



## MEMORANDUM

**TO:** City Council

**FROM:** Bill Robeson, Assistant City Manager/Public Works Director

**BY:** Shane Taylor, Utilities Manager

**SUBJECT:** Calendar Year 2021 Water Supply and Demand Update

**DATE:** January 25, 2022

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### **SUMMARY OF ACTION:**

The update reports the City's total water supply and demand for Calendar Year 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:**

Receive and file the Calendar Year 2021 Water Supply and Demand Report.

### **BACKGROUND:**

On October 21, 2021, the City Council adopted a Resolution declaring a Stage 1 Water Shortage Emergency, and implementing emergency water conservation measures and restrictions as a result of the extreme drought conditions.

In 2021, the City's water use was 2,310.5 acre-feet with a per capita use of 117 gallons per day/per person. There was a total of 14.4 inches of rainfall in the City in 2021.

### **ANALYSIS OF ISSUES:**

The United States Drought Monitor, as of January 12, 2021, shows San Luis Obispo County in a moderate drought. Rainfall to date for the period July 1, 2021, through December 31, 2021, is 7.23 inches at the Corporation Yard rain gauge. Lopez Lake, as of January 12, 2022, is at 30.2% capacity (14,939 acre-feet of storage).

The new water year began on April 1, 2021, and the City's annual Lopez contract supply was 2,290 acre-feet. On August 24, 2021, the San Luis Obispo County Board of Supervisors (Board) enacted the Low Reservoir Response Plan (LRRP) for Lopez Lake. On September 8, 2021, the Zone III Technical Advisory Committee endorsed the action

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of reducing contract deliveries by 10%. The City began reducing the flow of Lopez Lake deliveries on September 15, 2021, to 1.9 million gallons per day, compared to the normal flow of 2.2 million gallons per day. Currently, the deliveries from the Water Treatment Plant are at 1.5 million gallons per day. In addition, the City has 1,323 acre-feet of ground water entitlement from the Santa Maria Basin, and wells within the Pismo Formation that produce approximately 160 acre-feet per year. The first quarter monitoring for the Santa Maria Basin sentry wells was completed on January 4, 2022. The deep well index was 9.36 feet above sea level, which is 1.86 feet higher than the deep well index threshold value of 7.5 feet and 0.08 feet higher than the index value one year ago. The recent rainfall in December did raise Lopez Lake from 28% to 30% full, however the LRRP remains in effect, along with Stage 1 water shortage emergency mandatory reductions. The projected water use for the City of Arroyo Grande for water year 2021/22 is 2,450 acre-feet based on current rainfall.

**ALTERNATIVES:**

Not applicable at this time.

**ADVANTAGES:**

This report provides the City Council and the public with the current and projected conditions of our water supply and demand.

**DISADVANTAGES:**

No disadvantages noted at this time.

**ENVIRONMENTAL REVIEW:**

No environmental review is required for this item.

**PUBLIC NOTIFICATION AND COMMENTS:**

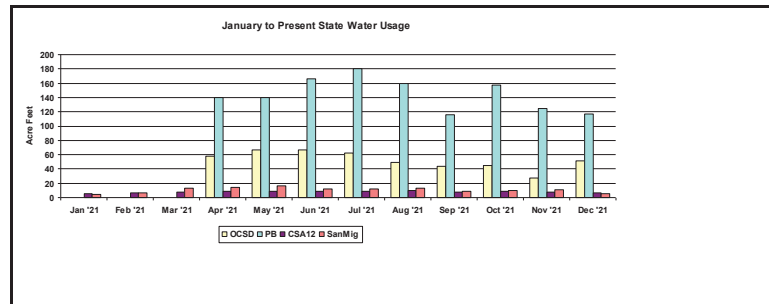
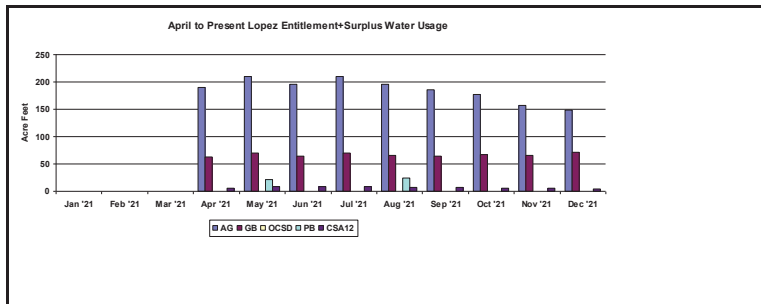
The Agenda was posted at City Hall and on the City's website in accordance with Government Code Section 54954.2.

**Attachments:**

1. Lopez Monthly Operations Report for December 2021
2. Lopez Reservoir Storage Projection
3. Yearly Water Use Comparison

San Luis Obispo County Flood Control and Water District  
 Zone 3 - Lopez Project - Monthly Operations Report  
 December, 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									
					Entitlement		Surplus		Entitlement		Surplus		Total		Annual Request	Usage	% of Annual Request	SWP Deliveries	Change in Storage	Usage		% of Annual Request	SWP Deliveries			
					Usage	%	Usage	%	Usage	%	Usage	%														
Arroyo Grande	2061	807.00	807.00	2868	148.51	7.2%	0.00	0.0%	1670.81	81.1%	0.00	0.0%	1670.81	58.3%	640	51.59	8.1%	469.90	73.4%	148.51						
Oceano CSD	272.7	107.00	107.00	380	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%	0.00	0.0%												
Grover Beach	720	282.00	282.00	1002	71.02	9.9%	0.00	0.0%	599.04	83.2%	0.00	0.0%	599.04	59.8%												
Pismo Beach	802.8	314.00	314.00	1117	0.00	0.0%	0.00	0.0%	46.13	5.7%	0.00	0.0%	46.13	4.1%							1260	117.05	9.3%	1301.78	103.3%	117.05
CSA 12	220.5	86.00	86.00	307	3.98	1.8%	0.00	0.0%	59.91	27.2%	0.00	0.0%	59.91	19.5%							96	6.61	6.9%	93.44	97.3%	10.59
San Miguelito															120	5.14	4.3%	127.21	106.0%	5.14						
<b>Total</b>	<b>4077</b>	<b>1596.00</b>	<b>1596.00</b>	<b>5673</b>	<b>223.51</b>	<b>5.5%</b>	<b>0.00</b>	<b>0.0%</b>	<b>2375.89</b>	<b>58.3%</b>	<b>0.00</b>	<b>0.0%</b>	<b>2375.89</b>	<b>41.9%</b>	<b>2116</b>	<b>180.39</b>	<b>8.5%</b>	<b>157</b>	<b>-23.39</b>	<b>1992.33</b>	<b>94.2%</b>	<b>1713.00</b>	<b>403.90</b>			
													Last Month Stored State Water		<b>1010.22</b>			This Month Stored State Water		<b>986.83</b>						



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

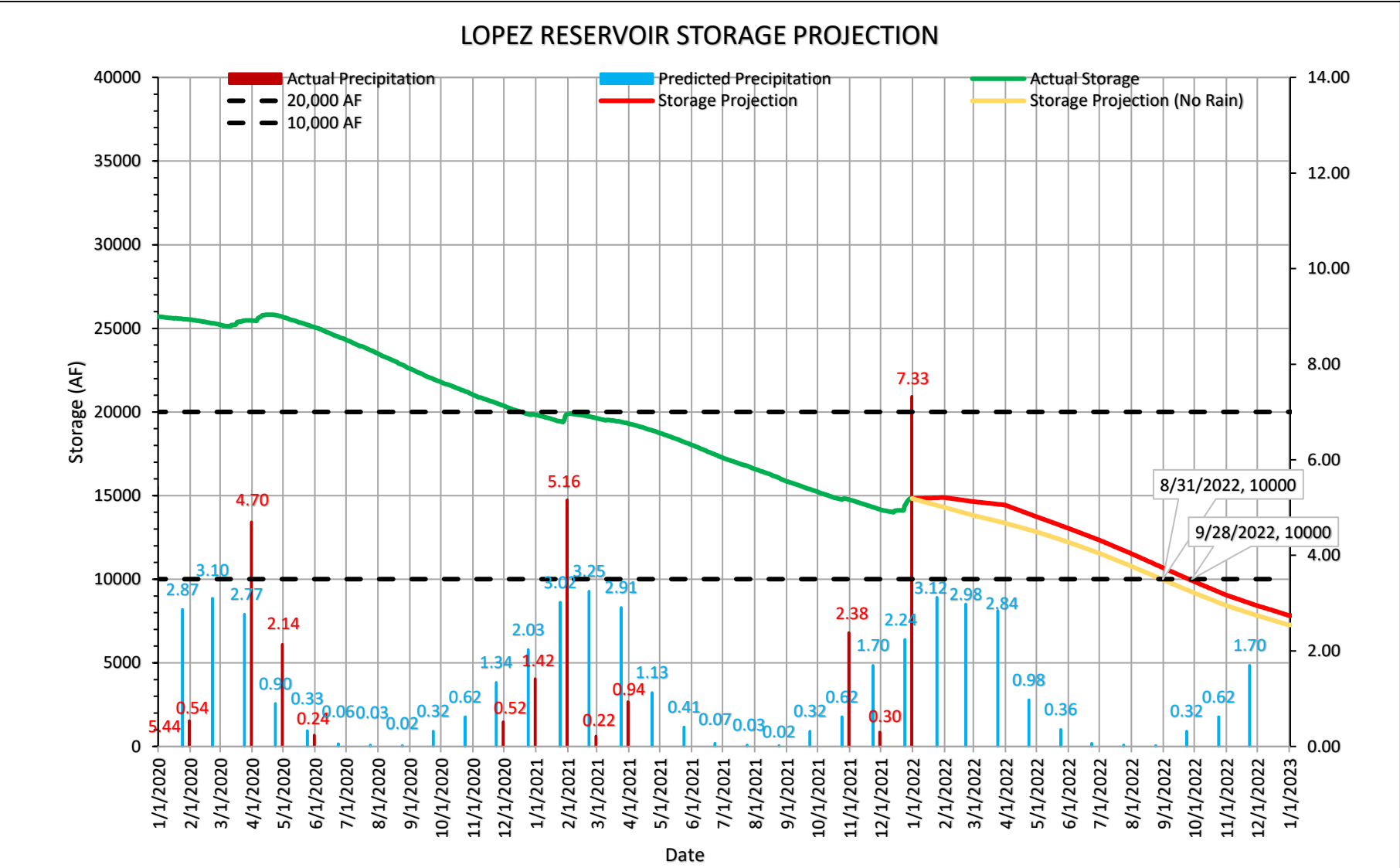
Lopez Dam Operations	This Month	Year to Date	Difference (feet)	% Full
Lake Elevation (full at 522.37 feet)	468.71		-53.66	
Storage (full at 49200 acre feet)	14905			30.3%
Rainfall	8.02	11.01		
Downstream Release (4200 acre feet/year)	284.79	2517.78		
Spillage (acre feet)	0	0.00		

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

Comments:

- 1) Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 1.33 AF delivered to Canyon Crest was added to Oceano's water usage this month and 1.33 AF was subtracted from Arroyo Grande's usage this month.
- 2) On May 12, 2021 Pismo requested to take all SW for April 2021. On May 18th, PB's SW Delivery Request was changed to 1260 AF.
- 3) Lopez Water Deliveries are now operated under the Low Reservoir Response Plan (LRRP). In August 2021 TAC requested a 10% entitlement reduction (retroactive to April 2021) in anticipation of reaching the 15,000 AF trigger of the LRRP. Entitlements shown represent a 10% reduction.

Surplus water shown is actually "Carry Over" water as designated in the LRRP.



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 2020 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.

