MEMORANDUM

TO: CITY COUNCIL
FROM: GEOFF ENGLISH, DIRECTOR OF PUBLIC WORKS
BY: SHANE TAYLOR, PUBLIC WORKS SUPERVISOR – UTILITIES
SUBJECT: MONTHLY WATER SUPPLY AND DEMAND UPDATE
DATE: OCTOBER 27, 2015

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 approximately $500.

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 severe drought continues, however a new rainfall year began in July and we have received 1.4” of rain. Lopez Lake is currently at 31% capacity. 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 is in advance of the Lake reaching 15,000 AF of storage, which is the automatic reduction trigger.

In September the City’s water use was 32% below September 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 15,000 AF storage level around November 1, 2015 unless the current weather pattern changes. The Lopez supply for water year 2015/16 for Arroyo Grande is 2,942 AF, which includes 883 AF of carry-over water. Based on the projected water demand of 2,300 AF, we expect to be able to meet the demand in water year 2015/16 with minimal groundwater pumping.

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 in front of City Hall on Thursday, October 22, 2015. The Agenda and staff report were posted on the City’s website on Friday, October 23, 2015.

Attachments:
1. September 2015 Water Supply and Demand Charts
2. Lopez Reservoir Storage Projections
City of Arroyo Grande Water Supply and Demand Update—September 2015

Rainfall

Cumulative Rainfall from July 1, 2015 to September 30th: 1.4 Inches

Cumulative Rainfall

Note: Precipitation data from AG City Yurt Station No. 1771 from July 1966—September 9, 2015

Water Demand

Total City Demand (AF)

September 2013 289.1
September 2015 196.9
% Difference from 2013 -22%

Lopez Lake

Water Supply

Lake Elevation (full at 522.37 ft) 470.49
Storage (full at 49,203 AF) 15,462.8
Storage - Percent Full 31%
Status Enacted
Current Entitlement Reduction 10%
Deliveries (AF) 195.76

Note: The Water Year (WY) for Lopez Lake is from April to March. The actual amount of water in Lopez at the end of September 2015 was 10,880 AF, however, the storage amount and storage percentage shown were adjusted to account for the 131.24 AF of stored State Water Project water in the lake.

Groundwater

SMGB Production (AF) 11.1
Pismo Formation Production (AF) 0.8

City SMGB average well levels for September 2015 were 0.5 feet higher than in September 2014.

Water Supply, Demand and Delivery Chart

Note: These production forecasts contain preliminary estimates of water production and draft predictions of future production based on historical averages.

Updated: 10/12/2015
Lopez Reservoir Storage Projections
(precipitation scenario source: www.LongRangeWeather.com)

Notes:
- For "Dry Months" (May - October), projected increases and/or decreases in storage estimated to mimic 2013 conditions.
- For "Wet Months" (November - April), projected storage declines assume annual downstream releases of 4,200 AFY and deliveries of 4,530 AFY.
- Storage projections for "Wet Months" assume that unsaturated conditions exist.
- Monthly rainfall projections assumed to occur during the first week of each month.
- Evaporation included in storage projection.
- Past 3 Year Avg Projection uses historic daily capacity changes averaged from 2012, 2013, 2014.

Gr:\Utilities\Zone3\Advisory Committee\Reservoir Chart Info
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Attachment C
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San Luis Obispo County Flood Control and Water District
Zone 3 - Lopez Project - Monthly Operations Report
September, 2015

Lopez Water Deliveries

<table>
<thead>
<tr>
<th>Contractor</th>
<th>This Month</th>
<th>April to Present</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
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<td>Surplus</td>
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<td></td>
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<td>271.77</td>
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State Water Deliveries

<table>
<thead>
<tr>
<th>Contractor</th>
<th>This Month</th>
<th>April to Present</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
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<tr>
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<td>0.0%</td>
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<tr>
<td>San Miguelito</td>
<td>271.77</td>
<td>6.7%</td>
</tr>
<tr>
<td>Total</td>
<td>271.77</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

April to Present Lopez Entitlement+Surplus Water Usage

January to Present State Water Usage

Note: Deliveries are in acre feet. 1 acre foot = 325,850 gallons or 43,560 cubic feet. Safe yield is 8,730 acre feet.

Lopez Dam Operations

<table>
<thead>
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<th>Year to Date</th>
<th>This Month</th>
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<tbody>
<tr>
<td>Lake Elevation (full at 522.37 feet)</td>
<td>470.49</td>
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<td>Storage (full at 49200 acre feet)</td>
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<td>Rainfall</td>
<td>0.08</td>
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<td>Downstream Release (4200 acre feet/year)</td>
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<td>Spillage</td>
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Comments:

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.

1) Oceano supplied State Water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 251 AF delivered to Canyon Crest was added to Oceano's State Water usage this month and 251 AF was subtracted from Arroyo Grande's usage this month.

Data entered by: J. Ogren
Report printed by: Admin
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