Each item on the agenda, no matter how described, shall be deemed to include any appropriate motion, whether to adopt minute motion, resolution, payment of any bill, approval of any matter or action, or any other action. Items listed as "For information" or "For discussion" may also be the subject of an "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. APPROVE MINUTES OF JANUARY 19, 2018 SPECIAL MEETING OF THE WATER RESOURCES COMMITTEE
   Staff Recommendation: The Committee will approve minutes as submitted.

4. REGIONAL BRACKISH WATER RECLAMATION PROGRAM FEASIBILITY STUDY UPDATE
   Staff Recommendation: For information.

5. REGIONAL BRACKISH WATER RECLAMATION PROGRAM ADVISORY GROUP DISCUSSION
   Staff Recommendation: For discussion.

6. OPERATIONS UPDATE
   Staff Recommendation: The Committee will receive and file report.

7. GROUNDWATER BASIN UPDATE
   Staff Recommendation: The Committee will receive and file report.

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

9. ADJOURNMENT - The Water Resources Committee will adjourn to the next meeting currently scheduled for August 21, 2018 at 9:30 a.m.

Agenda posted by Sherri Brown, on 07/12/2018. In compliance with ADA requirements, this document can be made available in alternative formats upon request.
DATE: JULY 17, 2018

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: APPROVE MINUTES OF JANUARY 19, 2018 SPECIAL MEETING OF THE WATER RESOURCES COMMITTEE

SUMMARY

A special meeting of the Water Resources Committee of the Board of Directors of the Water Replenishment District of Southern California was held on January 19, 2018 at 9:39 a.m., at the District Office, 4040 Paramount Boulevard, Lakewood, California 90712. Committee Chair Robert Katherman called the meeting to order and presided thereafter. Senior Administrative Specialist Sherri Brown recorded the minutes.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

The Committee will approve minutes as submitted.
MINUTES OF JANUARY 19, 2018
SPECIAL MEETING OF THE WATER RESOURCES COMMITTEE
OF THE BOARD OF DIRECTORS
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

A special meeting of the Water Resources Committee of the Board of Directors of the Water Replenishment District of Southern California was held on January 19, 2018 at 9:39 a.m., at the District Office, 4040 Paramount Boulevard, Lakewood, California 90712. Committee Chair Robert Katherman called the meeting to order and presided thereafter. Senior Administrative Specialist Sherri Brown recorded the minutes.

1. DETERMINATION OF A QUORUM
   A quorum was present, which included:
   Committee: Committee Chair Robert Katherman; President John D.S. Allen
   Staff: Ken Ortega; Scott Ota; Ted Johnson; Jim McDavid; Everett Ferguson; Esther Rojas
   Public: Zita Yu – West Basin

2. PUBLIC COMMENT
   Pursuant to Government Code Section 54954.3
   None.

3. APPROVAL OF MINUTES OF OCTOBER 18, 2017
   The Water Resources Committee approved the minutes as submitted.

4. APPROVAL OF MINUTES OF DECEMBER 20, 2017
   The Water Resources Committee approved the minutes as submitted.

5. DISCUSS DEVELOPMENT OF A WELL CONSTRUCTION AND REHABILITATION LOAN PROGRAM
   Chief Hydrogeologist Ted Johnson, Chief Financial Officer Scott Ota and Senior Water Resources Planner Esther Rojas provided an overview for the program that was requested to be brought to the Water Resources Committee by the Board. They provided details for where the seed money will come from for the initial funding of the program. Discussion followed.
   The Committee requested that staff bring back a report on what the basin operations will look like in the next decade. Discussion followed.

   Upon a motion duly made by President Allen, seconded by Director Katherman and unanimously approved, it was
   RESOLVED: The Water Resources Committee unanimously recommended that the Board of Directors authorize a Well Construction and Rehabilitation Loan Program, with an initial funding
amount of $1.5 million transferred from the Safe Drinking Water Loan Program; and add the Well Construction and Rehabilitation Loan Program to the District's Five-Year Capital Improvement Plan. Preference for new well projects will be given to pumpers in disadvantaged communities.

This will be a regular item on the agenda of the next Board of Directors meeting.

6. **UPDATE ON THE CARLSBAD DESALINATION PROJECT**
Manager of Engineering Jim McDavid provided the update. West Basin Water Resources Engineer Zita Yu provided additional information regarding the project. Discussion followed.

The Water Resources Committee received and filed the report.

7. **OPERATIONS UPDATE**
Senior Hydrogeologist Everett Ferguson provided the report for the Terminal Island Water Reclamation Plant. Discussion followed.

Assistant General Manager Ken Ortega reported on the Goldsworthy Desalter. Discussion followed.

Mr. Ortega also provided an update of the Leo J. Vander Lans Facility. Discussion followed.

The Water Resources Committee received and filed the report.

8. **GROUNDWATER BASIN UPDATE**
Mr. Ferguson provided the groundwater basin update. Discussion followed.

The Water Resources Committee received and filed the report.

9. **DIRECTORS REPORTS, INQUIRIES, AND FOLLOW-UP OF DIRECTIONS TO STAFF**
None.

10. **ADJOURNMENT**
There being no further business to come before the Committee, the meeting was adjourned at 9:47 A.M.

____________________________  Chair

ATTEST:

____________________________  Member

Approved in minutes of:

____________________________
SUMMARY

Staff will provide a verbal update for this committee item.

FISCAL IMPACT

No impact.

STAFF RECOMMENDATION

For information.
MEMORANDUM
ITEM NO. 5

DATE: JULY 17, 2018

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: REGIONAL BRACKISH WATER RECLAMATION PROGRAM ADVISORY GROUP DISCUSSION

SUMMARY
The Water Replenishment District of Southern California (WRD) is responsible for managing and replenishing both the West Coast and Central Basins. Within the West Coast Basin a significant plume (approx. 600,000 acre feet) of high Total Dissolved Solids (TDS) has been trapped due to seawater intrusion and the implementation of the West Coast Seawater Intrusion Barrier. WRD has initiated a Regional Brackish Water Reclamation Program (Program) through the Groundwater Basin’s Master Plan to evaluate ways to remediate the basin.

WRD has now initiated a regional planning effort to evaluate the feasibility of remediating the high TDS plume with six additional stakeholders (Stakeholder Group) who pump and wholesale potable water within the basin. The West Coast Basin stakeholder group consists of six agencies and WRD. A Feasibility Study has been identified as the first step to determining how to remediate this plume to allow for future groundwater use within the basin.

WRD is considering creating an advisory group to participate in the moving forward on plans to clean the brackish plume in an effort to maximize the use of groundwater in the basin and for creating new storage space for future groundwater storage.

FISCAL IMPACT
None at this time.

STAFF RECOMMENDATION
For discussion.
DATE: JULY 17, 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
Highlights from the TIWRP include the following:

- Production from the Plant is 6.0 mgd (recycled water).
- Demand within the Dominguez Barrier is 6.9 mgd.
- Import Water Demand from WBMWD connection WB-37 is 0.9 mgd.
- Percent recycled water contribution is 87%.
- Recent challenges to increasing the recycled water delivery to 100% have to do with the allowable operational pressures at the barrier connection. The TIWRP is working with the County to find a resolution.

Torrance Desalter Update
Highlights from the Torrance Desalter include the following:

- Production from the plant has averaged 54 million gallons for the month of June, with only one, complete plant shutdown. The monthly on-line factor was 97%.
- Reverse Osmosis (RO) system cleanings consisted of four maintenance cleanings (high pH caustic solution). No full chemical cleanings with proprietary cleaners were conducted.
• Staff submitted information to address the punch list items identified during the site visit by the State Water Resources Control Board (SWRCB) and is awaiting response.
  o One punch list item was an immediate request for sampling of the wells for 1,2,3-TCP (a manmade, chlorinated hydrocarbon used as a cleaning agent and degreasing compound). Sampling of both the City Yard well and the Delthorne Park well was conducted in the months of May and June and none was detected.
  o Staff continues to work on completing the Operation Optimization Plan (OOP) – a comprehensive document that describes the operations, maintenance and monitoring to accompany the operations permit. This document is a requirement of all treatment plants which fall under the jurisdiction of the Control Board.

Leo J. Vander Lans Facility (LVL) Update

Highlights from the LVL facility include the following:

• Facility remains off-line due to insufficient source water from the Long Beach Water Reclamation Plant.
• On-call Engineering Services program has been engaged to assist with addressing issues identified over the course of operation (e.g., bulk chemical conveyance system, increased storage capacity of bulk calcium chloride, etc.).
• Computerized Maintenance Management System (CMMS) was fully implemented the week of June 4th.
  o Asset maintenance, repairs and preventative maintenance can now be tracked in a work order system.
  o WRD staff on site for program support, training and troubleshooting.
• During the month of June 2018, 257.1 acre-feet (AF) of imported water from the LB07A connection was used to satisfy the barrier demand.
  o Current barrier injection is approximately 4.1 mgd of imported water.
• LACDPW is conducting well development on the following wells: 33U followed by 33J.
• Orange County Water District contractor (Kiewit Construction) has completed the main connection to their new wells. Outside air vacs are being installed at four of their new wells (34T, 34X, 34Z and 35). Injection wells 34N and 34Q are near completion and being configured with above ground vents, piping and concrete pads.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

The Committee will receive and file report.
DATE: JULY 17, 2018

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER BASIN UPDATE

SUMMARY

Staff report is attached.

FISCAL IMPACT

No impact.

STAFF RECOMMENDATION

The Committee will receive and file the report.
DATE: JULY 17, 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 July 8, 2018)
The WRD precipitation index reports that for the 2017-18 Water Year, there has been 4.63 inches of rainfall. The normal rainfall for this time period is 15.26 inches, so the District is 30% of normal. As of July 3, 2018, the U.S. Drought Monitor is reporting 85% of the State is abnormally dry, 44% is under drought conditions, 21% of the State is under severe drought conditions including most of Los Angeles County, and 3% of the State is under extreme drought (in portions of eastern Riverside and Imperial Counties).
Reservoirs (as of July 8, 2018)

For all 17 reservoirs reported monthly to the committee, water levels have lowered compared to levels recorded in the previous month. The largest decrease (~0.4 million acre feet) occurred at the Lake Shasta and San Luis Reservoirs. The smallest decrease (<0.01 million acre feet) occurred at the Castaic Lake, Lake Perris, Lake Silverwood, and Diamond Valley Lake (DVL) Reservoirs.

<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>1.73</td>
<td>71%</td>
<td>-0.15</td>
</tr>
<tr>
<td>Lake Shasta</td>
<td>4.55</td>
<td>3.52</td>
<td>77%</td>
<td>-0.41</td>
</tr>
<tr>
<td>Lake Oroville</td>
<td>3.54</td>
<td>2.19</td>
<td>62%</td>
<td>-0.21</td>
</tr>
<tr>
<td>Folsom Lake</td>
<td>0.98</td>
<td>0.79</td>
<td>81%</td>
<td>-0.16</td>
</tr>
<tr>
<td>New Melones</td>
<td>2.40</td>
<td>1.90</td>
<td>79%</td>
<td>-0.06</td>
</tr>
<tr>
<td>Don Pedro</td>
<td>2.03</td>
<td>1.81</td>
<td>89%</td>
<td>-0.10</td>
</tr>
<tr>
<td>Lake McClure</td>
<td>1.02</td>
<td>0.87</td>
<td>85%</td>
<td>-0.08</td>
</tr>
<tr>
<td>San Luis</td>
<td>2.04</td>
<td>1.11</td>
<td>54%</td>
<td>-0.39</td>
</tr>
<tr>
<td>Millerton Lake</td>
<td>0.52</td>
<td>0.42</td>
<td>80%</td>
<td>-0.05</td>
</tr>
<tr>
<td>Pine Flat</td>
<td>1.00</td>
<td>0.62</td>
<td>62%</td>
<td>-0.25</td>
</tr>
<tr>
<td>Castaic Lake</td>
<td>0.33</td>
<td>0.29</td>
<td>88%</td>
<td>0.00</td>
</tr>
<tr>
<td>Lake Perris</td>
<td>0.13</td>
<td>0.10</td>
<td>79%</td>
<td>0.00</td>
</tr>
<tr>
<td>Silverwood</td>
<td>0.08</td>
<td>0.07</td>
<td>89%</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Snowpack (Snow Water Content [SWE] as of June 14, 2018)

The last snow survey occurred on June 14, 2018, and observed no noticeable snow in the Central and Southern Sierra Nevada while 0.2 inches were still present in the Northern Sierra Nevada. As a result, this will likely be the final snow survey until next season.

**Northern Sierra Nevada** – 0.2 inches, 1% of April 1st average and 9% of normal to date  
**Central Sierra Nevada** – 0.0 inches, 0% of April 1st average and 0% of normal to date  
**Southern Sierra Nevada** – 0.0 inches, 0% of April 1st average and 0% of normal to date  
**Statewide** – 0.1 inches, 0% of April 1st average and 0% of normal to date
Groundwater Levels (through July 6, 2018)
Groundwater levels in key monitoring wells are shown in the hydrographs below.

### Groundwater Level Changes in Key Wells

<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 2.6 feet</td>
<td>Decreased 13.8 feet</td>
</tr>
<tr>
<td>Central Basin Key Well Long Beach #6_4</td>
<td>Decreased 6.3 feet</td>
<td>Increased 2.9 feet</td>
</tr>
<tr>
<td>West Coast Basin Key Well Lawndale #1_4</td>
<td>Increased 1.2 feet</td>
<td>Increased 2.2 feet</td>
</tr>
<tr>
<td>West Coast Basin Key Well Carson #1_2</td>
<td>Increased 0.9 foot</td>
<td>Increased 4.0 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 - May 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. An order for an additional 4,500 acre-feet was placed in April with 4,506 acre-feet of Imported Water delivered for a total of 9,792 acre-feet.

Preliminary numbers for the first eight months of the 2017-18 Water Year show that 41,596 acre-feet of recycled water has been recharged, which is above the year to date target amount of 37,450 acre-feet. The 120-month running average of recycled water contribution in the Montebello Forebay is 38.5% 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 eight months of the 2017-18 Water Year, 7,963 acre-feet of local water capture has been reported by the LACDPW.

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

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Preliminary numbers for the first eight months of the 2017-18 Water Year show that the West Coast Barrier used 2,153 acre-feet of imported water and 8,826 acre-feet of recycled water, or 80% recycled water. The Dominguez Gap Barrier used 2,889 acre-feet of imported water and 2,231 acre-feet of recycled water, or 44% recycled water. The Alamitos Barrier, on the WRD side, used an estimated 1,856 acre-feet of imported water and 119 acre-feet of recycled water, or 6% recycled water.

Pumping (October 2017 - May 2018* and Fiscal Year to Date)
Preliminary numbers for groundwater production in the District for the first eight months of the 2017-18 Water Year indicate that 142,412 acre-feet were pumped compared to 133,312 acre-feet the year previous, or an increase of 9,100 acre-feet (6.8%). In the Central Basin, pumping was 4,478 acre-feet higher than the previous water year (3.9%) and the West Coast Basin
pumping was up 4,622 acre-feet from the previous water year (26.7%). 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 eleven months of the current Fiscal Year 2017-18 (July 2017 – May 2018) indicate pumping in the Central Basin was up 4,976 acre-feet from the same time of the previous fiscal year (3.0%) and the West Coast Basin pumping was 6,284 acre-feet higher than the previous fiscal year (25.5%). The total pumping is 202,226 acre-feet compared to 190,965 acre-feet during the same time the previous year for an increase of 11,260 acre-feet, or 5.9%. The current pumping data do not include six Central Basin pumpers and two West Coast Basin pumpers totaling an estimated 41 additional acre-feet.

**FISCAL IMPACT**

None.

**STAFF RECOMMENDATION**

The Water Resurces Committee receive and file the report.