SPECIAL MEETING OF THE WATER RESOURCES COMMITTEE
OF THE BOARD OF DIRECTORS
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
4040 PARAMOUNT BOULEVARD, LAKEWOOD, CALIFORNIA 90712
9:30 A.M., THURSDAY, MARCH 22, 2018

AGENDA

EACH ITEM ON THE AGENDA, NO MATTER HOW DESCRIBED, SHALL BE DEEMED TO INCLUDE ANY APPROPRIATE MOTION, WHETHER TO ADOPT A MINUTE MOTION, RESOLUTION, PAYMENT OF ANY BILL, APPROVAL OF ANY MATTER OR ACTION, OR ANY OTHER ACTION. ITEMS LISTED AS "FOR INFORMATION" MAY ALSO BE THE SUBJECT OF ANY "ACTION" TAKEN BY THE BOARD OR A COMMITTEE AT THE SAME MEETING.

1. DETERMINATION OF A QUORUM

2. PUBLIC COMMENT
   Pursuant to Government Code Section 54954.3

3. CLOSED SESSION
   Conference with Legal Counsel – Anticipated litigation, pursuant to Government Code §54956.9 (b), One Matter.

4. OPERATIONS UPDATE
   Staff Recommendation: The Water Resources Committee will receive and file the report.

5. GROUNDWATER BASIN UPDATE
   Staff Recommendation: The Water Resources will receive and file the report.

6. DIRECTORS REPORTS, INQUIRIES, AND FOLLOW-UP OF DIRECTIONS TO STAFF

7. ADJOURNMENT
   The Water Resources Committee will adjourn to the next regular meeting currently scheduled for April 18, 2018, at 9:30 A.M.

Agenda posted by Senior Administrative Specialist Sherri Brown on March 21, 2018. In compliance with ADA requirements, this document can be made available in alternative formats upon request.
MEMORANDUM
ITEM NO. 4

DATE: MARCH 22, 2018
TO: WATER RESOURCES COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: OPERATIONS UPDATE

SUMMARY
The intent of the Operations Update staff report/agenda item is to inform and update members of the Water Resources Committee on a regular and reoccurring basis about operational matters, technical issues, engineering plans, and various multi-agency strategies in regards to all of the District’s current and planned operational facilities.

Terminal Island Water Reclamation Plant (TIWRP) Update
The Los Angeles Sanitation Department (LASAN) TIWRP expansion is delivering between 4 to 5 mgd to the DGBP and the current barrier demand is ~8 mgd (~12 cfs). TIWRP has increased the delivery with approval from the County and have just complete a second 30-day performance test. Depending on various plant adjustments, delivery can resume uninterrupted at 6 mgd. LASAN is in discussions with DDW & RWQCB to get approval of the TIWRP’s AOP operation and plant expansion in order to be able to go above 6.0 mgd and meet the full barrier demand. LASAN submitted the finalized plant expansion report to the RWQCB and DDW in early March. LASAN is planning to schedule the RWQCB/DDW Site Inspection for the first week of April to coordinate with a planned 2-week maintenance shutdown by the County. LASAN is anticipating receiving RWQCB/DDW approval immediately following the site inspection.

Robert W. Goldsworthy Desalter Update
Shimmick Construction Company Inc. completed punchlist items by March 1, 2018, and is now working with WRD and Carollo Engineers to close out the project. We hope to request WRD Board approval for project closure in April 2018. Regarding operations of the Desalter, efforts continued during the month of February 2018 toward achieving stable operations of the plant. As reported last month, the principal issue facing the team is fouling of the 2nd stage membranes within the reverse osmosis (RO) system. Since that report, efforts have included changing the flow conditions within the trains in an effort to slow the progression of fouling. Results have been positive, but work continues and will now include utilizing an alternative pretreatment chemical. Additional work completed during the month include further water quality sampling of the wells and removal of two RO membranes for autopsy. Results from these analyses will serve to 1. Confirm the nature of the foulant, to then 2. Identify the appropriate chemical cleaning strategy to employ.
Leo J. Vander Lans Facility (LVL) Update
LVL was restarted the week of 03/05/18 after being off-line for seven months due to limited source water from the Long Beach Water Reclamation Plant (LBWRP). Efforts continue to optimize the plant to achieve stable operations at this time. Specific issues which have arisen during startup have largely centered on the plant PLC system, including such things as program interlocks, “ghost” readings, etc. Long Beach Water Department telemetry staff and the District’s on-call programming support have been working to resolve these issues. Concurrently, efforts continue to link the plant SCADA system to the centralized system (a.k.a., CIS) here at the Lakewood headquarters. Spectrum continues to lay cable and should be completed by the first week in April, whereby work can proceed to connect LVL to the CIS system. During the month of February 2018, 263.4 acre-feet (AF) of imported water from the LB07A connection was used to satisfy the barrier demand (vs. 325.8 AF during the month of January, 2018).

**FISCAL IMPACT**
None.

**STAFF RECOMMENDATION**
The Water Resources Committee will receive and file the report.
MEMORANDUM

ITEM NO. 5

DATE: MARCH 22, 2018

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER BASIN UPDATE

SUMMARY

Staff monitors groundwater conditions in its service area throughout the year. A summary of the latest information is presented below.

Precipitation (as of March 5, 2018)
The WRD precipitation index reports that for the 2017-18 Water Year, there has been 2.54 inches of rainfall. The normal rainfall for this time period is 11.72 inches, so the District is 22% of normal. The U.S. Drought Monitor is reporting 92% of the State is abnormally dry, 48% is under drought conditions, and 20% of the State is under severe drought conditions including all Los Angeles County (as of March 1, 2018).

Reservoirs (as of March 6, 2018)

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Capacity</th>
<th>Storage</th>
<th>% Full</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trinity Lake</td>
<td>2.45</td>
<td>1.79</td>
<td>73%</td>
<td>0.01</td>
</tr>
<tr>
<td>Lake Shasta</td>
<td>4.55</td>
<td>3.45</td>
<td>76%</td>
<td>0.08</td>
</tr>
<tr>
<td>Lake Oroville</td>
<td>3.54</td>
<td>1.48</td>
<td>42%</td>
<td>0.04</td>
</tr>
<tr>
<td>Folsom Lake</td>
<td>0.98</td>
<td>0.53</td>
<td>54%</td>
<td>-0.04</td>
</tr>
<tr>
<td>New Melones</td>
<td>2.40</td>
<td>1.91</td>
<td>80%</td>
<td>-0.07</td>
</tr>
<tr>
<td>Don Pedro</td>
<td>2.03</td>
<td>1.67</td>
<td>82%</td>
<td>-0.01</td>
</tr>
<tr>
<td>Lake McClure</td>
<td>1.02</td>
<td>0.69</td>
<td>67%</td>
<td>0.01</td>
</tr>
<tr>
<td>San Luis</td>
<td>2.04</td>
<td>1.57</td>
<td>77%</td>
<td>-0.16</td>
</tr>
<tr>
<td>Millerton Lake</td>
<td>0.52</td>
<td>0.33</td>
<td>64%</td>
<td>-0.03</td>
</tr>
<tr>
<td>Pine Flat</td>
<td>1.00</td>
<td>0.53</td>
<td>53%</td>
<td>0.01</td>
</tr>
<tr>
<td>Castaic Lake</td>
<td>0.33</td>
<td>0.26</td>
<td>81%</td>
<td>0.01</td>
</tr>
<tr>
<td>Lake Perris</td>
<td>0.13</td>
<td>0.07</td>
<td>57%</td>
<td>0.00</td>
</tr>
<tr>
<td>Silverwood</td>
<td>0.08</td>
<td>0.07</td>
<td>92%</td>
<td>0.00</td>
</tr>
</tbody>
</table>

MWD Reservoirs (CRA)

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Capacity</th>
<th>Storage</th>
<th>% Full</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powell</td>
<td>24.30</td>
<td>13.30</td>
<td>55%</td>
<td>-0.33</td>
</tr>
<tr>
<td>Mead</td>
<td>26.12</td>
<td>10.70</td>
<td>41%</td>
<td>0.04</td>
</tr>
<tr>
<td>DVL</td>
<td>0.81</td>
<td>0.73</td>
<td>90%</td>
<td>-0.02</td>
</tr>
</tbody>
</table>

Black Text - Decrease or no change in storage since the last report.
Green Text - Increase in storage since the last report.
Snowpack (Snow Water Content [SWE] as of March 5, 2018)

In 1929, the State established the California Cooperative Snow Surveys Program with the California Department of Water Resources as the coordinator. Today, over 50 state, national, and private agencies collaborate in collecting snow data from over 300 snow courses with more than 60 of the course being the original courses established in the early 1900’s. The average snow course is 1,000 feet long and consist of about 10 sample points. Anywhere from two to six courses are measured per day depending on weather and access method.

The snow survey is completed using a snow sampling tube equipped with a cutter on the end that is driven through the snow measuring the depth and obtaining a snow core. The snow core is then weighed and the snow water content (or snow water equivalent) calculated. The surveys are completed throughout the winter by returning to the same sample points throughout the season to observe the changing conditions. From February through May the data is used by the State to forecast snow melt runoff. Many snow courses are only measured on or around April 1st, and since it is presumed that the snow accumulates up to April 1st and melts thereafter, April 1st is the benchmark for historic data comparisons.

**Northern Sierra Nevada** – 7.4 inches, 28% of April 1st average and 30% of normal to date

**Central Sierra Nevada** – 11.5 inches, 39% of April 1st average and 43% of normal to date

**Southern Sierra Nevada** – 8.7 inches, 33% of April 1st average and 37% of normal to date

**Statewide** – 9.5 inches, 34% of April 1st average and 37% of normal to date
Groundwater Levels (through March 2, 2018)

Groundwater levels in key monitoring wells are shown in the hydrographs below.

<table>
<thead>
<tr>
<th>Well Name</th>
<th>Since Last Month</th>
<th>Since Same Time the Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Basin Key Well 1601T</td>
<td>Decreased 1.2 feet</td>
<td>Decreased 28.6 feet</td>
</tr>
<tr>
<td>Central Basin Key Well Long Beach #6</td>
<td>Decreased 1.2 feet</td>
<td>Increased 12.1 feet</td>
</tr>
<tr>
<td>West Coast Basin Key Well Lawndale #1_4</td>
<td>Decreased 1.6 feet</td>
<td>Decreased 6.0 feet</td>
</tr>
<tr>
<td>West Coast Basin Key Well Carson #1_2</td>
<td>Decreased 0.4 foot</td>
<td>Increased 1.5 feet</td>
</tr>
</tbody>
</table>

Central Basin Key Well Long Beach #6 and West Coast Basin Key Wells Lawndale #1 & Carson #1 are in a confined aquifer and do not respond readily to rainfall but instead to changes in pumping patterns and barrier recharge.

Central Basin Key Well 1601T is between the two spreading grounds and rises rapidly with rainfall and replenishment but falls sharply during dry spells and lack of replenishment.
Montebello Forebay Spreading Grounds (October 2017 - January 2018)
The following Chart shows the preliminary spreading grounds replenishment water to date:

The District placed an order for 5,300 acre-feet of imported water for replenishment in Water Year 2017-18 to complete the 38,000 acre-feet order from earlier in 2017. The imported water delivery began on December 6th and was completed on December 17th with a total of 5,286 AF of Imported Water delivered.

Preliminary numbers for the first four months of the 2017-18 Water Year show that 20,937 acre-feet of recycled water has been recharged, which is above the year to date target amount of 16,650 acre-feet. The 120-month running average of recycled water contribution in the Montebello Forebay is 38.1% and the regulatory maximum is 45%, with additional studies being required once 40% is reached.
Local water (stormwater plus dry weather urban runoff) is captured by the Los Angeles County Department of Public Works (LACDPW) at the spreading grounds for recharge. Local water amounts are determined as the sum of the total waters conserved at the spreading grounds less the imported and recycled water deliveries. For the first four months of the 2017-18 Water Year, 1,079 acre-feet of local water capture has been reported by the LACDPW.

Seawater Barrier Well Injection and Replenishment (October 2017 - January 2018)
The following Chart shows the barrier water injection to date:

![Seawater Barrier Recharge Chart]

Preliminary numbers for the first four months of the 2017-18 Water Year show that the West Coast Barrier used 1,112 acre-feet of imported water and 4,965 acre-feet of recycled water, or 82% recycled water. The Dominguez Gap Barrier has put in less water than planned, due to TIWRP expansion activities using 1,801 acre-feet of imported water and 1,064 acre-feet of recycled water, or 37% recycled water. The Alamitos Barrier, on the WRD side, used an estimated 1,090 acre-feet of imported water and no recycled water due to the maintenance outage at the LBWRP.

Pumping (October 2017 - January 2018* and Fiscal Year to Date)
Preliminary numbers for groundwater production in the District for the first four months of the 2017-18 Water Year indicate that 131,714 acre-feet were pumped compared to 123,556 acre-feet the year previous, or an increase of 5,955 acre-feet (9.1%). In the Central Basin, pumping was 3,291 acre-feet higher than the previous water year (5.7%) and the West Coast Basin
Pumping was up 2,705 acre-feet from the previous water year (32.0%). The Chart below shows Water Year 2017-18 pumping versus Water Year 2016-17.

Preliminary numbers for groundwater production in the District for the first seven months of the current Fiscal Year 2017-18 (July 2017 – January 2018) indicate pumping in the Central Basin was up 3,790 acre-feet from the same time of the previous fiscal year (3.5%) and the West Coast Basin pumping was 4,368 acre-feet higher than the previous fiscal year (27.7%). The total pumping is 131,714 acre-feet compared to 123,556 acre-feet during the same time the previous year for an increase of 8,157 acre-feet, or 6.6%. The current pumping data do not include two Central Basin pumpers and three West Coast Basin pumpers totaling an estimated 20 additional acre-feet.

FISCAL IMPACT
None.

STAFF RECOMMENDATION
The Water Resources Committee receive and file the report.