MEMORANDUM

TO: CITY COUNCIL
FROM: GEOFF ENGLISH, DIRECTOR OF PUBLIC WORKS
BY: SHANE TAYLOR, UTILITIES MANAGER
SUBJECT: MONTHLY WATER SUPPLY AND DEMAND UPDATE
DATE: NOVEMBER 22, 2016

RECOMMENDATION:
It is recommended the City Council receive and review the monthly Water Supply and Demand Report.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:
The cost to provide the report is limited to staff time, which equates to approximately $350.

BACKGROUND:
The severe drought continues to impact the City’s water supply and demand. As a result, the City Council declared a Stage 1 Water Shortage Emergency on May 26, 2015. This monthly update on the current supply and demand statistics will provide the Council with the data required to make decisions related to Emergency Water Shortage Restrictions and Regulations.

ANALYSIS OF ISSUES:
The exceptional drought continues. We have received 2.3” of rain since July 1, 2016 at the Corporation Yard gauge. Lopez Lake is currently at 23% capacity (11,410 AF of storage). The Low Reservoir Level Response Plan (LRRP) has been enacted.

At the Zone 3 Advisory Board meeting on May 21, 2015, the Board recommended that the deliveries from the Water Treatment Plant be reduced by 10% starting April 1, 2015. This was in advance of the Lake reaching 15,000 AF of storage, which is the automatic reduction trigger. We are voluntarily reducing deliveries by 20% to keep lake supply above the 10,000 AF level, which mandates an automatic 20% reduction retroactive back to April 1, 2016.
In October the City’s water use was 34% below October 2013. The reduction requirement imposed by the State Water Resources Control Board for Arroyo Grande is 28%.

Based on current use and weather patterns, Lopez Lake is predicted to reach the 10,000 AF storage level around February 1, 2017. The Lopez supply for water year 2016/17, which began April 1, 2016, for Arroyo Grande is 2,998 AF, which includes 936 AF of carry-over water. Based on the projected water demand of 2,300 AF, we will meet the demand in water year 2016/17.

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. October 2016 Water Supply and Demand Charts
2. Lopez Reservoir Storage Projections
City of Arroyo Grande Water Supply and Demand Update-October 2016

Cumulative Rainfall from July 1, 2016 to October 31, 2016: 2.3 inches

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### Water Demand

**Total City Demand (AF)**
- October 2013: 276.6
- October 2016: 182.9

**% Difference from 2013**
- WY 2013/14 YTD: 1,808.7
- WY 2015/16 YTD: 1,275.2

**% Difference from WY 2013/14**
- -24%

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### Predicted Supply and Demand

**WY 2016/17 Predicted Supply and Demand**

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### Water Supply

**Lopez Lake**

- Lake Elevation (full at 522.37 ft)
- Storage (full at 49,200 AF)
- Storage - Percent Full: 22%
- Status: Enacted
- Current Entitlement Reduction: 20%

- Deliveries (AF): 164.79
- WY 15/16 Year to Date: 1,045.73
- Remaining Allocated Supply: 1,722.87

**Note:** The Water Year (WY) for Lopez Lake is from April to March. The actual amount of storage in Lopez at the end of October 2016 was 11,410 AF, however, the storage amount and storage percentage above were adjusted to account for the 346.27 AF of stored State Water Project water in the lake.

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**Groundwater**

- SMGB Production (AF): 12.7
- Pismo Formation Production (AF): 5.4

**Groundwater Allotment Available**

City SMGB average well levels for October 2016 were half a foot lower than October 2015.

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### Water Supply, Demand and Delivery Chart

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**Note:** These production forecasts contain preliminary estimates of water production and draft predictions of future production based on historical averages.
**Lopez Reservoir Storage Projections**

(precipitation scenario source: www.LongRangeWeather.com)

**Revised: 9/30/2016**

**Notes:**
- For "Dry Months" (April - October), projected increases and/or decreases in storage estimated to mimic conditions from 2015.
- For "Wet Months" (November - March), projected storage declines assume LRRP annual downstream release of 3,800 AFY and deliveries of 4,077 AFY.
- Storage projection for "Wet Months" assume that unsaturated conditions exist.
San Luis Obispo County Flood Control and Water District
Zone 3 - Lopez Project - Monthly Operations Report
October, 2016

Lopez Water Deliveries

<table>
<thead>
<tr>
<th>Contractor</th>
<th>Entitlement</th>
<th>Surplus</th>
<th>Total</th>
<th>April to Present</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>Entitlement</td>
<td>Usage %</td>
<td>Usage</td>
<td>Surplus</td>
<td>Usage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
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<tr>
<td>Arroyo Grande</td>
<td>2061</td>
<td>164.79</td>
<td>8.0%</td>
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<tr>
<td>Oceano CSD</td>
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</tr>
<tr>
<td>Grover Beach</td>
<td>720</td>
<td>64.34</td>
<td>8.9%</td>
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<tr>
<td>Pismo Beach</td>
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<tr>
<td>CSA 12</td>
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<td>7.68</td>
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<tr>
<td>San Miguelito</td>
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</tr>
<tr>
<td>Total</td>
<td>4077</td>
<td>258.92</td>
<td>6.4%</td>
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State Water Deliveries

<table>
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<tr>
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<th>This Month</th>
<th>April to Present</th>
<th>January to Present</th>
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<tbody>
<tr>
<td></td>
<td>Entitlement</td>
<td>Usage %</td>
<td>SWP Deliveries</td>
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<td></td>
<td>Request</td>
<td>%</td>
<td>Change</td>
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<td>in Storage</td>
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<tr>
<td></td>
<td>Entitlement</td>
<td>Usage</td>
<td>SWP Deliveries</td>
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<td></td>
<td>Request</td>
<td>%</td>
<td>Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>in Storage</td>
</tr>
</tbody>
</table>

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.

Reservoir is currently operated under the Low Reservoir Response Plan, therefore Entitlements shown represent a 10% reduction.

Surplus water shown is actually “Carry Over” water as designated in the LRRP and updated per BOS May 10, 2016 Declaration of Surplus.

1) Oceano supplied State Water to Canyon Crest via Arroyo Grande’s Edna turn out. A total of 2.03 AF delivered to Canyon Crest was added to Oceano's State Water usage this month.

Friday, November 04, 2016 Data entered by: D. Spiegel 
Report printed by: Admin 
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