

**MEETING OF THE WATER RESOURCES COMMITTEE
OF THE BOARD OF DIRECTORS
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA
4040 PARAMOUNT BOULEVARD, LAKEWOOD, CALIFORNIA 90712
12:00 P.M., WEDNESDAY, DECEMBER 7, 2011**

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**
- 3. CLOSED SESSION**
Conference with Legal Counsel – Anticipated Litigation,
Pursuant to Government Code §54956.9 (b), One Case
- 4. MINUTES OF THE SPECIAL MEETING OF NOVEMBER 2, 2011**
Staff Recommendation: Approve the minutes as submitted.
- 5. GROUNDWATER BASIN UPDATE**
Staff Recommendation: For information.
- 6. MEMORANDUM OF UNDERSTANDING WITH WBMWD FOR SALINE PLUME
GROUNDWATER MODELING IMPROVEMENTS**
Staff Recommendation: Enter into an MOU with WBMWD for reimbursement of costs associated
with Saline Plume calibration and model updates for a cost not to exceed \$50,000.
- 7. GROUNDWATER BASINS MASTER PLAN UPDATE**
Staff Recommendation: For information.

8. **UPDATE ON THE VANDER LANS FACILITY EXPANSION**
Staff Recommendation: For information.
9. **GROUNDWATER RELIABILITY IMPROVEMENT PROGRAM (GRIP) UPDATE**
Staff Recommendation: For information.
10. **DIRECTORS REPORTS, INQUIRIES, AND FOLLOW-UP OF DIRECTIONS TO STAFF**
11. **ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, December 1, 2011.

In compliance with the Americans with Disabilities Act (ADA), if special assistance is needed to participate in the Board meeting, please contact Deputy Secretary Abigail Andom at (562) 921-5521 for assistance to enable the District to make reasonable accommodations.

All public records relating to an agenda item on this agenda are available for public inspection at the time the record is distributed to all, or a majority of all, members of the Board. Such records shall be available at the District office located at 4040 Paramount Boulevard, Lakewood, California 90712.

Agendas and minutes are available at the District's website, www.wrd.org.

UNAPPROVED
MINUTES

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MINUTES

**MINUTES OF NOVEMBER 2, 2011
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 Wednesday, November 2, 2011, 2:10 p.m., at the District Office, 4040 Paramount Boulevard, Lakewood, California. Director Rob Katherman called the meeting to order and presided thereafter. Deputy Secretary Abigail C. Andom recorded the minutes.

1. DETERMINATION OF A QUORUM

Attendees at the meeting were as follows:

Committee: Directors Albert Robles and Rob Katherman

Staff: Ted Johnson, Phuong Ly, Jim McDavid

2. PUBLIC COMMENT

None.

3. MINUTES OF THE SPECIAL MEETING OF OCTOBER 12, 2011

The minutes were approved as submitted.

4. GROUNDWATER BASIN UPDATE

Chief Hydrogeologist Ted Johnson provided an update on the groundwater conditions in the Central and West Coast Basins. Mr. Johnson highlighted the following:

- Precipitation – since the start of the water year on October 1, 2011, there has been 1.08 inches of rainfall recorded. A normal year is 15.83 inches so the region was 6.8% of normal in just the first month of the water year.
- Groundwater levels - groundwater levels in the Central Basin are currently declining at the rate of 0.3 feet per week and in the West Basin water levels are currently falling at the rate of 0.2 feet per week. Mr. Johnson announced that the WRD was officially named by the Department of Water Resources as the official groundwater monitoring entity for the Central Basin and West Coast Basin.
- Spreading Grounds Replenishment – updated numbers from the L.A. County Department of Public Works indicate that 111,000 acre-feet of storm water has been captured at the Montebello Forebay from October 1, 2010 – August 31, 2011. A normal year is 54,000 acre-feet so this year, storm water captured is 106% above normal. WRD's order of 25,000 acre-feet of discounted water from the Metropolitan Water District (MWD) is being met with approximately 19,274 acre-feet already received but MWD discontinued making the discounted water available effective October 1, 2011. Recycled water totaling 33,080 acre-feet has recharged the groundwater basins. The amounts have been lower this year due to the excessive amounts of storm water captured in the spreading grounds during the winter months.

- Seawater Barrier Well Replenishment – imported water purchased for injection into the three seawater barriers (West Coast Basin Barrier Project, Dominguez Gap Barrier Project, Alamitos Barrier) totaled 13,363 acre-feet, short of the planned amount of 14, 300 acre-feet for the year. The difference is due to several unexpected short-term barrier shutdowns or reductions over the year due to leaks or pipeline breaks, and also due to reduced Alamitos Barrier demands from the Long Beach In-Lieu program. Recycled water purchased for injection totaled 11,285 acre-feet, short of the planned 14,100 acre-feet for the year. The difference is due to short-term barrier shutdowns over the year due to leaks or pipeline breaks, the continued difficulties of producing more recycled water at the West Basin treatment plant, and due to reduced Alamitos Barrier demands from the Long Beach In-Lieu program.
- In-Lieu Replenishment Water – the City of Long Beach put in 8,215 acre-feet of In-Lieu replenishment which resulted in reduced pumping. Since MWD stopped making In-Lieu water available effective October 1, 2011, it is likely that no additional Long Beach In-Lieu water will occur under the current agreement.
- Pumping – compared to the previous year, Central Basin is down 13% and West Coast Basin is up 1%. Combined, pumping is down 10% from the previous year. Reasons for the decline in the Central Basin are likely due to the wet weather in the first half of 2011 which caused reduced water demands, WRD's In-Lieu program with the City of Long Beach that has reduced pumping, and continuing water conservation efforts by the public and businesses in the District.

5. TIME EXTENSION WITH USGS FOR CENTRAL BASIN GROUNDWATER CONTAMINATION STUDY

The Committee recommended the Board Extend the termination date of the agreement with the United States Geological Survey for the Central Basin Groundwater Contamination Study to June 30, 2012, with no additional cost to the District.

6. GROUNDWATER BASINS MASTER PLAN UPDATE

Mr. Johnson stated that the Board recently approved an amendment to the CH2MHILL contract to allow for groundwater modeling of the alternative management scenarios on the Groundwater Basins Master Plan for the West Coast Basin and Central Basin (Master Plan). He explained that staff and consultant have been making progress and an update will be provided at next month's meeting.

Discussion followed and the Committee requested that a schedule of activities and completion be presented to the Committee at next month's meeting. The Committee also directed staff to prepare and issue a request for proposal (RFP) for the programmatic environmental impact report of the Master Plan. The item will be agendized for Board approval at the November 18 Board meeting.

7. GROUNDWATER RELIABILITY IMPROVEMENT PROGRAM (GRIP) UPDATE

Senior Engineer Jim McDavid provided an update to the Committee on the Groundwater Reliability Improvement Program (GRIP). Mr. McDavid stated that staff has been meeting with the Los Angeles County Sanitation Districts regarding the recycled water agreement and commitment to the same level of funding for the GRIP project.

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

The next Water Resources Committee meeting is scheduled Wednesday, December 7, 2011 at 12:00 p.m.

9. ADJOURNMENT

With no further business for the Committee, the meeting was adjourned at 3:00 p.m.

Chair

ATTEST:

Member

Prepared by: Ted Johnson
Reviewed by: Everett Ferguson
Approved by: Robb Whitaker

DATE: DECEMBER 7, 2011

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: GROUNDWATER BASIN UPDATE

SUMMARY

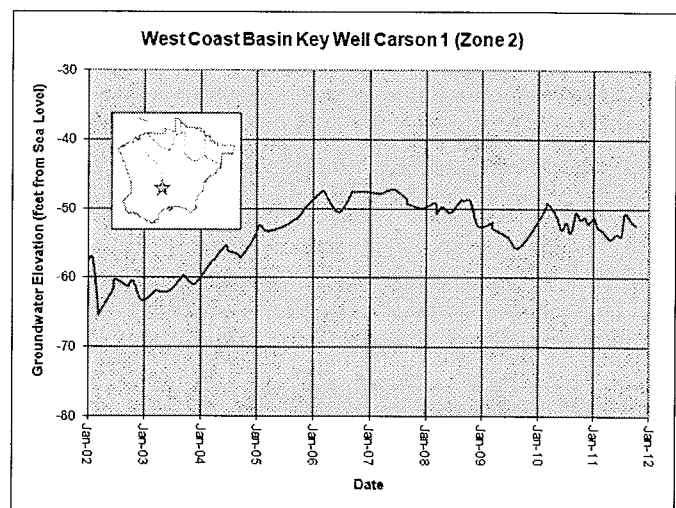
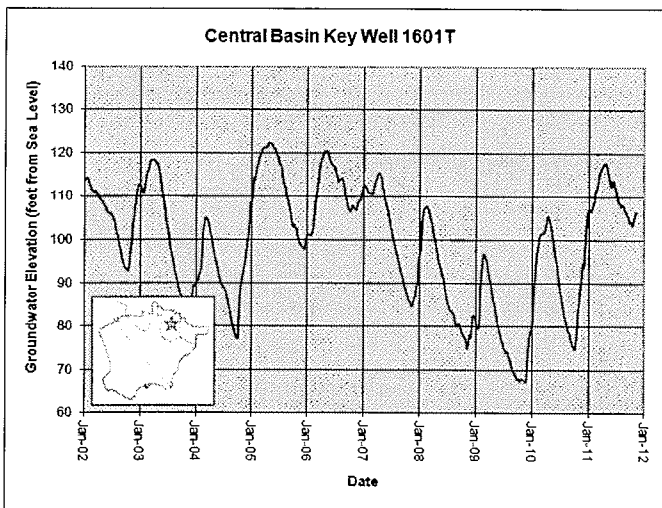
Staff monitors groundwater conditions in the Central and West Coast Basins throughout the year. A summary of the latest information is presented below.

Precipitation:

Since the start of the water year on October 1, 2011 there has been 2.59 inches of rainfall recorded by the WRD Precipitation Index. A normal year is 15.83 inches. Therefore, the region is 16% of a normal in just the two months of the water year. The majority of rainfall typically occurs between December and March each year.

Groundwater Levels:

Groundwater levels in Central Basin and West Coast Basin key wells for the past 10 years are shown below in the hydrographs. In the Central Basin Key Well 1601T, water levels can fluctuate from 10 to 40 feet from winter to summer depending on the rainfall, pumping, and WRD replenishment activities. Water levels in the well are currently rising at the rate of about 0.9 feet per week per the normal autumn cycle. In the West Coast Basin Key Well Carson #1, water levels respond to pumping and barrier injection activities versus rainfall since the well is in a confined aquifer. Water levels are currently falling at the rate of about 0.2 feet per week.



Montebello Forebay Spreading Grounds Replenishment:

- Stormwater: Preliminary numbers from the Los Angeles County Department of Public Works indicate that about 114,800 acre-feet of stormwater has been captured at the Montebello Forebay spreading grounds for the Water Year October 1, 2010 – September 30, 2011. A normal year is approximately 54,000 acre-feet, so this year is 60,800 acre-feet more than normal or 213% of normal. This was due in large part by the County of Los Angeles Flood Control District having close communications with WRD and maximizing stormwater capture.
- Imported Water: WRD purchased 37,315 acre-feet of imported water during the Water Year, including 18,041.3 acre-feet of Tier 1 untreated water between October 2010 and March 2011, and 19,273.7 acre-feet of discounted MWD untreated replenishment water between June and August 2011. MWD is considering new replenishment program opportunities for 2012 depending on surplus water availability, and their Board is expected to take action in December to adopt such a program.
- Recycled Water: In the 2010-2011 water year, WRD purchased 30,939.8 acre-feet of recycled water from the San Jose Creek and Whittier Narrows water reclamation plants and another 4,668.7 acre-feet of incidental water from the Pomona plant for a total of 35,608.5 acre-feet. The recycled amounts are low this year from the 50,000 acre-feet target due to the excessive amounts of stormwater that occupied the spreading grounds in the winter months. However, the amount of recycled can be made up in future years to approach WRD's permitted amount of 35% recycled water average over a 5-year period.

Seawater Barrier Well Replenishment:

- Imported Water: Between October 2010 and September 2011, a total of 13,363 acre-feet of imported water has been purchased for injected into the three seawater barriers by WRD (the West Coast Basin Barrier Project, the Dominguez Gap Barrier Project, and the Alamitos Barrier). The amount planned for the year was 14,300 acre-feet. The difference is due to several unexpected short-term barrier shutdowns or reductions over the year due to leaks or pipeline breaks, and also due to reduced Alamitos Barrier demands from the Long Beach In-Lieu program.
- Recycled Water: Between October 2010 and September 2011, a total of 11,286 acre-feet of recycled water has been purchased for injection into the three seawater barriers by WRD. The amount planned for the year was 14,100 acre-feet. The difference is due to short-term barrier shutdowns over the year due to leaks or pipeline breaks, the continued difficulties of producing more recycled water at the West Basin treatment plant, and due to reduced Alamitos Barrier demands from the Long Beach In-Lieu program.

In-Lieu Replenishment Water:

WRD and the City of Long Beach are in discussions about another In-Lieu program for 2012, but it is dependent upon the new MWD replenishment program and if they offer the In-Lieu water. As the MWD program details become known and the water availability schedule certain, the 2012 In-Lieu program proposals will come back to the Committee.

Pumping:

For the Water Year 2010-2011, the preliminary total of 215,195.83 acre-feet of groundwater has been pumped from wells within the District; 170,798.86 acre-feet from the Central Basin and 44,396.97 acre-feet from the West Coast Basin. As compared to the previous year, Central Basin is down 13.4% and the West Coast Basin is up 1.2%. Combined, pumping is down 10.8% from the previous year. Reasons for the decline in the Central Basin are likely due to the wet weather in the first half of 2011 which caused reduced water demands, WRD's In-Lieu program with the City of Long Beach that has reduced pumping, and continuing water conservation efforts by the public and businesses in the District.

FISCAL IMPACT

For information.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 6

Prepared by: Everett Ferguson

Reviewed by: Ted Johnson

Approved by: Robb Whitaker

DATE: DECEMBER 7, 2011

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: MEMORANDUM OF UNDERSTANDING WITH WBMWD FOR SALINE PLUME GROUNDWATER MODELING IMPROVEMENTS

SUMMARY

The West Basin Municipal Water District (WBMWD) utilizes a groundwater model each year to comply with their recycled water permit for injection into the West Coast Basin Barrier Project (WCBBP). The model was originally developed in the 1990s to simulate recycled water movement through the aquifers and has been subsequently updated by various consulting firms over the years. The most recent update was in 2010 by the consulting firm Geoscience and was utilized for WBMWD's 2010 permit compliance report. The model is calibrated to simulate groundwater flow, barrier injection, and recycled water movement, but has not been calibrated to reliably simulate the movement of the Saline Plume in the West Coast Basin since this function is not a requirement of WBMWD's permit.

To consolidate efforts, minimize costs, and utilize the existing model versus constructing a new model from scratch, the WBMWD and WRD recently reviewed the needs of both agencies. The WBMWD needs to meet its permit compliance monitoring and reporting requirements for 2011 and 2012, and WRD needs to have an enhanced model that can simulate the movement of the Saline Plume for its basin management purposes. The WBMWD and WRD agreed to team up so that both agencies could obtain their respective goals and share costs. The WBMWD prepared and released a Request for Proposals (RFP) for a two-year contract for annual modeling updates and simulations for their permit compliance purposes, and for Saline Plume modeling and calibration as a separate optional task (defined as Task 7 in the RFP). The WBMWD forwarded the RFP to their pre-qualified consultants as well as posted it on their web site.

The WBMWD received a total of four (4) proposals from Geoscience, Langan Engineering, Intera, and Worley Parsons. Each proposal was carefully evaluated by a proposal review panel consisting of WBMWD staff and also staff experienced in modeling from the Orange County Water District (OCWD) and the WRD. Each proposal was evaluated based on five initial weighted criteria including Proposal Completeness (15%), Project Approach & Understanding (20%), Modeling Experience and Project Familiarity (15%), Experience in Similar Projects (15%), and Estimated Cost (15%). Based on this initial review, three (3) of the

proposing firms were short-listed and requested to participate in an Interview (20%) - Geoscience, Langan Engineering, and Worley Parsons.

The proposal review panel met at the WBMWD's office on November 10, 2011 to interview the three (3) final candidates. Based on overall qualifications of the proposal and interviews, the panel is recommending Geoscience as the winning firm. Geoscience has the most recent experience with the model, has well qualified and experienced professionals assigned to the project, has previously met all WBMWD's schedules, budgets and timelines, and had the lowest overall cost.

WBMWD intends to enter into a contract with Geoscience for the permit compliance and Saline Plume modeling work. Since it is WRD that is requesting the Saline Plume modeling work, staff is recommending that WRD enter into a Memorandum of Understanding (MOU) with WBMWD to reimburse WBMWD for Task 7 - Saline Plume Modeling expenses. At the completion of the project, WRD will have a complete working version of the full updated model, including the Saline Plume calibration, for use in future basin planning and forecasting.

FISCAL IMPACT

The estimated cost for Geoscience to complete the Saline Plume modeling for WRD is not to exceed \$50,000. This work was anticipated and is included in the current fiscal year budget.

STAFF RECOMMENDATION

Enter into an MOU with WBMWD for reimbursement of costs associated with Saline Plume calibration and model updates for a cost not to exceed \$50,000.



MEMORANDUM

ITEM NO. 7

Prepared by: Jason Weeks
Reviewed by: Ted Johnson
Approved by: Robb Whitaker

DATE: DECEMBER 7, 2011
TO: WATER RESOURCES COMMITTEE
FROM: ROBB WHITAKER, GENERAL MANAGER
SUBJECT: GROUNDWATER BASINS MASTER PLAN UPDATE

SUMMARY

District staff and its consultants, CH2MHILL and RMC Water and Environment, are continuing work on the development of a Groundwater Basins Master Plan for the West Coast Basin and Central Basin (Plan).

The focus of effort over the previous month was the development of model files for the evaluation of alternatives for both the Central and West Coast Basins.

District staff will provide the Committee with an update on the alternative management scenarios for the Central and West Coast Basins and the status of the groundwater modeling which is being performed as part of this study. District staff will also provide a schedule of activities and projection for completion.

FISCAL IMPACT

None.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 8

<i>Prepared by:</i>	Paul Fu
<i>Reviewed by:</i>	Ted Johnson Jim McDavid
<i>Approved by:</i>	Robb Whitaker

DATE: DECEMBER 7, 2011

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: UPDATE ON THE VANDER LANS FACILITY EXPANSION

SUMMARY

The Leo J. Vander Lans Water Treatment Facility (LVLWTF) currently supplies recycled water to meet 50 percent of the demand at the Alamitos Seawater Barrier. Advanced-treated recycled water has been injected into the Alamitos Seawater Barrier since October 2005. Under our Water Independence Now (WIN) Program, the District seeks to replace all imported water demands at the barriers with advanced treated recycled water. A key component of the WIN Program is to expand production capacity at LVLWTF to satisfy 100% of the demand at the Alamitos Seawater Barrier using recycled water.

On September 19, 2011, District executed a contract with CDM Consultant for final design of the expansion of LVLWTF, including a 30-percent design of a source water supply pipeline. The design started immediately with a kickoff meeting held on September 21, 2011. The progress achieved up to date is summarized below.

- Reviewed the pre-design report and revised the design criteria to enhance the performance of the facility.
- Met with manufacturers of major equipment, including Pall Corporation (for microfiltration) and Trojan Technology (for UV system), to layout requirements to ensure that the equipment would satisfy the criteria of the expanded facility.
- Evaluating alternative pipeline routes for source water supply. Will finalize the route in the next month.
- Currently reviewing the new draft Groundwater Recharge Rules (released by CDPH on 11/22/11) and has scheduled to meet with CDPH on 12/7/11 to discuss impacts of the new rules on the expansion project.
- A pilot study is in progress to optimize the performance of the high-recovery third-stage RO and to provide water quality data that may be required by the regulators due to the new Recharge Rules.
- Reviewed electrical and instrumentation control design concept with the facility's operations team to synchronize the design with operations.

The final design is expected to continue until the end of May 2012.

FISCAL IMPACT

For information.

STAFF RECOMMENDATION

For information.



MEMORANDUM

ITEM NO. 9

*Prepared by: Jim McDavid
Reviewed by: Ted Johnson
Approved by: Robb Whitaker*

DATE: DECEMBER 7, 2011

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

**SUBJECT: GROUNDWATER RELIABILITY IMPROVEMENT PROGRAM (GRIP)
UPDATE**

SUMMARY

GRIP is an ongoing program to evaluate alternative replenishment water sources for the Montebello Forebay. Staff will provide an update of any new information regarding GRIP at the Committee meeting.

FISCAL IMPACT

None at this time.

STAFF RECOMMENDATION

For information.