

**REGULAR MEETING OF THE WATER RESOURCES COMMITTEE  
OF THE BOARD OF DIRECTORS  
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA  
12621 E. 166<sup>th</sup> Street (Corner, Bloomfield & 166<sup>th</sup>), Cerritos, California**

**12:30 P.M., MONDAY, NOVEMBER 8, 2004**

**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.

- I. DETERMINATION OF A QUORUM**
- II. PUBLIC COMMENT**
- III. MINUTES OF THE REGULAR MEETING OF OCTOBER 4, 2004**  
*Staff Recommendation:* Approve the minutes as submitted.
- IV. GROUNDWATER BASIN UPDATE**  
*Staff Recommendation:* For information.
- V. CONTINUATION OF USGS CONTRACT – SEAWATER INTRUSION IN THE DOMINGUEZ GAP AREA OF THE WEST COAST BASIN**  
*Staff Recommendation:* Recommend the Board continue the cooperative agreement with the USGS to investigate seawater intrusion in the Dominguez Gap area of the West Coast Basin.
- VI. CONTINUATION OF UCSB CONTRACT – TRACER TEST FOR RECYCLED WATER TRACKING – MONTEBELLO FOREBAY SPREADING GROUNDS**  
*Staff Recommendation:* Recommend the Board continue the cooperative agreement with the UCSB for groundwater tracer testing in the Montebello Forebay.
- VII. 2004 NATIONAL GROUNDWATER ASSOCIATION CONVENTION**  
*Staff Recommendation:* Recommend the Board authorize the attendance of up to four technical staff members at the National Groundwater Association Convention, to be held on December 12-15, 2004 in Las Vegas, Nevada.
- VIII. STRATEGIC PLAN REVIEW**  
*Staff Recommendation:* Initiate a formal update to the District's Strategic Plan in mid-2005 and include measurable outcomes for specific goals and objectives.

- IX. WBMWD RECYCLED WATER EXPANSION UPDATE**  
*Staff Recommendation:* For information.
- X. WEST COAST BASIN OPERATING PLAN**  
*Staff Recommendation:* For information.
- XI. WB-28<sup>TH</sup> SERVICE CONNECTION**  
*Staff Recommendation:* For information.
- XII. AMENDED AND RESTATED AGREEMENT WITH ORANGE COUNTY WATER DISTRICT FOR THE PURCHASE OF RECYCLED WATER PRODUCED BY THE LEO J. VANDER LANS WATER TREATMENT FACILITY**  
*Staff Recommendation:* Recommend the Board approve the Amended & Restated Recycle Water Purchase Agreement with the Orange County Water District.
- XIII. ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, November 2, 2004.

**MINUTES OF OCTOBER 4, 2004  
REGULAR MEETING OF THE WATER RESOURCES COMMITTEE  
OF THE BOARD OF DIRECTORS  
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

A regular meeting of the Water Resources Committee of the Board of Directors of the Water Replenishment District of Southern California was held on October 4, 2004 at 1:03 p.m., at the District Office, 12621 E. 166th Street, Cerritos, California. Chairperson Norman Ryan called the meeting to order and presided thereover. Sheryll A. Petty recorded the minutes.

**I. DETERMINATION OF A QUORUM**

Attendees at the meeting were as follows:

Committee: Directors Norman Ryan and Robert W. Goldsworthy  
Staff: Ted Johnson, Jason Weeks, Hoover Ng, Helene Mendoza,  
Mary Sellers, Paul Fu and Evelyn Fierro.

**II. PUBLIC COMMENT**

None.

**III. MINUTES OF THE REGULAR MEETING OF SEPTEMBER 13, 2004**

The minutes were approved as submitted.

**IV. GROUNDWATER BASIN UPDATE**

Chief Hydrogeologist Ted Johnson presented the Groundwater Basin Update. The Central and West Coast Basins only received 9.25 inches from October 1 through September 30 so the Water Year was below average again. A good rain is needed this winter. Pumping through August in the Central Basin was 5% higher than last year and in the West Coast Basin 8% lower than last year. Technical Support Specialist Mary Sellers contacted several pumpers to ask why the West Coast Basin pumping was lower. Water quality issues and problems with the pumps were cited.

The District put in an order with the MWD for nearly 38,000 AF of imported spreading water and has requested delivery as soon as possible to minimize the price increase of \$5/af effective 01/01/05.

The District was recently notified by the Sanitation Districts that our price for recycled water will increase by 46.8%. The reason for this significant increase is due to the increase in energy costs over the last three years.

The WRD has been issued low-flow penalties in June and July from MWD for \$78,000 because the connection that feeds imported water to the West Coast Barrier had water flows drop below 10% of its overall capacity of 160 cfs. Staff has been working with MWD to correct the problem and the solution may be to replace the meter with a smaller capacity one.

The Committee requested that Staff ask to have this penalty waived or offer to pay for the new meter in lieu of paying the penalty of \$78,000, whichever is less.

The US Geological Survey in conjunction with the WRD recently published a report titled "Ground-Water Quality of Coastal Aquifer Systems in the West Coast Basin, Los Angeles County, California 1999-2002".

**v. UPPER SAN GABRIEL VALLEY MWD WATER RECYCLING PROJECT**

Mr. Johnson told the Committee that the WRD was recently made aware by the County Sanitation Districts of LA County that the Upper San Gabriel Valley Municipal Water District is planning an approximate 4,300 af per year water recycling project in the Whittier Narrows area. The source of the water is the same source that provides the WRD replenishment water.

The WRD staff supports recycled water reuse projects in general and encourages the use of recycled water; however, 4,300 af per year could cost the WRD from \$250,000 to \$1M per year depending on the price of the alternative water source that is obtained. The Committee requested Staff meet with the County Sanitation Districts to discuss this matter further.

Mr. Johnson concluded by stating that the District is also looking at alternatives to increase recycled water spreading, including slight adjustments to the permit restrictions and also the costs of building an advanced treatment plant.

**VI. ADJOURNMENT**

With no further business for the Committee, the meeting was adjourned at 1:25 P.M.

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Chairperson

ATTEST:

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Director



**MEMORANDUM**

**ITEM NO. IV**

*Prepared by:* Ted Johnson  
*Reviewed by:* Robb Whitaker

**DATE: NOVEMBER 8, 2004**  
**TO: WATER RESOURCES COMMITTEE**  
**FROM: ROBB WHITAKER, GENERAL MANAGER**  
**SUBJECT: GROUNDWATER BASIN UPDATE**

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**SUMMARY**

Staff will present the committee an update on the replenishment activities and groundwater conditions in the Central and West Coast Basins during Water Year 2003/04, including:

Precipitation (at the Los Angeles Civic Center Station):

- 9.25 inches for the Water Year (64% of the long term average of 14.41 inches).

Pumping (for Water Year):

- Central Basin.....200,281 af (5% higher than last year).
- West Coast Basin....47,952 af (8% lower than last year).
- Total Pumping for the 2003/2004 Water Year...248,232 af (2.5% higher than last year).

Water Levels in Montebello Forebay Key Well 1601T:

- Groundwater elevation was measured at 77.2 ft on October 22, 2004, which is 9 feet below last year and 38 feet below the levels observed in the 1997/98 water year. Water levels in the well have reached their typical lows for the end of September / early October, and are expected to start their usual climb throughout the wet season.

Montebello Forebay Spreading Grounds:

- Imported Water - 27,520 af purchased for spreading in WY 2003/04.
- Recycled Water - 42,500 af (estimated for Water Year).
- Local Water - 29,000 af (estimated for Water Year. Approximately 60% of normal).
- Total Water Conserved, approximately 99,000 af.

Barrier Wells (for Water Year):

- Imported - 19,269 af (21,762 af same period last year).
- Recycled - 3,669 af (6,192 af same period last year, WCBBP only).

Other Matters Regarding Recharge and the Groundwater Basins:

- Rainfall at the start of the water year has been significantly above normal (approximately 5 inches versus a normal of 0.3 inches). This has resulted in conservation of storm water at the spreading grounds of approximately 12,000 acre feet.

- WRD's imported water spreading order of nearly 38,000 af has not yet been initiated due to the Los Angeles County DPW maintenance activities and the unavailability of MWD water. The next meeting of the Groundwater Replenishment Coordination Group Meeting will be November 16, where an update to our water order will be provided.
- WRD has been issued low-flow penalties in June, July, and August from MWD for over \$100,000 because connection WB-28, which feeds imported water to the West Coast Barrier, had water flows drop below 10% of its overall capacity of 160 cfs. Staff has investigated the problem and is working with MWD, WBMWD, and LACDPW to solve it. The solution may be to replace the 160 cfs meter with a smaller meter. A meeting has been scheduled for the morning of November 8, so an update should be provided at the afternoon Committee meeting.
- Now that the Water Year has closed, Staff will be working on the Regional Groundwater Monitoring Report to document water levels and water quality changes over the Water Year. The report is planned to be brought to the Committee for approval in January 2005.

#### **FISCAL IMPACT**

For information.

#### **STAFF RECOMMENDATION**

For information.



## **MEMORANDUM**

### **ITEM NO. V**

*Prepared by:* Ted Johnson

*Reviewed by:* Robb Whitaker

**DATE: NOVEMBER 8, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: CONTINUATION OF USGS CONTRACT - SEAWATER INTRUSION IN THE DOMINGUEZ GAP AREA OF THE WEST COAST BASIN**

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### **SUMMARY**

Last year, the Board authorized a contract with the United States Geological Survey (USGS) to perform detailed scientific investigations of seawater intrusion in the Dominguez Gap area to better define the groundwater flow system leading to the intrusion. The work includes evaluation of new data, geochemical modeling, transport modeling of seawater intrusion, additional stratigraphic analysis to determine intrusion pathways, and documentation of the results. A report was issued this year in cooperation with WRD titled "Ground-Water Quality of Coastal Aquifer Systems in the West Coast Basin, Los Angeles County, California".

The USGS proposal submitted last year was for a 3-year study, for which the Board approved funding for the first year only. Staff is now requesting funding for the second year. The total cost for Year 2 is \$215,500, of which USGS will provide Federal funding of \$90,500 leaving \$125,000 to be funded by WRD. Staff has included this amount in the current budget. Attached to this writeup is the progress report prepared by the USGS.

This investigation is very beneficial to the District in that we receive excellent, new technical information on the basins at a cost sharing with our USGS partner, and the investigation results have the potential to save considerably more money through reduced barrier injection water and/or costs and better management of the seawater intrusion problem.

### **FISCAL IMPACT**

\$125,000. This is a budgeted item.

### **STAFF RECOMMENDATION**

Recommend the Board continue the cooperative agreement with the USGS to investigate seawater intrusion in the Dominguez Gap area of the West Coast Basin.

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**Water Replenishment District-U.S. Geological Survey Study:  
Seawater Intrusion in the Dominguez Gap area of the West Coast  
Basin, Los Angeles County, California: Progress report for  
Federal Fiscal Year (FY) 2004 and Plans for FY 05**

In October 2003, the U.S. Geological Survey (USGS) initiated a new three-year phase of its cooperative study of the Central and West Coast ground-water basins with the Water Replenishment District of Southern California (WRD). The focus of this new phase has been on the management of seawater intrusion in the Dominguez Gap Area. Over the past year, we have conducted work on four main project elements: 1) evaluation of electromagnetic induction logs, 2) analysis of new geochemical data and geochemical modeling, 3) ground-water flow and transport modeling, and 4) stratigraphic analysis. Note that these work elements are slightly expanded from those listed in the original workplan. Progress on these elements over the past year is described below.

This document summarizes the work completed over the past year (FY04) and delineates the tasks to be completed in FY05.

### **Progress, FY 04**

In addition to the FY04 work on individual elements described below, we also have published a report summarizing the water-quality investigations we have conducted in the West Coast Basin over the past several years. The report, USGS Scientific



Investigations Report 2004-5067, "Ground-Water Quality of Coastal Aquifer Systems in the West Coast Basin, Los Angeles County, California, 1999-2002," was released on the web on September 10, 2004, and can be accessed at <http://pubs.water.usgs.gov/sir2004-5067/>

### **Evaluation of electromagnetic induction (EM) logs**

As part of previous work conducted cooperatively with WRD, the USGS conducted EM logs on 84 monitoring wells in the West Coast Basin. EM logs are valuable monitoring tools for assessing seawater intrusion. The EM conductivity is affected by physical properties of the geologic deposits and by the salinity of the pore water. When combined with other data, such as gamma logs, the EM data can be used to identify and monitor zones of poor-quality water through both blank and screened PVC casing.

Over the past year, we filtered and splined all EM conductivity and bulk natural gamma logs (GAMA) to create equally spaced (2 ft.) data sets. This data was then paired with all related water-chemistry samples (monitoring well and pore water) to compute new regressions between EM conductivity and chloride. This now provides a new basis to make regional estimates of seawater intrusion in three dimensions.

### **Analysis of new geochemical data and geochemical modeling**

Over the past year we have coordinated on collecting and analyzing water-quality samples from several of the recent constructed WRD-USGS monitoring sites, interpreted new chemical data collected from these wells, analyzed the minerals present in sediments

collected from the monitoring sites, worked with WRD on evaluation of the AES dewatering activities adjacent to the West Coast Basin Barrier Project, and begun geochemical modeling. We have completed water-quality analysis on samples collected from the WRD-USGS monitoring sites Norwalk-1 and Compton-1, and have interpreted new water quality data from WRD-USGS monitoring sites Carson-2, Long Beach-6, Long Beach-7, Cerritos-2, Compton-1, and Norwalk 1.

Preliminary results from the synthesis of water-chemistry, stable-isotope, and radiogenic data include the following. At Carson-2, water in all zones is of good quality and recharged in the Los Angeles Forebay more than 50 years ago. At Long Beach-6, water in most zones is colored and of good quality, with the exception of zone 1, which has elevated levels of iron and dissolved solids. Data indicate that water in all zones at this site originally recharged in the Montebello Forebay between several thousand to more than 10,000 years ago. At Long Beach-7, the shallowest zone is affected by seawater (10-15 percent seawater based on chloride and stable isotope data). Water all three underlying zones is thousands of years old; trace element and major-ion composition data suggest incipient seawater intrusion in the two intermediate zones.

At Cerritos-2, there are several interesting water-quality results. While most of the deep zones (zones 1,3,4, and 5) contain older “native” water, zone 2 (915-935 ft deep) appears to contain relatively recent water that emanates from spreading operations in the Montebello Forebay. Arsenic concentrations are somewhat elevated at this site. At Compton-1, water in all zones is over 50 years old (based on tritium data) and appears

to originate in the Los Angeles Forebay (based on stable isotope data). At Norwalk-1, only the deepest three zones have been sampled thus far. These zones all contain older, warmer water but have distinctive chemical compositions and sources of recharge.

We have evaluated the mineralogy of sediments from drill cuttings and cores using optical techniques, X-ray diffraction, and heavy-mineral separation technique. We also have analyzed the strontium isotope ratios of sediments and compared them with values determined for water samples.

We have worked with WRD on analyzing data from the AES dewatering operations. This involved evaluation of basic chemistry, stable-isotopes, and trace elements. We have begun geochemical modeling to assess the potentially important geochemical reactions and transformations that may affect strategies for barrier injection. We have incorporated geochemical data collected from the WRD-USGS wells, mineralogic characterization of the sediments, and information on the geochemical signatures of different source waters into the USGS program PHREEQC-I. So far, we have estimated the distribution of dissolved species and calculated the saturation indices for each water sample. We have simulated the pure mixing between fresh, native water, seawater, and imported water, as well as the reaction between Terminal Island Treatment Plant (TITP) water and known mineral phases. Initial work shows that water from the TITP is under saturated with respect to many mineral phases.

### **Ground-water flow and transport modeling**

Over the past year we have used the regional ground-water flow model to simulate the effects of alternative operation strategies for the West Coast Basin Barrier project, updated the regional flow model through water year 2003, converted the regional flow model to be consistent the most recent version of the USGS MODFLOW program (MODFLOW-2000), and begun development of a cross-sectional seawater intrusion transport model.

The regional ground-water flow model was used to test the effects of having seasonal variation in injection into the West Coast Basin Barrier Project. Working with WRD, we used the model to assess water level impacts of injecting more of the water during wet months. We applied particle tracking to look at the likely pathways of injection water under the different injection scenarios.

The regional ground-water flow model was updated to extend through water year 2003. This involved incorporating recent data on pumping, spreading, injection, and precipitation. As part of the updating, water level data from the 13 most recently drilled WRD-USGS monitoring sites were added to the 24 sites used in the original model development. In addition, modifications were made to the model input files to make them consistent with MODFLOW-2000, the most recent version of MODFLOW.

We have begun developing a two-dimensional cross-sectional model of seawater intrusion in the Dominguez Gap area, in order to test the implications of alternative assumptions regarding the hydrostratigraphy. We are using the USGS solute transport

code, SUTRA, for these simulations. So far we have run an initial, simplified steady state simulation that considers the aquifer systems as represented in the regional model. This will be the starting point from which to bring in increasing stratigraphic detail, in collaboration with the USGS geologists in the Earthquake Hazards and Coastal/Marine Geology groups in Menlo Park.

### **Stratigraphic analysis**

Our main stratigraphic activity in the past year has been estimating the stratigraphic surfaces in the vicinity of the Dominguez Gap Barrier Project. Working with the USGS Coastal/Marine geology group, we have compiled and processed all near-shore seismic data. These data were converted into stacked thicknesses and then combined to generate estimates of elevations of bottoms of major stratigraphic units. By using these estimates, along with stratigraphic picks from selected offshore oil wells and onshore monitoring and barrier wells, we have begun estimating the onshore and offshore distribution of the aquifer system boundaries that are used in the USGS regional ground-water flow model.

### **Plans, FY 05**

#### **Evaluation of electromagnetic induction (EM) logs**

In FY 05, we will use the linked chemical/geophysical database that we constructed over the past year to generate new three-dimensional representations of the seawater intrusion in the Dominguez Gap area. We will complete a draft paper summarizing the data compilation, processing, and analysis.

### **Analysis of new geochemical data and geochemical modeling**

In FY 05 we will coordinate with WRD to collect and evaluate water-quality samples from Norwalk-1 (zones 4 and 5), Gardena-2, and Long Beach-8. We also will sample for selected analytes from several targeted zones (PM-1, PM-3, Los Angeles-1, Huntington Park-1, Wilmington-2) to address some specific regional ground-water quality interests.

We will conduct limited additional mineral characterization of core material, including more detailed evaluation of strontium isotope data and a characterization of carbon-13/12.

In FY 05, the geochemical modeling tasks will consist of the following: 1) collect and evaluate additional information on the TITP source water; 2) conduct different mixing model analyses from different water types (native, imported, seawater) to match existing water-quality conditions; 3) refine the inverse approach to identify a reaction model(s) to quantify mass transfer between monitoring sites in the West Coast Basin; 4) apply reaction constraints to more precisely predict resulting water-quality conditions resulting from the injection of tertiary treated waste water from the Terminal Island Plant; and 5) examine possible reactions associated with intrusion of 'older' seawater.

### **Ground-water flow and transport modeling**

In FY 05, we will continue to apply the regional model to test out alternative ground-water management scenarios in the West Coast Basin. As part of this, we will utilize the newly developed USGS optimization module for MODFLOW-2000, GWM, to identify efficient strategies for injection, pumpage, in lieu deliveries, and aquifer storage projects.

We also will begin taking advantage of the new options available in MODFLOW-2000 for the regional model. In particular, we will begin converting the model to utilize the new Layer Property Flow Package to represent more detailed vertical layering.

Finally, we will continue work on the cross sectional solute transport modeling. We will build on the simplified simulations conducted in the past year. We will test alternative assumptions regarding hydraulic properties and stratigraphic conceptualizations. We will then incorporate components of the most recent sequence stratigraphic section now being developed by the USGS Geologic Division. The goal is to determine the key aspects of the updated stratigraphy and the associated hydraulic properties that must eventually be incorporated into a full three-dimensional transport model.

### **Stratigraphic analysis**

The stratigraphic surfaces developed over the past year, along with water quality data, will be imported into Earthvision, a program for visualizing and geologic

framework data. This will allow us to assess the relation between stratigraphic horizons and pathways of seawater intrusion. This work will be conducted in coordination with USGS geologists in Menlo Park, who are refining their detailed sequence stratigraphic analysis of the Dominguez Gap area and expanding their analysis to the other parts of the West Coast Basin.

### **Budget and Staffing**

The budget and planned staffing for FY05 are the same as laid out in the work plan from October 2003. The total cost of the FY05 work is \$215,5000. Federal matching funds and direct salary funding are \$90,500. Total funding requested from WRD for FY05 is \$125,000.





## **MEMORANDUM**

### **ITEM NO. VII**

*Prepared by:* Nancy Matsumoto

*Reviewed by:* Ted Johnson

**DATE: NOVEMBER 8, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: 2004 NATIONAL GROUND WATER ASSOCIATION CONVENTION**

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### **SUMMARY**

The 56<sup>th</sup> annual National Ground Water Association convention will be held on December 12-15, 2004, in Las Vegas, Nevada. This annual convention provides an excellent opportunity for District staff to acquire current industry information, and to keep abreast of emerging issues and technology. Benefits to the District include:

- Reviewing the latest developments and research in the groundwater industry
- Participating in workshops for skills development
- Interacting with thousands of groundwater professionals from across the United States and around the world
- Perusing an exhibition of the latest groundwater equipment and technology
- Exploring opportunities to discuss basin management practices and issues with other basin managers from around the country

Information about the convention and a program of presentations and workshops is attached. Estimated expenses to attend the conference are about \$1,500 per person. We anticipate up to four technical staff members attending this important annual event.

### **FISCAL IMPACT**

Estimated expenses to attend the convention are about \$1,500 per person and are in the FY 2004/05 budget.

### **STAFF RECOMMENDATION**

Recommend the Board authorize the attendance of up to four technical staff members at the National Ground Water Association Convention, to be held on December 12-15, 2004, in Las Vegas, Nevada.



## **MEMORANDUM**

### **ITEM NO. VIII**

*Prepared by:* Jason Weeks

*Reviewed by:* Mario Garcia

**DATE: NOVEMBER 8, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: STRATEGIC PLAN REVIEW**

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#### **SUMMARY**

On September 3, 2003, the WRD Board of Directors adopted the District's Strategic Plan. The adoption of this plan was the culmination of extensive meetings with the District's stakeholders and the Ad Hoc WRD Strategic Plan/CIP Committee in which input was compiled into a series of goals, objectives and associated projects.

As part of the Strategic Plan development process, the Board was presented with the Strategic Plan Update Cycle, which provides for a revisit of the Strategic Plan on an annual basis. If a determination is made that significant changes have occurred within the basins, the process of performing a formal update to the plan will commence. Since the plan was adopted just over a year ago and basin conditions have remained relatively status quo, it is the District staff's recommendation that a formal update to the plan be deferred until a later time.

In June 2004, the California Bureau of State Audits released its third and final report on the District. One of its recommendations was that the District assign measurable outcomes from which progress can be measured in achieving specified goals and objectives. While these outcomes were not specifically identified in the Strategic Plan, they were included to some extent in the development of the District's Capital Improvement Program, which also included a schedule showing anticipated completion dates for the capital projects. The CIP, however, is limited only to the capital components associated with achieving the District's goals and objectives. The development of measurable outcomes for goals such as providing basin replenishment that deal more with operational functions of the District should be carefully evaluated by the District's Ad Hoc Strategic Plan/CIP Committee. Additionally, the ongoing discussions associated with the Conjunctive Use Working Group will directly impact many of the potential measurable outcomes associated with the various goals and objectives. For this reason, it is Staff's recommendation that a formal strategic plan update be deferred until mid-2005, at which time measurable outcomes will be identified and included within the updated plan.

#### **FISCAL IMPACT**

None.

#### **STAFF RECOMMENDATION**

Initiate a formal update to the District's Strategic Plan in mid-2005 and include measurable outcomes for specific goals and objectives.



## **MEMORANDUM**

### **ITEM NO. IX**

*Prepared by:* Jason Weeks

*Reviewed by:* Mario Garcia

**DATE: NOVEMBER 8, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: WBMWD RECYCLED WATER EXPANSION UPDATE**

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### **SUMMARY**

WBMWD staff will provide the Committee with an update on the expansion of its recycled water facility. When this facility is completed, the District will purchase an additional 5,000 acre-feet per year of advanced treated recycled water from WBMWD to satisfy demands at the West Coast Basin Barrier.

### **FISCAL IMPACT**

None.

### **STAFF RECOMMENDATION**

For information.



## MEMORANDUM

ITEM NO. X

*Prepared by:* Jason Weeks

*Reviewed by:* Mario Garcia

**DATE: NOVEMBER 8, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: WEST COAST BASIN OPERATING PLAN**

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### SUMMARY

The contract to conduct the above-entitled study was approved by the WRD Board at its October 6 meeting. Since then, staff has finalized the contract with CH2M Hill and is coordinating initial activities and meetings. The project kick-off meeting was held at the District office on October 26<sup>th</sup> whereupon the objectives of the study, proposed approach and project schedule were reviewed and agreed upon.

District staff and the CH2M Hill project manager, Terry Foreman, will provide the Committee with a summary of the discussion at the kick-off meeting.

### FISCAL IMPACT

None.

### STAFF RECOMMENDATION

For information.



## **MEMORANDUM**

### **ITEM NO. XI**

*Prepared by:* Mario Garcia

*Reviewed by:*

**DATE: NOVEMBER 8, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: WB-28 SERVICE CONNECTION**

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### **SUMMARY**

The WB-28 service connection delivers imported water from MWD's system to the West Coast Basin Barrier Project (WCBBP). Over the past several months, the District has incurred low flow penalties at the connection due to flow rates at the connection falling below 10% of the rated meter capacity of 160 cubic feet per second (cfs).

Staff has investigated the situation and discovered that there are several elements that have contributed to the low demand through WB-28, not the least of which is modification work at the barrier by L.A. County Department of Public Works (LACDPW). Last month, staff sent a letter (attached) to West Basin Municipal Water District (WBMWD) formalizing a request for relief from the low flow penalty and finding a long term solution for the problem.

Although it is uncertain whether or not the penalty can ultimately be waived, staff is working with WBMWD, MWD, and LACDPW to resolve the problem as quickly as possible. A meeting has been scheduled for the morning of November 8, so an update should be provided at the afternoon Committee meeting.

### **FISCAL IMPACT**

For invoices through September 2004, penalties have totaled \$141,648.

### **STAFF RECOMMENDATION**

For information.

## MEMORANDUM

ITEM NO. XII

Prepared by: Paul Fu

Reviewed by: Mario Garcia

DATE: NOVEMBER 8, 2004

TO: WATER RESOURCES COMMITTEE

FROM: ROBB WHITAKER, GENERAL MANAGER

SUBJECT: AMENDED AND RESTATED AGREEMENT WITH ORANGE COUNTY WATER DISTRICT FOR THE PURCHASE OF RECYCLED WATER PRODUCED BY THE LEO J. VANDER LANS WATER TREATMENT FACILITY

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### SUMMARY

WRD and the Orange County Water District (OCWD) entered into a Recycled Water Purchase Agreement relating to the Alamitos Barrier Recycled Water Facility dated March 17, 1999. Based on the Agreement, the parties set forth terms and conditions under which WRD agreed to sell, and OCWD agreed to purchase, recycled water produced by the WRD water reclamation facility formerly known as the Alamitos Barrier Reclaimed Water Project and now known and renamed as the Leo J. Vander Lans Water Treatment Facility. WRD and OCWD desire to provide for the long term use of recycled water for injection into the Alamitos Seawater Barrier, thereby fulfilling their joint responsibilities for the conservation of natural resources.

It is recommended that WRD and OCWD amend and restate the prior Agreement to reflect certain circumstances that have a material effect on the prior Agreement and to incorporate those circumstances into the attached Agreement (with strikeout and insertion highlighted).

The main reasons for the amended/restated agreement are:

- x Changed location of flow measurement at Point A (revised Exhibit A and the formula in Article 7 for calculating quantity of recycled water purchased)
- x Changed the supplier of imported water to Long Beach Water Department (Previous supplier was Central Basin Municipal Water District) and redefined the effective rate in Article 5 for OCWD to purchase recycled water from WRD

District Counsel has reviewed the proposed changes and his comments have been addressed in the current draft.

### FISCAL IMPACT

The price for the recycled water is tied to the rate for imported water at the barrier. Because the rate at which barrier water purchased from Long Beach Water Department is less than the rate from Central Basin MWD, the price for the recycled water will drop accordingly. The estimated price differential between the current CBMWD rate (\$467/AF) and the LBWD effective rate (\$453.60/AF) is \$13.40/AF.

Based on historical usage by OCWD (23%-35% of total barrier injection) and the expected output of the Vander Lans facility (3,024 AFY), the revenue generated by recycled water sales will be lessened by \$9,000 to \$15,000 per year. This accounts for about 3% of total recycled water sales to OCWD.

STAFF RECOMMENDATION

Recommend the Board approve the Amended and Restated Recycled Water Purchase Agreement with the Orange County Water District.

**AMENDED AND RESTATED AGREEMENT BETWEEN**  
**THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA AND THE**  
**ORANGE COUNTY WATER DISTRICT FOR THE PURCHASE OF**  
**RECYCLED WATER PRODUCED BY**  
**THE LEO J. VANDER LANS WATER TREATMENT FACILITY (FORMERLY KNOWN**  
**AS THE ALAMITOS BARRIER RECLAIMED WATER PROJECT**

This Amended and Restated Agreement (“Agreement”) is made and entered into this \_\_\_ day of \_\_\_\_\_, 2004, by and between the Water Replenishment District of Southern California, a water replenishment district formed under Division 18 of the California Water Code (hereinafter “WRD”), and Orange County Water District, a public entity formed under the Orange County Water District Act (hereinafter “OCWD”), collectively, the “Parties.”

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**RECITALS**

A. WRD and OCWD entered into the Recycled Water Purchase Agreement relating to The Alamitos Barrier Reclaimed Water Project dated March 17, 1999 (the “Prior Agreement”), whereby WRD agreed to sell, and OCWD agreed to purchase, recycled water produced by the WRD water reclamation facility formerly known as the “Alamitos Barrier Reclaimed Water Project” and now known as renamed as the “Leo J. Vander Lans Water Treatment Facility” (“Plant”) which has been constructed in the City of Long Beach, County of Los Angeles, California.

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B. WRD and OCWD desire to amend and restate the Prior Agreement to reflect certain circumstances that have a material effect on the Prior Agreement and to incorporate those circumstances into this Agreement.

C. Due to certain natural hydrological conditions, seawater has in the past intruded, and continues to threaten to intrude, into the Central Groundwater Basin of Los Angeles County (for which WRD is responsible) and the Orange County Groundwater Basin (for which OCWD is responsible).

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D. In an effort to prevent such seawater intrusion into the above-referenced groundwater basins, the Alamitos Barrier (hereafter referred to as the “Barrier”), an engineered freshwater pressure ridge and seawater trough, was constructed and has been operated by the County of Los Angeles. The Barrier is presently operated by the Los Angeles County Department of Public Works.

E. WRD is authorized to sell water, and OCWD is authorized to buy water, in order to prevent contaminants, such as seawater, from entering the groundwater supplies of each district and to otherwise protect the groundwater in each district.

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F. WRD and OCWD have each been purchasing potable imported surface water to inject into the Barrier to protect their respective groundwater basins from seawater intrusion.

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G. WRD's Plant is capable of supplying recycled water, rather than potable imported surface water, to be injected into the Barrier to prevent seawater intrusion into the WRD and OCWD groundwater basins, thereby conserving that potable imported water.

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H. WRD and OCWD desire to provide for the long term use of recycled water for injection into the Barrier, thereby fulfilling their joint responsibilities for the conservation of natural resources.

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I. The potable water injected into the Barrier is supplied by the Long Beach Water Department (hereinafter, "LBWD") through its LB-07A connection.

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J. OCWD wishes to purchase from WRD, and WRD wishes to sell to OCWD, all or part of the recycled water to be produced at the Plant for injection water to maintain the Barrier.

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AGREEMENT

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NOW, THEREFORE, in consideration of the facts recited above and the covenants, conditions and promises contained herein, the parties agree as follows:

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1. Amendment and Restatement of Prior Agreement. This Agreement shall supersede and replace the Prior Agreement in its entirety and the Prior Agreement shall have no force or effect at law or in equity.

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2. Commencement and Term of Agreement. This Agreement shall commence when the Plant commences operation (the "Effective Date"). This Agreement shall have a term of thirty (30) years, and may be extended upon agreement of the Parties. The Parties agree to meet and confer in good faith to negotiate an extension of this Agreement at least twelve (12) months prior to expiration of this Agreement.

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3. Agreement to Purchase Water. To the extent water produced by the Plant is suitable to be injected into the Barrier, OCWD agrees to purchase such amounts of recycled water, in accord with regulatory limits, that are injected into the Barrier through the injection wells OCWD operates in Orange County. To the extent recycled water produced by the Plant exceeds the amounts required by OCWD for use at its injection wells, OCWD shall not be obligated to take delivery nor pay for such water. In such case, WRD shall be free to market such water to third parties or to make use of such water itself.

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4. Quality of Water to be Purchased by OCWD.

4.1 WRD agrees to use its best efforts to ensure that all water delivered to OCWD hereunder conforms to the requirements established from time to time by those regulatory agencies having jurisdiction over the Plant and the Barrier. All water delivered to OCWD hereunder shall meet all applicable regulatory standards.

4.2 In the event OCWD is prohibited (a) by order of any regulatory agency having jurisdiction over OCWD's operations at the Barrier, or (b) by the adoption of any statute or law, or the promulgation of any regulation or directive binding upon OCWD, from using recycled water delivered by WRD at the Barrier, OCWD shall be excused from its obligation to purchase recycled water from WRD pursuant to the terms of this Agreement.

4.3 The Parties recognize that factors beyond their control could cause operational difficulties at the Plant and/or at the Barrier. In such events, the Parties may agree to temporarily suspend delivery of recycled water to the Barrier by WRD. In such event, the Parties shall use their best efforts to re-establish operation of their respective facilities, and to re-establish delivery of recycled water to the Barrier in accordance with the terms of this Agreement. The Parties hereby waive any right either may have to recover damages from the other attributable to such interruption of operations outside the control of the Parties.

4.4 OCWD agrees to indemnify and hold harmless WRD, its officers, directors, agents and employees from and against any and all claims, demands, loss, liability, costs, damages, causes of action (whether legal, equitable or administrative), fees of attorneys and other expenses arising out of any negligent act or omission of OCWD. WRD shall indemnify and hold harmless OCWD, its officers, directors, agents and employees from and against any and all claims, demands, loss, liability, costs, damages, causes of action (whether legal, equitable or administrative), fees of attorneys and other expenses arising out of any negligent act or omission of WRD.

5. **Purchase Price of Water.** OCWD shall pay WRD for all water purchased under Paragraph 3, above, at the “Effective LBWD Rate,” which is defined as the actual cost charged to LBWD by MWD with respect to the LB-07A service connection for injection of water into the Barrier, including all MWD-related charges however they may be defined, surcharges and credits, plus a per acre foot amount equivalent to the LBWD administrative fee charged for each acre foot of water delivered to the LB-07A service connection. If anytime after ten years from the Effective Date of this Agreement the LBWD Effective Rate is more than 10 percent higher than the unit project costs, as presented in the Annual Report cited in Paragraph 10, below, WRD and OCWD shall negotiate in good faith a new purchase price of the recycled water.

6. **Payment Terms.** WRD shall invoice OCWD within thirty (30) days of the end of each month for the cost of the recycled water delivered to OCWD's facilities for injection into the Barrier. Said invoices shall be paid within thirty (30) days after the date of receipt of the invoice by OCWD. Payments made after forty-five (45) days after the date of the receipt of the invoice shall be subject to a 1% per month interest charge for the outstanding unpaid amount.

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**7. Metering and Measurement of Flows.** The Points cited in this section are depicted on the diagram attached hereto as "Exhibit A". and are defined as follows:

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Point A: Located at the junction of the barrier supply pipeline and the barrier distribution pipeline. There is no meter at this point, as it is a geographic marker that serves to define facility ownership between OCWD and LACDPW.

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Point B: A meter on the barrier distribution pipeline on the east levee of the San Gabriel River levee.

Point C: A meter on the barrier distribution pipeline located just south of injection well 34L.

Point L: An MWD meter located at LBWD's LB-07A connection.

Point W: A WRD meter that measures flow from the Leo J. Vander Lans Water Treatment Facility to the barrier supply pipeline.

By way of reference, the locations of Points A, B and C described above are shown in "Exhibit A" of the Agreement for Cooperative Implementation of Alamitos Barrier Project, as amended, dated July 7, 1964 between the Los Angeles County Flood Control District and the Orange County Water District.

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The volume of recycled water delivered to OCWD during a given month shall be determined by the following formula:

$$V_{OC} = V_{WY} \times (V_B + V_C) / 2 (V_L + V_W)$$

where:

$V_{OC}$  = monthly volume of recycled water delivered to OCWD

$V_L$  = monthly volume of all potable water delivered to Barrier as measured at Point "A"

$V_B$  = monthly volume of all water (potable and recycled) through Point "B"

$V_C$  = monthly volume of all water (potable and recycled) through Point "C"

$V_W$  = monthly volume of all recycled water delivered to Barrier as measured through Point "D"

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The meters that measure the flow through Point B and Point C are maintained, read and reported by the Los Angeles County Department of Public Works, consistent with an Agreement for Cooperative Implementation of Alamitos Barrier Project, as amended, dated July 7, 1964 between the Los Angeles County Flood Control District and the Orange County Water District. The meter that measures the flow through Point L is maintained, read and reported by the Metropolitan Water District of Southern California. The meter that will measure the flow through Point "W" will be maintained, read and reported by WRD.

**8. Limitation of Use.**

**8.1** OCWD understands and agrees that the recycled water delivered from the Plant to its facilities for injection into the Barrier pursuant to the terms of this Agreement has limited

uses, and OCWD agrees to use said water for only those uses or purposes which are legally permissible under the laws of the State of California and the directives of the California Water Quality Control Board and the Department of Health Services, or any other regulatory agency having jurisdiction over OCWD's use of recycled water; provided, however, that the Parties acknowledge that the purpose of this Agreement is to provide recycled water for injection into the Barrier, and WRD assumes the responsibility for assuring that the use of all recycled water delivered under this Agreement shall be legally permissible under the laws of the State of California and the directives of the California Water Quality Control Board and the Department of Health Services, or any other regulatory agency having jurisdiction over the injection of reclaimed water into the affected groundwater basins.

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**8.2** This Agreement covers the delivery of recycled water only. It does not cover the delivery of potable water. This Agreement applies only to the Alamitos Barrier and shall not apply to any other barriers. OCWD is precluded from using the recycled water delivered under the terms of this Agreement for any use other than at the Alamitos Barrier.

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**9. Assignment.** Neither this Agreement nor any rights secured hereby shall be assigned by either Party hereof without the prior written express consent of the other Party hereto.

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**10. Annual Report.** Within 60 days after the end of each fiscal year (June 30) WRD shall send OCWD a report describing the operations of the Plant; volume of recycled water injected into the barrier; and a summary of total annual project costs that includes (but are not limited to) amortized capital expenditures, water purchases, operations, maintenance, equipment replacement, water quality monitoring, and residuals disposal. The total annual project costs divided by the annual volume of recycled water injected shall constitute the unit project costs for that year.

**11. Notices.** All Notices pursuant to this Agreement shall be addressed to WRD or OCWD as set forth below, or as WRD or OCWD may hereafter designate in writing, and shall be sent through the United States Mail, duly registered or certified, return-receipt requested, with postage prepaid thereon.

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TO WRD:

General Manager  
Water Replenishment District of Southern California  
12621 East 166th Street  
Cerritos, CA 90703

Copy to:

Weston, Benshoof, Rochefort, Rubalcava & MacCuish  
333 South Hope Street, 16<sup>th</sup> Floor

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TO OCWD:

General Manager  
Orange County Water District  
10500 Ellis Avenue  
Fountain Valley, CA 92728-8300

**12. Attorneys' Fees.** In any action, at law or in equity, seeking to enforce or interpret any term or provision of this Agreement, or to collect any portion of any amount payable under this Agreement, then the prevailing Party shall be entitled to recover reasonable attorneys' fees in addition to any other relief granted to which the prevailing Party would otherwise be entitled.

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**13. Integrated Agreement.** This Agreement constitutes the entire agreement of the Parties hereto, and there are no understandings or agreements except as herein stated.

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*[Signatures on Following Page]*

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IN WITNESS WHEREOF, the Parties have executed this agreement on the date set forth above.

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**WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

\_\_\_\_\_  
*Signature* \_\_\_\_\_ *Signature*

Willard H. Murray, Jr. \_\_\_\_\_ Albert Robles \_\_\_\_\_  
President, Board of Directors \_\_\_\_\_ Secretary, Board of Directors \_\_\_\_\_

**Approved As To Form**  
**WESTON, BENSHOOF, ROCHEFORT,**  
**RUBALCAVA & MACCUISH, LLP**

\_\_\_\_\_  
Attorneys for the Water Replenishment  
District of Southern California

**ORANGE COUNTY WATER DISTRICT**

\_\_\_\_\_  
*Signature* \_\_\_\_\_ *Signature*

Denis R. Bilodeau \_\_\_\_\_ Virginia Grebbien \_\_\_\_\_  
President, Board of Directors \_\_\_\_\_ General Manager \_\_\_\_\_

**Approved As To Form**  
**RUTAN & TUCKER, LLP**

\_\_\_\_\_  
Attorneys for the Orange County

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By: \_\_\_\_\_

Its: \_\_\_\_\_

APPROVED AS TO FORM:

LAGERLOF, SENECA, BRADLEY, GOSNEY & KRUSE, LLP

By: William F. Kruse

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**WATER DISTRICT**¶

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**APPROVED AS TO FORM:**¶

By: \_\_\_\_\_¶

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Central Basin Municipal Water District's Seawater Barrier Rate or successor rate

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