

## MEMORANDUM

**TO:** City Council

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

**BY:** Shane Taylor, Utilities Manager

**SUBJECT:** Monthly Water Supply and Demand Update

**DATE:** November 23, 2021

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### **SUMMARY OF ACTION:**

Receive a report of the City's water supply and demand for October 2021, including current and projected Lopez Lake levels.

### **IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:**

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

### **RECOMMENDATION:**

Receive and file the Monthly Water Supply and Demand Report.

### **BACKGROUND:**

On April 25, 2017, the City Council, by Resolution, rescinded the previous Stage 1 Water Shortage Emergency along with related emergency water conservation measures and restrictions.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 response to Council discussion on April 27, 2021, staff has begun to provide notice to customers in non-compliance of the mandatory water conservation measures by hanging door tags. In addition, four social media posts have been posted to the City's social media channels reminding customers of the measures, information is highlighted on the City's website, and message boards displaying conservation messaging have been placed at various locations around the City. The City's drought response team has continued to

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enhance public awareness of the drought and has been preparing for upcoming water shortage measures.

On October 12, 2021, the City Council adopted a Resolution declaring a Stage 1 Water Shortage Emergency, and implementing reductions in water usage as provided in Arroyo Grande Municipal Code Section 13.07.030(A).

In October the City's water use was 194.7 acre-feet with a per capita use of 116 gallons per day/per person. There was 1.6 inches of rain in October 2021. The water use for the current "rolling" water year from November 2020 to October 2021 was 2,347.7 acre-feet which equates to a per capita use of 119 gallons per day per person. There was a total of 10.71 inches of rain fall for this period.

**ANALYSIS OF ISSUES:**

The United States Drought Monitor, as of November 9, 2021, shows San Luis Obispo County in an extreme drought. Rainfall to date for the period July 1, 2021 through November 9, 2021 is 1.75 inches at the Corporation Yard rain gauge. Lopez Lake, as of November 9, 2021 is at 29.6% capacity (14,637 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 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. 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 fourth quarter monitoring for the Santa Maria Basin sentry wells was completed in October. The deep well index was 6.64 feet above sea level, which is 0.86 feet lower than the deep well index threshold value of 7.5 feet and 0.43 feet lower than the index value one year ago (7.07 feet). This is the second consecutive quarter the index is below the 7.5-foot threshold. If the deep well index value is below 7.5 feet for six (6) continuous quarters, this is also a Stage 1 triggering condition. 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:**

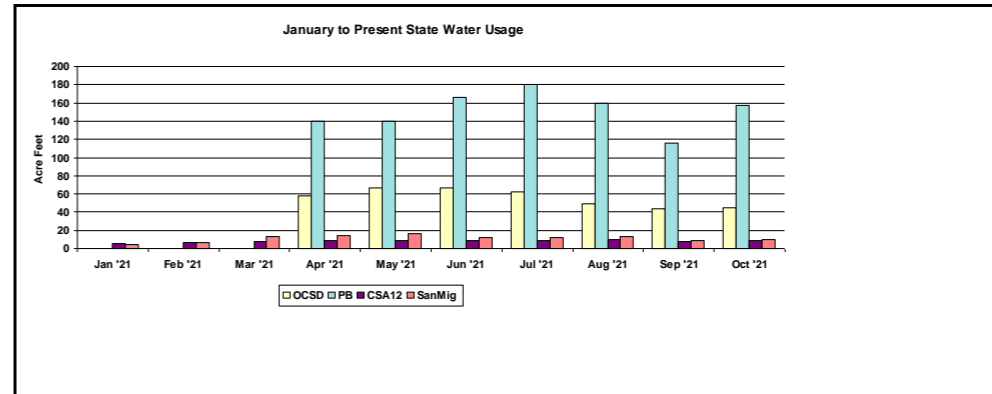
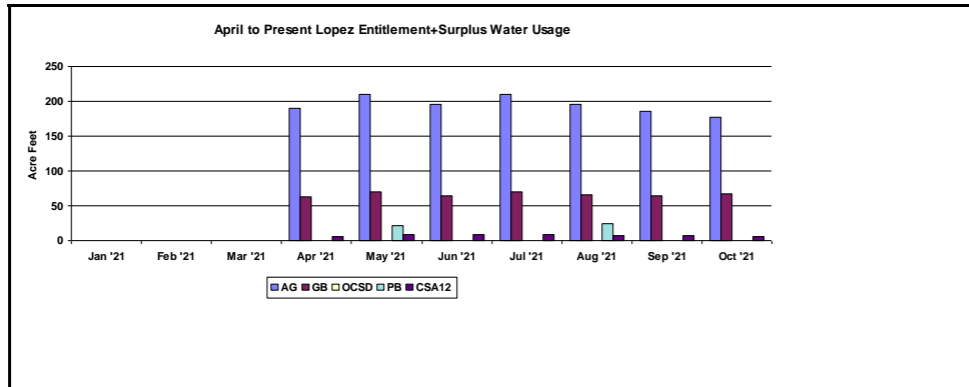
The Agenda was posted at City Hall and on the City's website in accordance with Government Code Section 54954.2.

Attachments:

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

San Luis Obispo County Flood Control and Water District  
 Zone 3 - Lopez Project - Monthly Operations Report  
 October, 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						Annual Request	This Month				January to Present					
					Entitlement		Surplus		Entitlement		Surplus		Total			Usage		% of Annual Request	SWP Deliveries	Change in Storage	Usage	% of Annual Request	SWP Deliveries		
					Usage	%	Usage	%	Usage	%	Usage	%	Usage	%											
Arroyo Grande	2061	807.00	807.00	2868	177.57	8.6%	0.00	0.0%	1364.55	66.2%	0.00	0.0%	1364.55	47.6%										177.57	
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%	640	44.31	6.9%					390.98	61.1%		44.31
Grover Beach	720	282.00	282.00	1002	66.84	9.3%	0.00	0.0%	462.97	64.3%	0.00	0.0%	462.97	46.2%										66.84	
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	157.61	12.5%					1059.63	84.1%		157.61
CSA 12	220.5	86.00	86.00	307	5.85	2.7%	0.00	0.0%	50.53	22.9%	0.00	0.0%	50.53	16.5%	96	8.50	8.9%					79.33	82.6%		14.35
San Miguelito															120	10.19	8.5%					111.25	92.7%		10.19
<b>Total</b>	<b>4077</b>	<b>1596.00</b>	<b>1596.00</b>	<b>5673</b>	<b>250.26</b>	<b>6.1%</b>	<b>0.00</b>	<b>0.0%</b>	<b>1924.18</b>	<b>47.2%</b>	<b>0.00</b>	<b>0.0%</b>	<b>1924.18</b>	<b>33.9%</b>	<b>2116</b>	<b>220.61</b>	<b>10.4%</b>	<b>220</b>	<b>-0.61</b>			<b>1641.19</b>	<b>77.6%</b>	<b>1555.00</b>	<b>470.87</b>
													Last Month Stored State Water		<b>1180.5800</b>					This Month Stored State Water		<b>1179.97</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.

"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		
Lake Elevation (full at 522.37 feet)	468.29		Difference (feet)	-54.08
Storage (full at 49200 acre feet)	14744		% Full	30.0%
Rainfall	2.66	2.70		
Downstream Release (4200 acre feet/year)	317.32	1960.47		
Spillage (acre feet)	0	0.00		

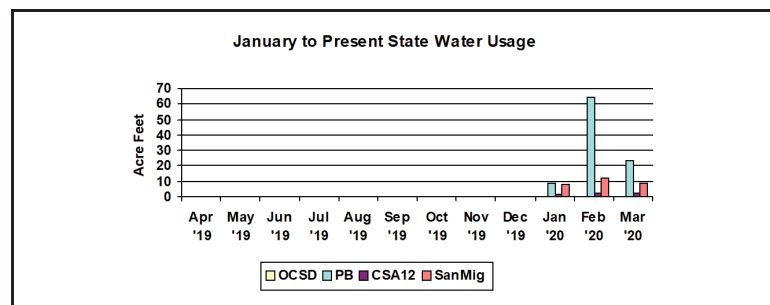
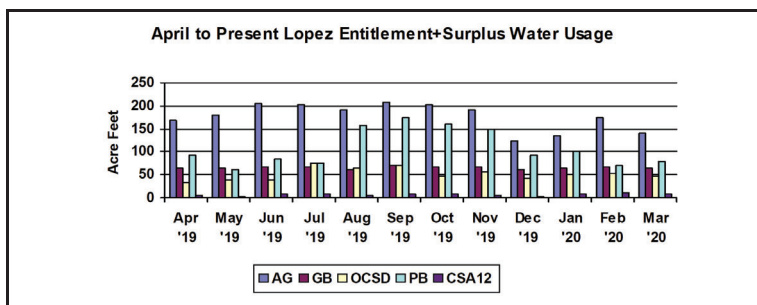
**Comments:**

- 1) Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 2.09 AF delivered to Canyon Crest was added to Oceano's water usage this month and 2.09 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.

### 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	%	Usage	%	Annual Request		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
<b>Total</b>	<b>4530</b>	<b>747.00</b>	<b>747.00</b>	<b>5277.00</b>	<b>210.93</b>	<b>4.7%</b>	<b>126.72</b>	<b>17.0%</b>	<b>4190.91</b>	<b>92.5%</b>	<b>727.00</b>	<b>97.3%</b>	<b>4917.91</b>	<b>93.2%</b>	<b>1501</b>	<b>35.14</b>	<b>2.3%</b>				<b>132.28</b>	<b>8.8%</b>			<b>136.00</b>	<b>372.79</b>
															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.

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

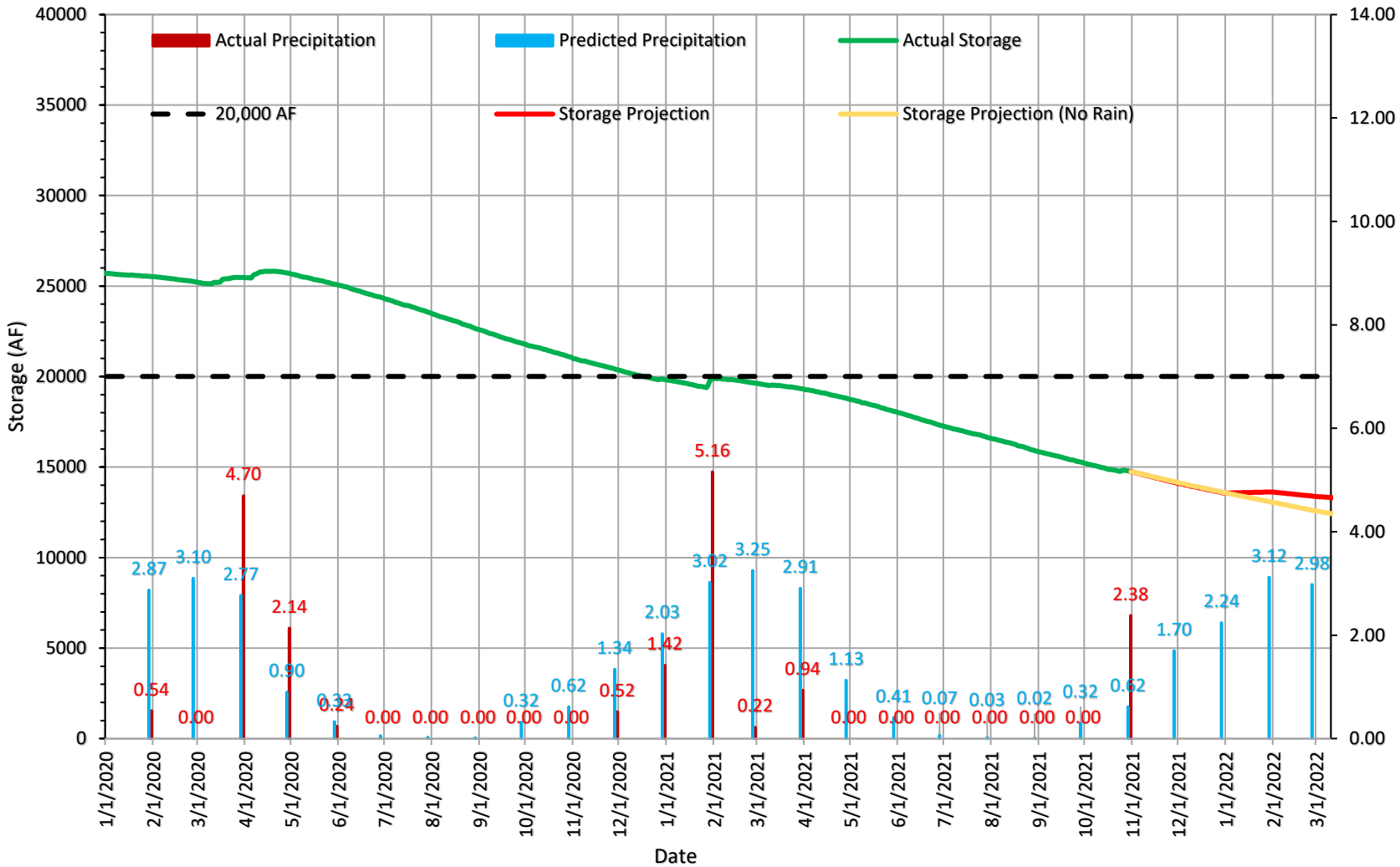
**Comments:**

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.

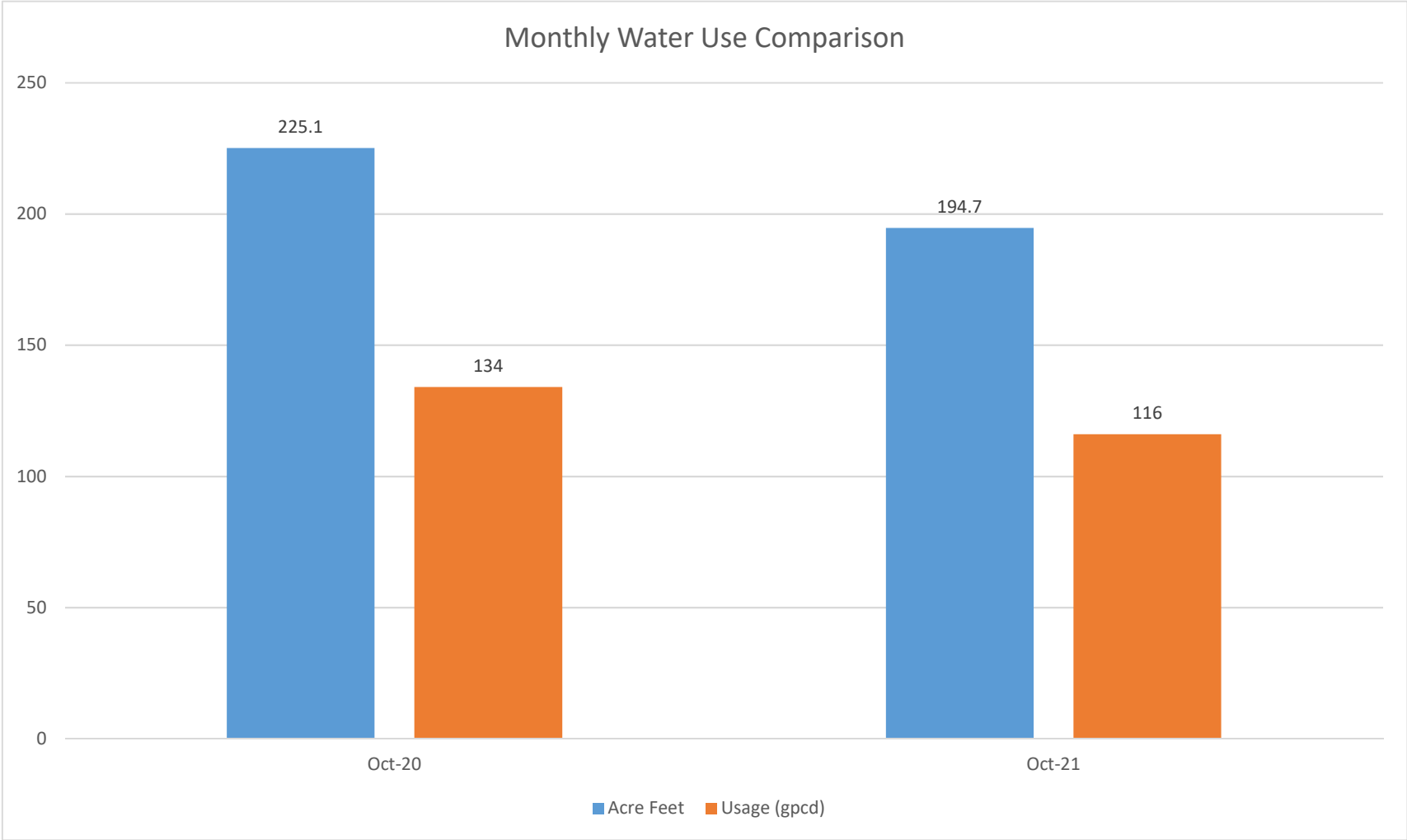
1) Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 1.5 AF delivered to Canyon Crest was added to Oceano's water usage this month and 1.5 AF was subtracted from Arroyo Grande's usage this month.

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 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 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.



## ATTACHMENT 4

Below is the information you have submitted for the month of October 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	10/21
County / Counties	San Luis Obispo
County Under Drought Declaration	Yes
Water Shortage Contingency Plan	1
Water Shortage Level	Yes
Population	17636
Total Potable Water Production	194.7 AF
Commercial Agricultural Water	0 AF
Residential Use Percentage	80%
CII Water	21.5 AF
Recycled Water	0 AF
Non-revenue Water	AF
Estimated R-GPCD	92.84
Qualification	
Emergency Response Section Revealed?	Yes

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