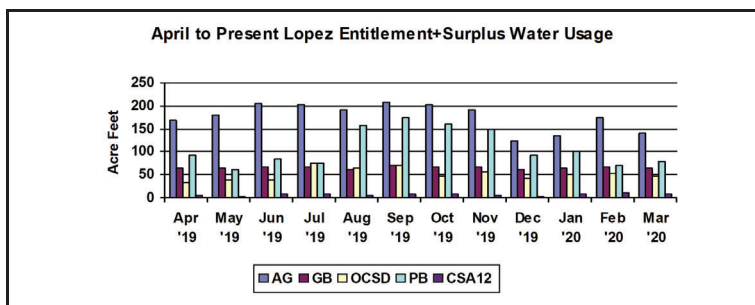
Lopez Dam Operations	This Month	Year to Date	Difference (feet)	% Full
Lake Elevation (full at 522.37 feet)	480.38		-41.99	
Storage (full at 49200 acre feet)	19874			40.4%
Rainfall	6.81	9.20		
Downstream Release (4200 acre feet/year)	306.58	2593.52		
Spillage (acre feet)	0	0.00		

Comments:

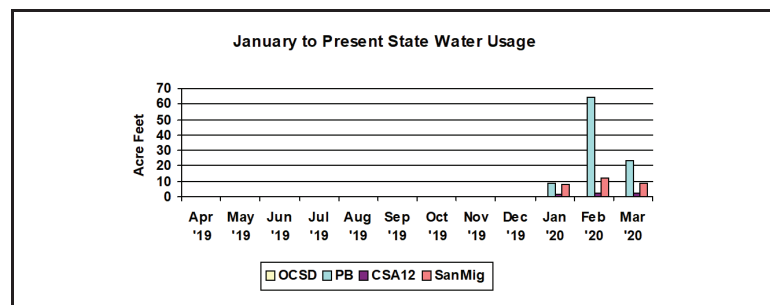
1) Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 1.86 AF delivered to Canyon Crest was added to Oceano's water usage this month and 1.86 AF was subtracted from Arroyo Grande's usage this month.

San Luis Obispo County Flood Control and Water District Zone 3 - Lopez Project - Monthly Operations Report March, 2020

Contractor	Lopez Water Deliveries										State Water Deliveries							Total Water Deliveries This Month								
	Entl.	Surplus Water Declared	Surplus Requested	Total Available Water	This Month				April to Present						This Month				January to Present							
					Usage	%	Usage	%	Usage	%	Usage	%	Usage	%	Annual Request	Usage	% of Annual Request		SWP Deliveries	Change in Storage	Usage	% of Annual Request	SWP Deliveries			
Arroyo Grande	2290	378.00	0.00	2290.00	139.74	6.1%	0.00	0.0%	2122.35	92.7%	0.00	0.0%	2122.35	92.7%											139.74	
Oceano CSD	303	50.00	321.35	624.35	0.00	0.0%	48.07	15.0%	303.00	100.0%	321.35	100.0%	624.35	100.0%	227	0.00	0.0%				0.00	0.0%				48.07
Grover Beach	800	132.00	20.00	820.00	64.00	8.0%	0.00	0.0%	787.22	98.4%	0.00	0.0%	787.22	96.0%											64	
Pismo Beach	892	147.00	405.65	1297.65	0.00	0.0%	78.65	19.4%	892.00	100.0%	405.65	100.0%	1297.65	100.0%	1120	23.84	2.1%				97.27	8.7%				102.49
CSA 12	245	40.00	0.00	245.00	7.19	2.9%	0.00	0.0%	86.34	35.2%	0.00	0.0%	86.34	35.2%	27	2.04	7.6%				5.92	21.9%				9.23
San Miguelito															127	9.26	7.3%				29.09	22.9%				9.26
Total	4530	747.00	747.00	5277.00	210.93	4.7%	126.72	17.0%	4190.91	92.5%	727.00	97.3%	4917.91	93.2%	1501	35.14	2.3%				132.28	8.8%			136.00	372.79
															Last Month Stored State Water						This Month Stored State Water			1459.97		



Note: Deliveries are in acre feet. One acre foot = 325, 850 gallons or 43, 560 cubic feet. Safe yield is 8,730 acre feet.



"Year to Date" is January to present for State water, April to present for Lopez deliveries, and July to present for rainfall.

Comments:

Available Surplus Water is shown and as designated per BOS May 14, 2019 Declaration of Surplus Water. Beginning with July 2019 report, Surplus Water Requested is amount purchased by each agency. Surplus Water used is based on Surplus Water Requested.

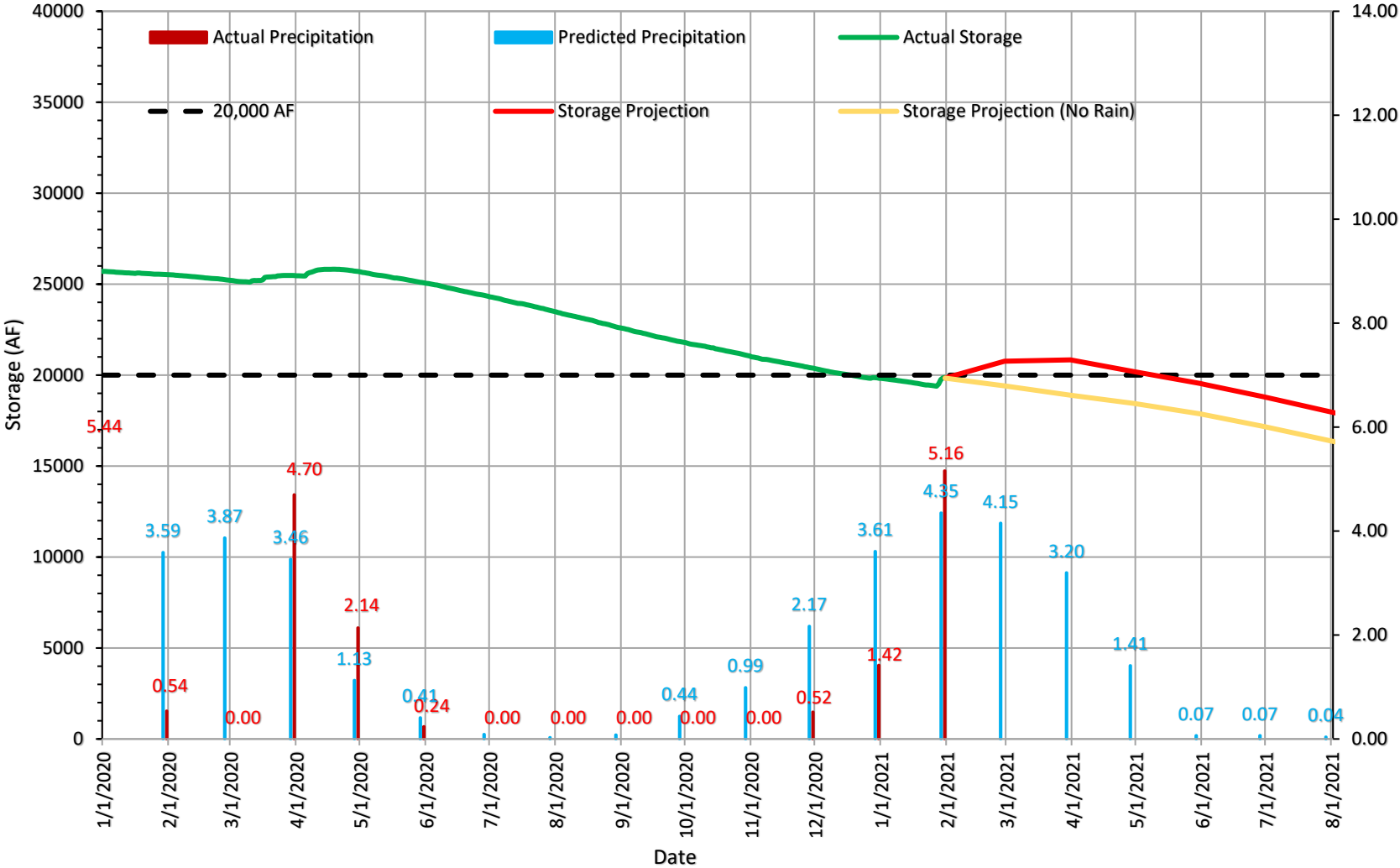
1) Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 1.5 AF delivered to Canyon Crest was added to Oceano's water usage this month and 1.5 AF was subtracted from Arroyo Grande's usage this month.

On 2/7/2020 Pismo requested the remaining 127 AF of surplus water (SurW) in addition up to 90 AF of Oceano's SurW if needed for March, 2020. In March, Pismo used 78.65 AF of Oceano's remaining SurW.

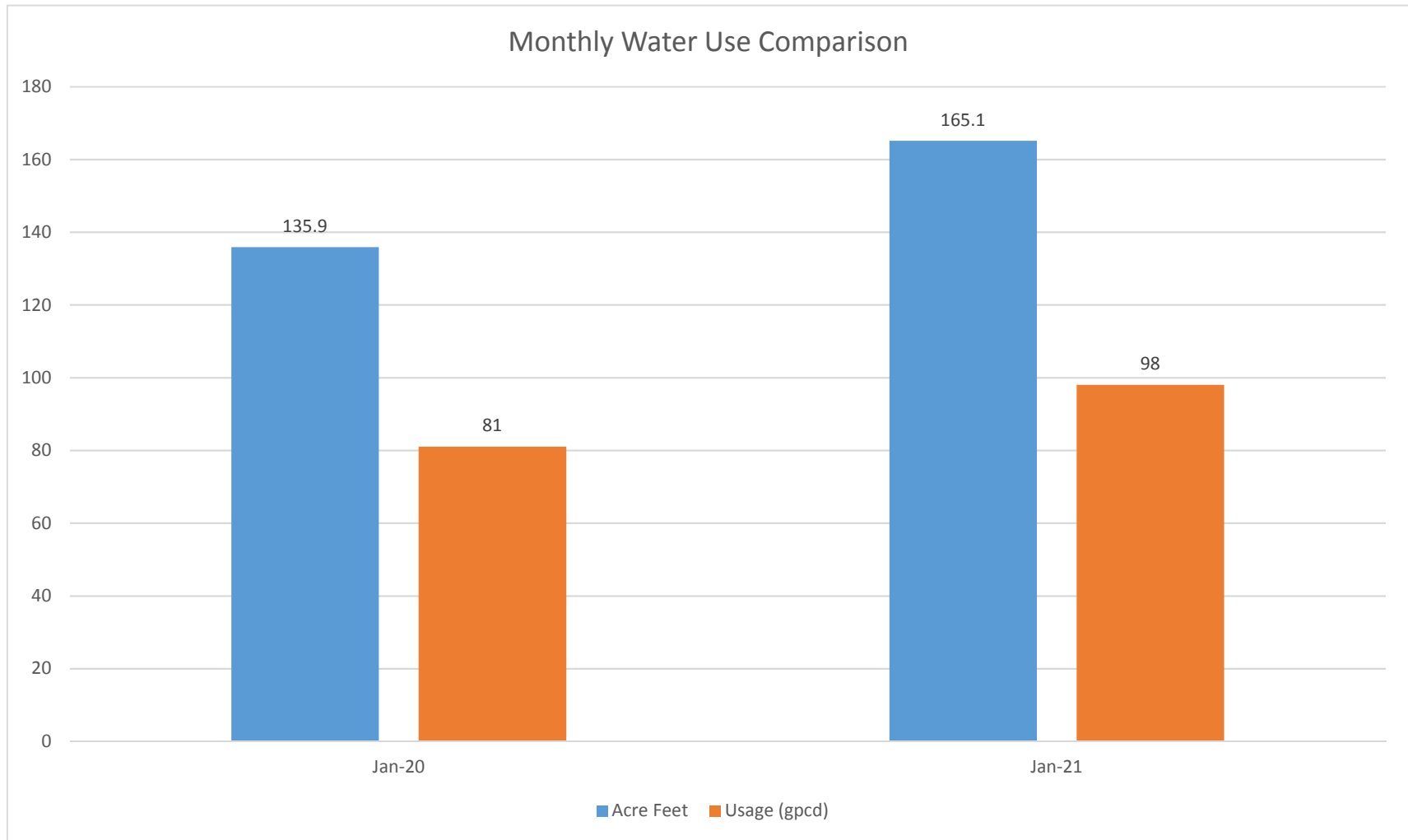
Pismo Surplus = 200 AF (original) + 127AF (Total remaining SurW) + 78.65 (Oceano's remaining SurW Requested) = 405.65 AF.

Lopez Dam Operations	This Month	Year to Date	Difference (feet)	
Lake Elevation (full at 522.37 feet)	490.87			-31.50
Storage (full at 49200 acre feet)	25472		% Full	51.8%
Rainfall	5.37	14.31		
Downstream Release (4200 acre feet/year)	207.46	2736.22		
Spillage (acre feet)	0	0.00		

LOPEZ RESERVOIR STORAGE PROJECTION



1. Storage projection is based on predicted rainfall from longrangeweather.com, inflow based on predicted rainfall, 20-21 downstream release requests, and municipal usage.
 2. Municipal Usage is based on Jan 2010- Dec 2019 average monthly deliveries.
 3. Predicted inflow is based off of historical precipitation and storage data. Antecedant moisture conditions are factored into the model. The first rainstorms after months without rain will cause less inflow than rainstorms during the rainy season. If the average daily rainfall for the previous three months is below 1 inch the model will multiply the predicted inflow by 0.1, if the average is above 1 inch the inflow is multiplied by 1.25.



Thank you for your Monitoring Report. Below is the information you have submitted for the month of January 2021. If this information is incorrect, you can edit the report or re-submit your report for the month with the corrected information. We use your most recently submitted monthly report in our calculations.

Reporter	Shane Taylor
Urban Water Supplier (Number)	Arroyo Grande City of (608)
Public Water System ID(s)	CA4010001
Reporting Month	01/21
County / Counties	San Luis Obispo
Water Shortage Contingency Plan	0
Water Shortage Level	No
Population	17636
Total Potable Water Production	165.1 AF
Commercial Agricultural Water	0 AF
Residential Use Percentage	80%
CII Water	18.2 AF
Recycled Water	0 AF
Non-revenue Water	AF
Estimated R-GPCD	78.72
Qualification	

State Water Resources Control Board Office of Research, Planning & Performance