

**MEETING OF THE BOARD OF DIRECTORS  
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA  
4040 PARAMOUNT BOULEVARD, LAKEWOOD, CALIFORNIA 90712**

**9:00 A.M., FRIDAY, DECEMBER 19, 2008**

**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" 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. PLEDGE OF ALLEGIANCE**

**3. ADDITIONAL ITEMS TO AGENDA**

Determine the need to add items to the agenda. In order for the Board to add an item to the agenda it must make a determination that: (i). The item came to the attention of the Board after the posting of the agenda; (ii). That there is a need for immediate action to be taken by the Board. If these two tests are met, the Board may add the item in question to the agenda for consideration consistent with the provisions of the Brown Act.

**4. PUBLIC COMMENT**

**5. CONSENT CALENDAR**

Consent Calendar items are considered routine by the Board of Directors and will be adopted by one motion. There will be no separate discussion of these items unless a Board Member so requests, in which event the item will be removed from the Consent Calendar and considered separately immediately following action on the remaining items.

**A. MINUTES OF THE MEETING OF OCTOBER 17, 2008**

**B. MINUTES OF THE OCTOBER 17, 2008 SPECIAL MEETING OF THE SOUTHERN CALIFORNIA WATER REPLENISHMENT FINANCING CORPORATION**

**C. EXPENSES OVER 90 DAYS**

Finance Committee Recommendation: Approve the expense reimbursements for payment.

- D. TRAVEL REQUEST – WASHINGTON, D.C.**  
Finance Committee Recommendation: Approve retroactively Vice President Lillian Kawasaki's out-of-state travel request to attend congressional and other legislative meetings in Washington, D.C., December 10-12, 2008.
- E. NO-COST TIME EXTENSION FOR AGREEMENT WITH NELLOR ENVIRONMENTAL ASSOCIATES, INC.**  
Water Resources Committee Recommendation: Extend the termination date for the agreement with Nellor Environmental Associates, Inc, to December 31, 2009.
- F. CONTRACT AMENDMENT FOR RECYCLED WATER MODELING AT THE DOMINGUEZ GAP BARRIER – GOLDER ASSOCIATES**  
Water Resources Committee Recommendation: Extend the termination date for the agreement with Golder Associates to December 31, 2009 and add \$13,400 to the contract amount for additional modeling services.
- G. SOUTH BAY CITIES COUNCIL OF GOVERNMENTS 10<sup>TH</sup> ANNUAL GENERAL ASSEMBLY SPONSORSHIP**  
External Affairs Committee Recommendation: Increase the budgeted amount by \$1500 for the SBCCOG Annual event for a total of \$2,500.
- H. THE CALIFORNIA LATINO LEGISLATIVE CAUCUS INSTITUTE FOR PUBLIC POLICY – POLANCO FELLOWS**  
External Affairs Committee Recommendation: Contribute \$8,000 to the Richard G. Polanco public policy fellows program.
- 6. GROUNDWATER BASIN UPDATE**  
Water Resources Committee Recommendation: For information.
- 7. SOUTH MONTEBELLO IRRIGATION DISTRICT (SMID) WELL MODIFICATION**  
Water Resources Committee Recommendation: Enter into an agreement with General Pump Company, subject to approval of form by District Counsel, to perform well modification work to South Montebello Well #3 for an amount not to exceed \$60,000.
- 8. U.C. SANTA BARBARA 2009 RIO HONDO GROUNDWATER TRACER RESEARCH PROJECT**  
Water Resources Committee Recommendation: Enter into an agreement with the University of California Santa Barbara, subject to approval of form by District Counsel, for the 2009 Rio Hondo Groundwater Tracer Research Project.
- 9. SUPPORT REAPPOINTMENT OF FRANCES SPIVY-WEBER TO THE STATE WATER RESOURCES CONTROL BOARD**  
External Affairs Committee Recommendation: Support the reappointment of Frances Spivy-Weber to the State Water Resources Control Board.

10. **PROJECT LABOR AGREEMENTS RESOLUTION**  
*External Affairs Committee Recommendation:* Adopt Resolution No. 08-838.
11. **WRD HISTORY REPORT**  
*Staff Recommendation:* For information.
12. **LEGISLATIVE REPORT**  
*External Affairs Committee Recommendation:* For information.
13. **GENERAL MANAGER'S REPORT**
14. **DISTRICT COUNSEL REPORT**
15. **COMMITTEE REPORTS**
16. **AB 1234 COMPLIANCE REPORTS AND DIRECTORS' REPORTS**
17. **WRD BOARD MEETING DATES**
  - A. January 16, 2009 – 9:00 a.m. – Board of Directors Meeting
  - B. February 20, 2009 – 9:00 a.m. – Board of Directors Meeting
  - C. March 20, 2009 – 9:00 a.m. – Board of Directors Meeting
18. **CLOSED SESSION**
  - A. Conference with Legal Counsel – Existing Litigation, pursuant to Government Code § 54956.9(a), California Water Service Company, et al. City of Compton, et al., Case No. 506 806
  - B. Conference with Legal Counsel – Existing Litigation, pursuant to Government Code § 54956.9(a), Central and West Basin Water Replenishment District v. Charles Adams; L.A.S.C. Case No. 786,656
  - C. Public Employee Performance Evaluation, pursuant to Government Code §54957  
Title: General Manager
19. **ADJOURNMENT**

Agenda posted by Abigail C. Andom, Deputy Secretary, December 16, 2008.

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](http://www.wrd.org).

**UNAPPROVED  
MINUTES**

**UNAPPROVED  
MINUTES**

**MINUTES OF OCTOBER 17, 2008  
MEETING OF THE BOARD OF DIRECTORS  
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

A regular meeting of the Board of Directors of the Water Replenishment District of Southern California was held on October 17, 2008 at 9:08 a.m. in the District office located at 4040 Paramount Boulevard, Lakewood, California. President Robert Katherman called the meeting to order. Deputy Secretary Abigail C. Andom recorded the minutes.

**1. DETERMINATION OF A QUORUM**

The President declared that a quorum of Directors was present, which in addition to himself included Directors Sergio Calderon, Lillian Kawasaki, and Albert Robles. Director Willard H. Murray, Jr. was excused.

**2. PLEDGE OF ALLEGIANCE**

Jack Vander Linden, City of Torrance, led the pledge of allegiance.

**3. ADDITIONAL ITEMS TO THE AGENDA**

None.

**4. PUBLIC COMMENT**

None.

**5. CONSENT CALENDAR**

- A. MINUTES OF THE SPECIAL MEETING OF AUGUST 8, 2008**
- B. MINUTES OF THE MEETING OF AUGUST 15, 2008**
- C. DEMANDS – AUGUST 31, 2008**
- D. FINANCIAL STATEMENTS – JUNE 30, 2008**
- E. INVESTMENT REPORT FOR THE PERIOD ENDING JUNE 30, 2008**
- F. CONSIDERATION OF RESOLUTION NO. 08- 834– A JOINT RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES ACTING IN BEHALF OF LOS ANGELES COUNTY GENERAL FUND, LOS ANGELES COUNTY FLOOD CONTROL, THE**

**BOARD OF DIRECTORS OF COUNTY SANITATION DISTRICT NO. 3 OF LOS ANGELES COUNTY, AND THE GOVERNING BODIES OF GREATER LOS ANGELES COUNTY VECTOR CONTROL DISTRICT, CITY OF LONG BEACH, AND THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA APPROVING AND ACCEPTING NEGOTIATED EXCHANGE OF PROPERTY TAX REVENUES RESULTING FROM ANNEXATION TO COUNTY SANITATION DISTRICT NO. 3 – ANNEXATION NO. 31**

- G. CONSIDERATION OF RESOLUTION NO. 08- 835 – A JOINT RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES; THE BOARD OF DIRECTORS OF THE GREATER LOS ANGELES COUNTY VECTOR CONTROL DISTRICT; THE BOARD OF DIRECTORS OF THE COUNTY SANITATION DISTRICT NO. 18 OF LOS ANGELES COUNTY (COUNTY SANITATION DISTRICT NO. 18); AND THE BOARD OF DIRECTORS OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA APPROVING AND ACCEPTING THE NEGOTIATED EXCHANGE OF PROPERTY TAX REVENUES RESULTING FROM ANNEXATION OF L 004-2006 TO COUNTY LIGHTING MAINTENANCE DISTRICT 1687**
- H. EXPENSES OVER 90 DAYS**
- I. JANITORIAL SERVICES CONTRACT**
- J. WESTON BENSHOOF/ALSTON & BIRD CONTRACT AMENDMENT**
- K. AMERICAN WATER WORKS ASSOCIATION RESEARCH FOUNDATION RENEWAL**
- L. TRAVEL REQUEST – CARPE DIEM WESTERN WATER AND CLIMATE CHANGE PROJECT**

Upon a motion duly made by Director Robles, seconded by Director Calderon, and unanimously approved, it was

**RESOLVED:** The Board approves the Consent Calendar of October 17, 2008 as submitted.

**6. DEBT FINANCING ISSUANCE – CONSIDERATION OF RESOLUTION NO. 08-836 – A RESOLUTION OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA APPROVING AN INSTALLMENT PURCHASE AGREEMENT, A TRUST AGREEMENT, A CERTIFICATE PURCHASE AGREEMENT, A CONTINUING DISCLOSURE AGREEMENT AND AN OFFICIAL STATEMENT; MAKING CERTAIN DETERMINATIONS RELATING THERETO; AND AUTHORIZING CERTAIN OTHER ACTIONS IN CONNECTION THEREWITH**

Chief Financial Officer Scott Ota provided an overview of the bond financing process, identifying the District's financing team, their roles and responsibilities, the potential size of the bond issuance, importance of credit rating, and the impact of the bond issuance to the replenishment assessment. Mr. Ota noted that the District's replenishment assessment would have been approximately \$173/acre-foot for fiscal year 2008-09 without debt financing.

Jack Vander Linden, City of Torrance, stated that the City supports WRD's debt issuance and believes the action is consistent with good business practice.

Jim Glancy, City of Lakewood and Chair of WRD's Technical Advisory Committee (TAC), stated that he would like to confirm that the projects identified in the bond issuance were long-term projects vetted and recommended by the TAC. He noted that the only variance may be on the Wellhead Treatment Projects which the TAC had recommended as pay-go but realizing the investments the District had made in the building and other additional costs, he understands why staff would want to proceed with the bond financing at this time. Mr. Glancy stated that he would like to thank and applaud the Board for its vision into looking at other opportunities and sources of local water supply and making the necessary investment to make that happen.

Upon a motion duly made by Director Calderon, seconded by Director Kawasaki and by roll call vote, it was

RESOLVED: The Board adopts Resolution  
No. 08-836.

AYES: Directors Calderon, Katherman,  
Kawasaki, Robles

NOES: None

ABSENT: Director Murray

#### RESOLUTION NO. 08-836

A RESOLUTION OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA APPROVING AN INSTALLMENT PURCHASE AGREEMENT, A TRUST AGREEMENT, A CERTIFICATE PURCHASE AGREEMENT, A CONTINUING DISCLOSURE AGREEMENT AND AN OFFICIAL STATEMENT; MAKING CERTAIN DETERMINATIONS RELATING THERETO; AND AUTHORIZING CERTAIN OTHER ACTIONS IN CONNECTION THEREWITH

(Reference is hereby made to Resolution No. 08-836 in the Draft Resolution file and by this reference is incorporated herein and included a part hereof as though fully set forth at length.)

The Board recessed at 9:30 a.m. to convene the special meeting of the Southern California Water Replenishment Financing Corporation. The Board reconvened at 9:35 a.m.

Director Kawasaki stated that she would like to thank the debt-financing team for all their hard work. President Katherman concurred and added that the action the Board took today is another step towards fulfilling the District's mission of looking for safe, reliable, high quality water supply.

#### **7. UPDATE ON THE GROUNDWATER BASINS**

Chief Hydrogeologist Ted Johnson stated that he is pleased to report that WRD received an estimated 11,000 acre-feet of reservoir release water from Morris Dam at no cost to the District. Mr. Johnson noted that if the water was purchased as imported water for replenishment through

Metropolitan Water District (MWD), the water would have cost nearly \$3,000,000.

Mr. Johnson explained that WRD staff has been working with the Los Angeles County Department of Public Works (DPW) and the San Gabriel Valley Protective Association (SGVPA) to receive storm water captured from last winter's precipitation behind Morris Dam in the San Gabriel Mountains. The intent was to release the water from the dam and share it between the Main San Gabriel Basin (MSGB) and the Central Basin. He noted that thanks to careful pre-planning and creative operational changes by the DPW during this imported water shortage, the water was available for groundwater replenishment. Mr. Johnson expressed the District's appreciation to the DPW for modifying their reservoir operating plans to allow for the water to be stored and eventually released and to the SGVPA for recognizing that the water should be shared with the groundwater basins that exist along the path of the San Gabriel River.

Jim Glancy, City of Lakewood, thanked Mr. Johnson for his excellent presentation. Mr. Glancy stated that it was a great learning experience for all the agencies involved – the San Gabriel Valley Protective Association, the County Public Works, and WRD. He noted that the water made available would be of tremendous help in offsetting the unavailability of imported water at any price.

General Manager Whitaker thanked Mr. Glancy for his assistance in helping secure the water as a member of the San Gabriel Valley Protective Association.

**8. WATEREUSE FOUNDATION MEMBRANE RESEARCH PROJECT**

Upon a motion duly made by Director Robles, seconded by Director Calderon, and unanimously approved, it was

RESOLVED: The Board (1) approves the co-funding agreement with Watereuse Foundation to contribute \$125,000 to the proposed Phase 1 membrane research project. (Actual WRD expense is \$75,000 after cost sharing with USGVMWD and LACSD.)

(2) approves a cash contribution of \$75,000 to share the costs with USGVMWD and LACSD to conduct the Phase 2 membrane research at SJCWRP.

**9. LEED CERTIFICATION FOR ADMINISTRATION BUILDING**

Chief Engineer Bob Siemak stated that WRD is seeking Leadership in Energy and Environmental Design (LEED) green building certification for the District's administration building under the U.S. Green Building Council's (USGBC) system for existing buildings. Mr. Siemak noted that the action reflects the District's commitment to sustainability and environmental stewardship. He explained that a LEED consultant is required to assist staff and provide guidance to perform the effort. A total of 45 request for proposals were sent out to a group of consultants and referrals. Five proposals were received, a short-list was developed, and interviews were conducted.

Mr. Siemak stated that the selection group rated Gensler as the most qualified firm for the project based on the proposed team, experience, approach, and interview scores.

Director Robles stated that he would abstain from participating in the discussions due to a potential conflict of interest. He explained that his sister works as an architect for Gensler and due to his current employment work load he was not aware of the item before the Board. Due to an

abundance of caution, he asked to be excused from the discussion and left the meeting during consideration of this item.

Director Kawasaki clarified that the project involves two phases and she wanted staff to authorize the consultant to proceed initially with Phase 1 which involves analysis and assessment. The Phase 2 work involves documentation and commissioning should WRD elect to move forward with the certification. Director Kawasaki noted that the Board needs to review the findings of Phase 1 before the consultant moves into the second phase of the study.

Upon a motion duly made by Director Kawasaki, seconded by Director Calderon, and by roll call vote, it was

RESOLVED: The Board awards a contract to Gensler, subject to approval of form by District Counsel, for assistance with the District's U. S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) green building certification in an amount not to exceed \$126,065.

AYES: Directors Calderon, Katherman, Kawasaki,  
NOES: None  
ABSENT: Director Murray  
ABSTAIN: Director Robles

**10. SUPERVISOR YVONNE BURKE RETIREMENT EVENT**

President Katherman stated that Supervisor Yvonne Burke will be retiring after 15 years of service on the Los Angeles County Board of Supervisors. An official retirement event is being planned on November 19 and corporate sponsorships are being solicited. All net proceeds of the event will go to the American Diabetes Association.

Upon a motion duly made by Director Robles, seconded by Director Calderon, and unanimously approved, it was

RESOLVED: The Board approves a \$2500 contribution to Supervisor Yvonne Burke's retirement event.

**11. GENERAL MANAGER'S REPORT**

President Katherman referred everyone to the General Manager's written report.

**12. DISTRICT COUNSEL REPORT**

Deferred to closed session.

**13. COMMITTEE REPORTS**

Director Calderon expressed his gratitude to Director Kawasaki for all her assistance and mentoring as the senior member of the Finance Committee.

**14. AB 1234 COMPLIANCE REPORTS AND DIRECTORS' REPORTS**

Director Calderon stated that he would submit his meetings in writing. He noted that he attended the NALEO Conference this weekend and discussion was held on new desalination technology.

Director Kawasaki stated that she participated in a Clean Water Summit via teleconference. She noted that groundwater was discussed as an important issue. Director Kawasaki added that Dorothy Green passed away on October 13 after a long battle with cancer. She stated that Ms. Green was the Founding President of Heal the Bay and President Emeritus of the Los Angeles & San Gabriel Rivers Watershed Council. She noted Ms. Green's many contributions and mentoring efforts in educating a new generation of environmental activists.

President Katherman stated that he would also submit his meetings in writing.

**15. WRD BOARD MEETING DATES**

- A. November 21, 2008 – 9:00 a.m. – Board of Directors Meeting
- B. December 19, 2008 – 9:00 a.m. – Board of Directors Meeting
- C. January 16, 2008 – 9:00 a.m. – Board of Directors Meeting

**16. CLOSED SESSION**

- A. Conference with Legal Counsel – Existing litigation, pursuant to Government Code §54956.9(a), California Water Service Company, et al. v. City of Compton, et al., Case No. 506 806
- B. Conference with Legal Counsel – Existing litigation, pursuant to Government Code §54956.9(a), Central and West Basin Water Replenishment District v. Charles Adams; L.A.S.C. Case No. 786, 656

The Board went into closed session. The Board reconvened in open session.

District Counsel Casso stated that no action was taken on Agenda Items 16.A and 16.B.

**19. ADJOURNMENT**

President Katherman asked if there was any further business to come before the Board, and there being none the meeting was adjourned at 11:10 a.m., in memory of Dorothy Green. A moment of silence was observed.

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President

ATTEST:

\_\_\_\_\_  
Secretary

UNAPPROVED  
MINUTES

UNAPPROVED  
MINUTES

**MINUTES OF OCTOBER 17, 2008  
SPECIAL MEETING OF THE BOARD OF DIRECTORS  
SOUTHERN CALIFORNIA WATER REPLENISHMENT FINANCING CORPORATION**

A special meeting of the Board of Directors of the Southern California Water Replenishment Financing Corporation was held on October 17, 2008 at 9:30 a.m. in the District office at 4040 Paramount Boulevard, Lakewood, California. President Robert Katherman called the meeting to order. Deputy Secretary Abigail C. Andom recorded the minutes.

**I. DETERMINATION OF A QUORUM**

The President declared a quorum of Directors was present, which in addition to himself included Directors Sergio Calderon, Lillian Kawasaki, and Albert Robles. Director Willard H. Murray, Jr. was excused.

**II. PUBLIC COMMENT**

None.

**III. MINUTES OF THE MEETING OF FEBRUARY 1, 2008**

Upon a motion duly made by Director Calderon, seconded by Director Kawasaki, and unanimously approved, it was

RESOLVED: The minutes of the meeting of February 1, 2008 were approved as submitted.

**IV. DEBT FINANCING ISSUANCE - CONSIDERATION OF RESOLUTION NO. 08-07- A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SOUTHERN CALIFORNIA WATER REPLENISHMENT FINANCING CORPORATION APPROVING AN INSTALLMENT PURCHASE AGREEMENT AND CERTAIN OTHER DOCUMENTS, AUTHORIZING THE PREPARATION, SALE AND DELIVERY OF CERTIFICATES OF PARTICIPATION IN AN AMOUNT NOT TO EXCEED \$20,000,000 AND AUTHORIZING CERTAIN ACTIONS IN CONNECTION THEREWITH**

Upon a motion duly made by Director Calderon, seconded by Director Kawasaki, and by roll call vote, it was

RESOLVED: The Board adopts Resolution No. 08-07.

AYES: Director Calderon, Katherman, Kawasaki,  
Robles  
NOES: None  
ABSENT: Director Murray

RESOLUTION NO. 08-07

A RESOLUTION OF THE BOARD OF DIRECTORS OF  
THE SOUTHERN CALIFORNIA WATER REPLENISHMENT FINANCING  
CORPORATION APPROVING AN INSTALLMENT PURCHASE AGREEMENT  
AND CERTAIN OTHER DOCUMENTS, AUTHORIZING THE PREPARATION,  
SALE AND DELIVERY OF CERTIFICATES OF PARTICIPATION IN AN  
AMOUNT NOT TO EXCEED \$20,000,000 AND AUTHORIZING  
CERTAIN ACTIONS IN CONNECTION THEREWITH

(Reference is hereby made to Resolution No. 08 - 07 in the Draft Resolution file and by this reference is incorporated herein and included a part hereof as though fully set forth at length.)

**V. ADJOURNMENT**

President Katherman asked if there was any further business to come before the Board and there being none, the meeting was adjourned at 9:35 a.m.

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President

ATTEST:

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Secretary



## MEMORANDUM

ITEM NO. 5.C

*Prepared by: Abbie Andom  
Reviewed by: Scott M. Ota  
Approved by: Robb Whitaker*

**DATE: DECEMBER 19, 2008**  
**TO: BOARD OF DIRECTORS**  
**FROM: ROBB WHITAKER, GENERAL MANAGER**  
**SUBJECT: EXPENSES OVER 90 DAYS**

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### SUMMARY

Based on Section 13.2.3 of the District's Administrative Code, "Requests for reimbursement must be submitted within 90 days of the date the expense was incurred...Any reimbursement for a non-excluded expense submitted after 90 days must be approved by the Board of Directors."

Staff would like to present expenses over the 90 day period to the Board of Directors for payment.

### FISCAL IMPACT

Fiscal impact of these expenses is a not to exceed amount of 990.00

### FINANCE COMMITTEE RECOMMENDATION

Approve the expense reimbursements for payment.



## MEMORANDUM

ITEM NO. 5.D

*Prepared by:* Abbie Andom

*Reviewed by:* Scott Ota

*Approved by:* Robb Whitaker

**DATE:** DECEMBER 19, 2008  
**TO:** BOARD OF DIRECTORS  
**FROM:** ROBB WHITAKER, GENERAL MANAGER  
**SUBJECT:** TRAVEL REQUEST – WASHINGTON, D.C.

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### SUMMARY

Vice President Lillian Kawasaki was given the opportunity to meet with Congress members Grace Napolitano and Lucille Roybal-Allard in Washington, D.C. regarding the economic stimulus package opportunities for WRD. Meetings with the District's federal legislative advocates have also been scheduled. The legislative meetings are scheduled to take place on December 10-12, 2008.

Section 13.2.4 of the District's Administrative Code allows for retroactive approval based on difficult or unexpected circumstances. Staff is seeking retroactive approval of the out-of-state travel.

### FISCAL IMPACT

Travel and expenses are budgeted in the FY 2008-09 budget for directors travel.

### FINANCE COMMITTEE RECOMMENDATION

Approve retroactively Vice President Lillian Kawasaki's out-of-state travel request to attend congressional and other legislative meetings in Washington, D.C., December 10-12, 2008.



## MEMORANDUM

ITEM NO. 5.E

*Prepared by:* Ted Johnson

*Reviewed by:* Hoover Ng

*Approved by:* Robb Whitaker

**DATE:** DECEMBER 19, 2008

**TO:** BOARD OF DIRECTORS

**FROM:** ROBB WHITAKER, GENERAL MANAGER

**SUBJECT:** NO-COST TIME EXTENSION FOR AGREEMENT WITH NELLOR ENVIRONMENTAL ASSOCIATES, INC.

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### SUMMARY

On January 11, 2008, the Board entered into an agreement with Nellor Environmental Associates, Inc. (NEA) to provide professional consulting services associated with regulatory aspects of increasing the use of recycled water in the Montebello Forebay and other water recycling permit issues. Ms. Margaret Nellor, President of NEA, has nearly 30 years of experience in the environmental field, and was formerly with the Los Angeles County Sanitation Districts (LACSD) in which she was in charge of water reclamation permits and associated research programs activities of the LACSD plants. She has a wide array of experiences as noted on the attached Statement of Qualifications. In particular, she provided technical assistance that resulted in the successful adoption of the petition to the State Water Resources Control Board to remove the use of notification levels as enforceable effluent limits for the Alamitos Barrier Recycled Water Project.

Ms. Nellor has greatly assisted WRD with many tasks during the past year, including assisting staff in preparing technical reports, memoranda, and other correspondence and documents related to GRIP (Groundwater Replenishment Improvement Program), as well as helping staff strategize on numerous meetings throughout the year with the California Department of Public Health and Regional Water Quality Control Board.

The contract for NEA was for \$20,000 and is set to expire on December 31, 2008, but there are still approximately \$10,000 in funds left under her contract and there is still work for her to do. Therefore, Staff is requesting a no-cost time extension until December 31, 2009.

### FISCAL IMPACT

None.

### WATER RESOURCES COMMITTEE RECOMMENDATION

Extend the termination date for the agreement with Nellor Environmental Associates, Inc, to December 31, 2009.



## MEMORANDUM

ITEM NO. 5.F

*Prepared by:* Ted Johnson

*Reviewed by:* Hoover Ng

*Approved by:* Robb Whitaker

**DATE:** DECEMBER 19, 2008

**TO:** BOARD OF DIRECTORS

**FROM:** ROBB WHITAKER, GENERAL MANAGER

**SUBJECT:** CONTRACT AMENDMENT FOR RECYCLED WATER MODELING AT THE DOMINGUEZ GAP BARRIER – GOLDER ASSOCIATES

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### SUMMARY

On December 7, 2007, the District entered into an agreement with Golder Associates to perform groundwater modeling services to predict how far recycled water has traveled in the West Coast Basin due to injection at the Dominguez Gap Barrier. This work is required annually by the Regional Water Quality Control Board, Los Angeles Office (RWQCB). Golder also performed other modeling services such as code conversion and calibration.

Golder's contract expires December 6, 2008, however additional modeling work is needed. The District is required to modify operations at the barrier by 2011. The original intent was to construct a blend station so that a mix of 50/50 recycled water to MWD water was injected by 2011. However, due to two successful 100% recycled injection permits being issued since Dominguez Gap started (West Coast Barrier and Talbert Barrier in Orange County), and because of the rising price and limited availability of MWD water for injection, and due to WRD's implementation of the Water Independence Network (WIN) program, the District is now exploring options to go to 100% recycled water at the Dominguez Gap Barrier instead of just a 50/50 blend. Therefore, modeling runs are needed to predict how this change may alter conditions in the aquifers and forecast arrival times to nearest drinking water wells. In addition, the 2008 RWQCB permit compliance report will be due March 1, 2009, and the modeling is needed for this report.

Staff recommends continuing the work with Golder Associates as their work to date has been high quality, timely, and relatively low cost. They are also the most familiar with the model. A copy of their proposal is attached.

### FISCAL IMPACT

The fee for the modeling work is estimated at \$12,200, plus a 10% contingency fee for a total authorized amount of \$13,400 and is budgeted for FY 2008-0 budget.

### WATER RESOURCES COMMITTEE RECOMMENDATION

Extend the termination date for the agreement with Golder Associates to December 31, 2009 and add \$13,400 to the contract amount for additional modeling services.



**Golder Associates Inc.**

18300 NE Union Hill Road, Suite 200  
Redmond, WA USA 98052-3333  
Telephone (425) 883-0777  
Fax (425) 882-5498  
www.golder.com



December 3, 2008

Our Ref.: 063-1204.200

Water Replenishment District of Southern California  
4040 Paramount Boulevard  
Lakewood, California 90712

Attention: Ted Johnson, C.H.G.

**RE: PROPOSAL FOR ADDITIONAL MODELING SIMULATIONS  
RECYCLED/IMPORTED WATER INJECTION AT THE  
DOMINGUEZ GAP BARRIER, LOS ANGELES COUNTY, CALIFORNIA**

Dear Ted:

Golder Associates Inc. (Golder) appreciates the opportunity to present this proposal to the District to perform additional model simulations using the Dominguez Gap Barrier Model (the model). Golder developed the model in 2006-07, and used the model to simulate one future barrier operation condition in 2008. This condition involved the following five phases:

- October 2005 and January 2006 – the model simulated actual barrier injection rates and all wells injected only imported water.
- February 2007 – December 2007 – the model simulated actual barrier injection, plus total recycled and imported water; all injection wells received the same percentage of each water type during this period.
- January 2008 – September 2008 - the model assumed that the barrier would inject a total of 10 cfs each month, and that the monthly distribution of recycled/imported water would be the same as that recorded during the same months in 2007.
- October 2008 to September 2011 – the barrier would continue to inject 10 cfs with the western wells receiving 100 percent recycled water and the eastern wells receiving 100 percent
- October 2011 to September 2054 - the barrier would continue to inject 10 cfs but all wells would receive a 50/50 blend of recycled/imported water types.

The model predicted future groundwater levels and the percentage of recycled water in the primary aquifers at monthly (until October 2011) and quarterly (thereafter) time steps. The District now wishes to evaluate the results for operational variations. Golder has developed the following work scope to assist the District with this task.

***Task 1 – Project Management***

Golder will manage the project to meet the objectives identified for each task. Management of this project will include preparation of monthly invoices including cover letters explaining the charges incurred, progress of the project, and highlighting any changes in scope, budget or schedule.

***Task 2 – Simulate Three Recycled/Imported Injection Water Scenarios***

This task will consist of using the existing Dominguez Gap Barrier Model to simulate three barrier operational scenarios. These are as follows:

1. Delay the start of the 50/50 blend (Phase 4 above) until October 2015.
2. Continue to operate by injecting 100 percent recycled water along the western arm and 100 percent imported water along the eastern arm between October 2008 and September 2055. That is, no 50/50 blend occurs during the simulation period.
3. Commence with 100% recycled water injection over the entire barrier starting in October 2015.

For each scenario, the actual monthly barrier injection (rates and recycled water percentages) up until December 2008 will be simulated. The remaining monthly and annual injection rates will remain the same as the original scenario. No changes will be made to the basin pumping or boundary conditions. The model will use the MODFLOW code to solve the groundwater flow transiently and the solute transport code MT3D to predict the recycled water percentage in the main production aquifers (Gage, Lynnwood and Silverado). We have assumed that the District will provide barrier injection data (rates and recycled percentage totals) for 2008. The model output results will consist of:

- (1) Up to four recycled percentage maps for each aquifer for each scenario, and
- (2) One time versus percentage chart for the main municipal supply wells in the area for each scenario.

### ***Task 3 – Prepare Technical Reports***

Upon completion of Task 2, Golder will initially prepare a brief letter report that will include the model results for the period up until December 2008. The District will use these results as part of their 2008 permit compliance report. Subsequently, Golder will prepare a full technical memorandum summarizing our activities, findings, limitations and recommendations of the entire modeling task. This scope also assumes that Golder's project manager will review the draft letter and report with District staff via a phone call prior to finalizing.

### **STAFFING**

The key Golder Associates staff that will perform the above work scope will be as follows:

- Bob Anderson, L.Hg. – Principal in Charge. Bob will be responsible for overseeing the project, and provide QA/QC support.
- Stephen Thomas, C.HG. – Project manager/hydrogeologist. Stephen will conduct the main portion of the modeling and prepare the technical reports.
- Jeff Schneider. Staff engineer. Jeff will assist with modeling and report preparation.

### **COST ESTIMATE**

All work will be conducted on a time and materials basis with the following rates not to exceed **\$12,200**. The following is a cost estimate breakdown by task:

|  |               |
|--|---------------|
| Task 1: Project Management                                   | \$ 1,000      |
| Task 3: Simulate Recycled-Imported Injection Water Scenarios | \$ 5,700      |
| Task 4: Prepare Technical Reports                            | \$ 4,900      |
| Other non-labor costs (all tasks)                            | <u>\$ 600</u> |

**PROJECT TOTAL: \$12,200**

This estimate is based on the following rates:

| <u>Staff Rates:</u>                       | <u>Hourly Rate</u> |
|---|--------------------|
| Principal                                 | \$185              |
| Associate                                 | \$165              |
| Senior                                    | \$145              |
| Project                                   | \$115              |
| Staff                                     | \$ 95              |
| Graphics/CAD                              | \$ 85              |
| Support (word processing, administrative) | \$ 75              |
| <br><u>Expenses:</u>                      |                    |
| Communication fee                         | 5%                 |
| Expenses                                  | 10%                |

## SCHEDULE

We will complete the work under the following schedule:

Task 2 – Simulate Recycled/Imported Injection Water Scenarios. We will complete this task within three weeks of receipt of authorization to proceed.

Task 3 – Prepare Technical Reports. We will deliver the initial letter report within one week of completion of the first model scenario, and the draft technical memorandum within two weeks of completion of Task 2.

## AUTHORIZATION

Golder Associates Inc. is pleased to present this proposal and we look forward to your favorable response. We assume that this work will be carried out under terms and conditions that were included in our recent contract (*Professional Services Agreement*, dated December 7, 2007) between the Water Replenishment District of Southern California and Golder Associates Inc. We will not begin work until we receive formal authorization from you.

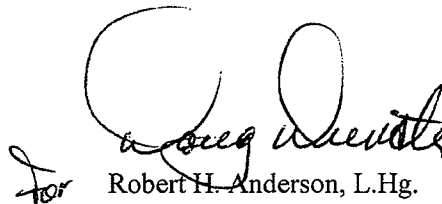
If there are any questions or points that you would like to discuss, please do not hesitate to give me a call. We appreciate the opportunity to offer this proposal for your consideration.

Sincerely,

**GOLDER ASSOCIATES INC.**



Stephen D. Thomas, C.HG.  
Senior Hydrogeologist, Project Manager



For Robert H. Anderson, L.Hg.  
Principal

RHA/SDT/ngs



## MEMORANDUM

ITEM NO. 5.G

*Prepared by: Elsa Lopez  
Reviewed by: Robb Whitaker  
Approved by: Robb Whitaker*

**DATE: DECEMBER 19, 2008**

**TO: BOARD OF DIRECTORS**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: SOUTH BAY CITIES COUNCIL OF GOVERNMENTS 10<sup>TH</sup> ANNUAL  
GENERAL ASSEMBLY SPONSORSHIP**

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### SUMMARY

The South Bay Cities Council of Governments (SBCCOG) is inviting WRD to be a sponsor of their 10th Annual General Assembly "Funding City Services in the Future—House of Cards" to be held on Friday, February 27, 2009. WRD has budgeted for \$1,000 for this event in the Regional Sponsorship List for FY '08-'09. However, for this year the minimum level of sponsorship is the \$2500 level.

The External Affairs Committee is requesting that the sponsorship be increased by \$1500 for a total of \$2,500. WRD's signage will be seen by many of the South Bay elected officials, commissioners, and department heads, as well as business and community leaders. Over 10,000 people in the Los Angeles region will receive an invitation through the SBCCOG's extensive e-mail distribution.

### FISCAL IMPACT

Increase the budgeted amount by \$1,500 in the Regional Sponsorships list for the Annual SBCCOG event for a total of \$2500 for FY '08-'09.

### EXTERNAL AFFAIRS COMMITTEE RECOMMENDATION

Increase the budgeted amount by \$1500 for the SBCCOG Annual event for a total of \$2,500.



## MEMORANDUM

ITEM NO. 5.H

*Prepared by:* Elsa Lopez

*Reviewed by:* Robb Whitaker

*Approved by:* Robb Whitaker

**DATE:** DECEMBER 19, 2008

**TO:** BOARD OF DIRECTORS

**FROM:** ROBB WHITAKER, GENERAL MANAGER

**SUBJECT:** THE CALIFORNIA LATINO LEGISLATIVE CAUCUS INSTITUTE FOR PUBLIC POLICY - POLANCO FELLOWS

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### SUMMARY

The California Latino Legislative Caucus Institute for Public Policy (CLLCIPP), known as the California Latino Caucus Institute, was established as a non-partisan effort in 2002 by the California Latino Legislative Caucus as a broad-based public policy, educational, and leadership development organization. The Institute supports innovative leadership programs to enhance the quality of life for Californians.

As the Institute enters the sixth year of its mission to help chart the future course of California, it will focus its energy and resources on these five key strategic goals:

1. **The Richard G. Polanco Public Policy Fellows Program:** an intensive, year-long public policy and leadership development program that will produce highly-trained and capable leaders for key sectors of society;
2. **The Chrysler Elected Officials Academy:** designed to train newly elected officials at the municipal and county levels in the administrative aspects of governance;
3. **Public policy symposia:** help build partnerships with the Institute's corporate sponsors. These symposia will inform sponsors on key public policy issues and build support for effective policy solutions;
4. **An Endowment Fund:** to provide financial independence, greater ownership of resources, increased capacity, and long-term sustainability;
5. **The Madrinas Padrinos Program:** to support young professionals in their careers and helps develop a new generation of public policy activists.

The External Affairs Committee is recommending that WRD contribute \$8,000 to the Richard G. Polanco Public Policy Fellows Program. Named in honor of former California State Senator Richard G. Polanco, a founder and the chair of the California Latino Caucus Institute, the Polanco Fellowship program provides leadership training and development for a select group college graduates. As of Spring 2007, there are 24 Polanco Fellows.

Considered one of the premier public policy fellowships in the nation, the Polanco Fellowship is a year-long placement that includes leadership training at the world-renowned Center for Creative Leadership in La Jolla, an annual Institute Orientation at UCLA, a four-month placement in a major state agency in Sacramento such as CalPERS and an eight-month placement in the Capitol office of a state legislator.

**FISCAL IMPACT**

This item is not budgeted. If approved, funds will come from the regional sponsorship fund for FY 2008-09.

**EXTERNAL AFFAIRS COMMITTEE RECOMMENDATION**

Contribute \$8,000 to the Richard G. Polanco Public Policy Fellows Program.



**MEMORANDUM**

**ITEM NO. 6**

*Prepared by:* Ted Johnson  
*Reviewed by:* Nancy Matsumoto  
*Approved by:* Robb Whitaker

**DATE:** DECEMBER 19, 2008  
**TO:** BOARD OF DIRECTORS  
**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 for the recently completed Water Year 2007 – 2008 (October 1 through September 30) is presented below and will be discussed in more detail at the Board meeting.

**Replenishment Activities:**

Every year there is insufficient natural replenishment to make up the deficit caused by groundwater pumping. Therefore, the District purchases supplemental water to make up this deficit. Both imported and recycled waters are purchased for replenishment and are put into the groundwater basins via spreading grounds and seawater barrier injection wells.

The spreading grounds replenishment numbers for Water Year 2007 - 2008 (WY 2007/08) are shown on the table to the right. Interruptible (seasonal) imported water was not available for the entire Water Year, as Metropolitan Water District (MWD) suspended deliveries due to continued drought conditions and Bay-Delta environmental issues. MWD has stated that replenishment spreading water will probably not be available until 2010 at the earliest. However, Central Basin Municipal Water District was able to purchase 1,510 acre feet of Tier 1 firm untreated water in November and December 2007.

**SPREADING GROUNDS**

| WY 2007/08     | Imported <sup>1</sup> | Recycled <sup>2</sup> | Local Water   | TOTAL          |
|----------------|-----------------------|-----------------------|---------------|----------------|
| October        | 0                     | 2,501                 | 0             | 2,501          |
| November       | 750                   | 3,684                 | 2,070         | 6,505          |
| December       | 760                   | 4,482                 | 5,449         | 10,690         |
| January        | 0                     | 4,075                 | 28,998        | 33,073         |
| February       | 0                     | 3,852                 | 8,008         | 11,860         |
| March          | 0                     | 3,886                 | 1,453         | 5,339          |
| April          | 0                     | 3,438                 | 368           | 3,806          |
| May            | 0                     | 3,439                 | 3,556         | 6,995          |
| June           | 0                     | 2,374                 | 0             | 2,374          |
| July           | 0                     | 3,206                 | 0             | 3,206          |
| August         | 0                     | 2,594                 | 1,211         | 3,804          |
| September      | 0                     | 2,237                 | 3,648         | 5,885          |
| <b>TOTAL</b>   | <b>1,510</b>          | <b>39,767</b>         | <b>54,761</b> | <b>96,037</b>  |
| <b>Planned</b> | <b>21,000</b>         | <b>50,000</b>         | <b>54,000</b> | <b>125,000</b> |

1 Replenishment Water paid for by CBWMD for Downey, Lakewood, Cerritos  
 2 Spreading includes both purchased and Pomona plant water  
 All values in Acre-Feet (AF)

Recycled water spreading was lower than planned partially due to the Zone 1 Ditch being closed between mid-October through the end of December 2007, as County Sanitation Districts of Los Angeles County (CSDLAC) completed emergency repairs to their pipeline near Rosemead Boulevard. Also, CSDLAC could not send recycled water through the Zone 1 Ditch at other times this Water Year, as there was no diluent water (imported or stormwater) to blend with the recycled water. In addition, the presence of a non-native fish (tilapia) in the concrete-lined San Gabriel River forced recycled water to continue to flow there to maintain the fish, thus reducing the amount of water available for recharge.

Local water spreading (storm water plus river base flow) was higher than planned due to an unanticipated capture of approximately 11,000 AF that was released upstream from Morris Dam during summer 2008.

Replenishment also occurs at the seawater barrier injection wells, which create a freshwater ridge to halt the intrusion of seawater into the basins. Both potable MWD water and advanced treated recycled water are injected into the barrier wells. The table below shows the injection water numbers for WY 2007/08.

### **BARRIER WELLS (preliminary)**

| WY 2007/08     | Alamitos Barrier <sup>1</sup> |              | West Coast Barrier |               | Dominguez Gap Barrier |              | TOTAL         |
|----------------|-------------------------------|--------------|--------------------|---------------|-----------------------|--------------|---------------|
|                | Imported                      | Recycled     | Imported           | Recycled      | Imported              | Recycled     |               |
| October        | 239                           | 46           | 334                | 993           | 289                   | 78           | 1,979         |
| November       | 243                           | 134          | 385                | 938           | 422                   | 178          | 2,300         |
| December       | 177                           | 75           | 274                | 990           | 444                   | 124          | 2,084         |
| January        | 306                           | 80           | 226                | 939           | 572                   | 0            | 2,123         |
| February       | 278                           | 32           | 314                | 767           | 431                   | 117          | 1,939         |
| March          | 255                           | 149          | 341                | 851           | 280                   | 358          | 2,234         |
| April          | 301                           | 130          | 403                | 788           | 281                   | 354          | 2,257         |
| May            | 300                           | 166          | 289                | 898           | 528                   | 133          | 2,314         |
| June           | 393                           | 72           | 231                | 967           | 308                   | 349          | 2,320         |
| July           | 313                           | 139          | 423                | 843           | 317                   | 282          | 2,317         |
| August         | 355                           | 188          | 249                | 1,006         | 270                   | 323          | 2,391         |
| September      | 307                           | 73           | 193                | 974           | 393                   | 262          | 2,202         |
| <b>TOTAL</b>   | <b>3,467</b>                  | <b>1,284</b> | <b>3,662</b>       | <b>10,954</b> | <b>4,535</b>          | <b>2,558</b> | <b>26,460</b> |
| <b>Planned</b> | <b>1,650</b>                  | <b>1,650</b> | <b>3,400</b>       | <b>10,200</b> | <b>6,000</b>          | <b>5,000</b> | <b>27,900</b> |

<sup>1</sup> WRD 's purchases for LA side of the barrier water only. Does not include Orange County purchases  
All values in Acre-Feet (AF)

As shown on the table, the overall injection amounts are close to planned. Imported water injection at the Alamitos Barrier will be higher than planned, partly because imported water compensated for lower-than-planned amounts of recycled injection water (the Vander Lans

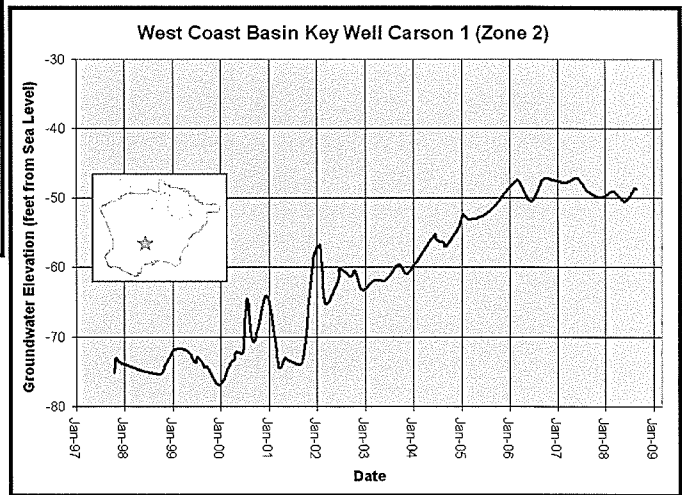
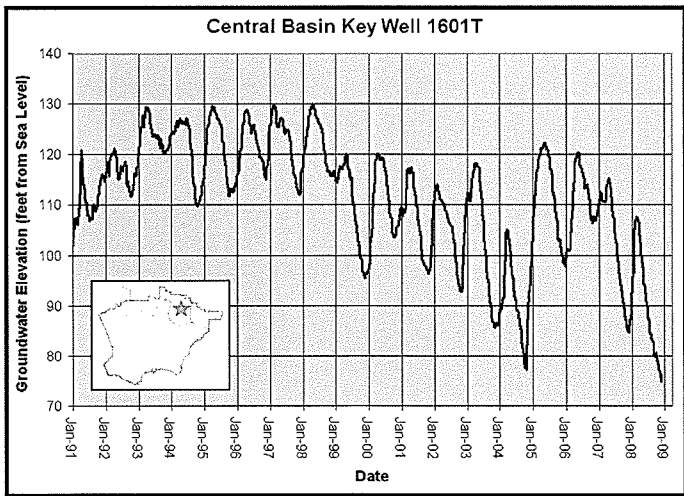
recycled water plant was not running at full capacity in October and December 2007, and January 2008, and intermittently in fall 2008). Recycled water injection at the Dominguez Gap Barrier was lower than planned, largely because the Terminal Island Treatment Plant was not running at full capacity in October 2007, and was down in January 2008 for repairs. Overall injection at the Dominguez Gap Barrier was also lower than planned, due to the barrier being down during part of October 2007.

**Precipitation Amounts:**

The Los Angeles County Department of Public Works collects rainfall data for the water year. For WRD’s key station, Downey Fire Station 107D, a total of 17.11 inches was reported over the water year. The running 81 year average is 14.5 inches.

**Groundwater Levels:**

The groundwater levels in a Central Basin key well and a West Coast Basin key well are shown below. In the Central Basin well, water levels rise and fall seasonally due to heavier replenishment in the winter and spring months versus heavier pumping in summer and fall. Water levels this year are about 5 feet lower than the previous year due to continued drought conditions and unavailable imported spreading water. In November 2008, groundwater levels were at a 30-year low. Water levels are expected to rise during winter as they usually do. In the West Coast Basin, water levels were rising on average about 3 feet per year between 1998 and 2006, but have leveled out since that time.



## Pumping:

The amount of pumping in the District for WY 2007/08 is shown on the table to the right. Values are still preliminary as not all numbers have been submitted or verified.

## Other Activities:

Staff are compiling the water level data collected this year, and are preparing maps to calculate the change in storage over the past Water Year. Preliminary information is that approximately 41,600 acre feet were lost from storage, primarily in the Montebello Forebay. This information will be finalized in the upcoming Annual Survey and Report.

## FISCAL IMPACT

For information.

## WATER RESOURCES COMMITTEE RECOMMENDATION

For information.

## PUMPING (preliminary)

| WY 2007/08           | Central Basin  | West Coast Basin | TOTAL          |
|----------------------|----------------|------------------|----------------|
| October              | 19,054.94      | 3,084.93         | 22,140         |
| November             | 17,519.60      | 2,746.85         | 20,266         |
| December             | 15,955.29      | 3,057.36         | 19,013         |
| January              | 15,482.56      | 2,790.56         | 18,273         |
| February             | 14,281.67      | 2,800.38         | 17,082         |
| March                | 16,938.92      | 3,361.83         | 20,301         |
| April                | 15,016.03      | 3,458.57         | 18,475         |
| May                  | 17,391.18      | 3,565.24         | 20,956         |
| June                 | 18,129.13      | 3,259.45         | 21,389         |
| July                 | 19,000.26      | 3,459.49         | 22,460         |
| August               | 17,595.06      | 3,537.83         | 21,133         |
| September            | 20,466.36      | 3,349.51         | 23,816         |
| <b>TOTAL</b>         | <b>206,831</b> | <b>38,472</b>    | <b>245,303</b> |
| Planned <sup>1</sup> | -              | -                | <b>235,000</b> |

All values in Acre-Feet (AF)

<sup>1</sup> Board of Directors set a planned value of 235,000 af with no breakdown for Central and West Coast Basin pumping



## MEMORANDUM

### ITEM NO. 7

|                     |               |
|---------------------|---------------|
| <i>Prepared by:</i> | Phuong Ly     |
| <i>Reviewed by:</i> | Ted Johnson   |
| <i>Approved by:</i> | Robb Whitaker |

**DATE:** DECEMBER 19, 2008

**TO:** BOARD OF DIRECTORS

**FROM:** ROBB WHITAKER, GENERAL MANAGER

**SUBJECT:** SOUTH MONTEBELLO IRRIGATION DISTRICT (SMID) WELL MODIFICATION

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### SUMMARY

The use of recycled water versus imported water in the Montebello Forebay currently saves WRD nearly \$13 million each year compared to imported water costs. Recycled water for groundwater recharge also provides increased reliability to the groundwater supply. The California Department of Public Health's (DPH) draft regulations for groundwater recharge using recycled water requires the recycled water to be underground for at least 6 months before being pumped out for potable use. The DPH used a distance of 500 feet from the point of recharge (the spreading grounds) to assume compliance with the 6-month rule. This put 23 potable wells near the spreading grounds in potential violation of this 6-month rule. This "distance" approach did not account for the vertical depths of the wells and the nature of the aquifers in the area. In 2003, WRD developed and performed a groundwater tracer test on behalf of the affected pumpers and determined that 21 of the 23 wells passed the 6-month test, despite their proximity to the spreading grounds. This tracer test saved the District and the pumpers up to \$40 million if these wells required replacement.

Two production wells did not pass the test and face replacement unless modifications can be made. These wells are owned by South Montebello Irrigation District (SMID) and existed prior to our current permitted use of recycled water in the spreading grounds. In an effort to bring these wells in compliance without the expense of replacement, the Board approved modifications in 2005 to one of the wells (Well #5). This work successfully increased the recycled water travel time from 2 months to 6 months, making the well in compliance. The cost of this work was approximately \$120,000, including both the well modification and the tracer test performed separately by the University of California, Santa Barbara (UCSB). Based on this success, we now want to repeat the work at the other well, known as Well #3. The work involves pulling out the pump, installing a "packer," and reinstalling the pump which should cause the well to draw groundwater only from the deeper and older parts of the aquifer, thereby increasing the recycled water travel time, like it did for Well #5.

### **Benefits to District:**

- Demonstrate technology to increase travel time to a well.
- Significant cost savings versus installation of a new well (10% of the cost for a new well).
- Keeps a well in production next to a groundwater recharge facility using recycled water.

**Scope of Required Services:**

- Pull out existing pump.
- Inspect condition of the well and perform rehabilitation work if necessary.
- Design a new pumping system to draw water from only the lower portion of the well.
- Install the new pumping system.
- Perform a pumping test to ensure the equipment and well are working properly.
- Submit a report of the work.

A separate contract will be issued with the UCSB to perform the tracer work. WRD staff will perform the monitoring of the well to determine if the modifications worked to increase travel time beyond 6 months.

**Procurement Procedures:**

Staff issued requests for proposals on November 6, 2008 to four (4) pre-qualified firms specializing in water well pump work in the local area. A job walk was held on November 17, 2008. Proposals were due on November 26, 2008. Only three (3) firms responded with proposals (see data table below).

District staff evaluated each of the firms based on four criteria, including Project Approach and Scope of Work, Estimated Cost, Project Team, and Relevant Experience/References. A weighting of 25% was given to each of the criteria. This is a Professional Services agreement and therefore award can go to the most qualified firm. The final rankings are shown below:

| Overall Ranking | Firm                             | Proposal Amount |
|-----------------|----------------------------------|-----------------|
| 1               | General Pump Company             | \$49,266.00     |
| 2               | Layne Christensen Company        | \$42,115.77     |
| 3               | South West Pump & Drilling, Inc. | \$57,424.00     |

Based on the indicated ranking, Staff is recommending award of the contract to General Pump Company. This firm demonstrated the greatest project understanding and experience and their proposal was judged to provide the District with the best value for this project. General Pump Company also successfully performed similar modifications to Well #5.

The project is expected to be completed by the end of January 2009.

**FISCAL IMPACT**

Total cost of the project is approximately \$50,000 with a \$10,000 contingency added in case unforeseen issues arise, bringing the total amount to \$60,000. This is a budgeted item.

**WATER RESOURCES COMMITTEE RECOMMENDATION**

Enter into an agreement with General Pump Company, subject to approval of form by District Counsel, to perform well modification work to South Montebello Well #3 for an amount not to exceed \$60,000.



## MEMORANDUM

ITEM NO. 8

*Prepared by:* Ted Johnson

*Reviewed by:* Phuong Ly

*Approved by:* Robb Whitaker

**DATE: DECEMBER 19, 2008**

**TO: BOARD OF DIRECTORS**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: U.C. SANTA BARBARA 2009 RIO HONDO GROUNDWATER TRACER RESEARCH PROJECT**

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### SUMMARY

This item is related to the previous Board agenda item on the South Montebello Irrigation District. The California Department of Public Health's (DPH) draft regulations for groundwater recharge using recycled water requires the recycled water to be underground for at least 6 months before being pumped out for potable use. The DPH used a distance of 500 feet from the point of recharge (the spreading grounds) to assume compliance with the 6-month rule. This put 23 potable wells near the spreading grounds in potential violation of this 6-month rule. This "distance" approach did not account for the vertical depths of the wells and the nature of the aquifers in the area. In 2003, WRD developed and performed a groundwater tracer test in conjunction with the University of California Santa Barbara (UCSB) to measure the actual recharge water travel times to the wells and determined that 21 of the 23 wells passed the 6-month test. This tracer test saved the District and the pumpers up to \$40 million if all of these wells required replacement.

However, two production wells did not pass the test and face replacement unless modifications could be made to increase travel time to them. In an effort to bring these wells in compliance without the expense of replacement, the Board approved modifications in 2005 to one of the wells and a repeat of the tracer test was performed by UCSB. The modifications were successful to increase the travel time from 2 months to 6 months, making the well in compliance. Based on this success, WRD now wants to repeat the work at the other well, known as Well #3.

### **Benefits to District:**

- Demonstrate technology to increase travel time to a well.
- Significant cost savings versus installation of a new well (10% of the cost for a new well).
- Keeps a well in production next to a groundwater recharge facility using recycled water.

### **Scope of Required Services by UCSB:**

- Sample Well #3 and other nearby production and monitoring wells before adding a tracer to document background conditions (see attached proposal).
- After a heavy rain fills the Rio Hondo Spreading Grounds, add the DPH-approved

groundwater tracer Sulfur Hexafluoride (SF6) to the northern ponds that are nearest Well #3.

- WRD staff will re-sample the wells for a period of 1 year to allow time for the tracer to reach the wells, and UCSB will analyze the samples for SF6 to determine arrival time to the wells.
- Prepare a draft and final report of findings.

### **FISCAL IMPACT**

The proposal and cost estimate by UCSB are attached. The cost is estimated at \$38,673. Their cost in 2004/2005 was \$29,749. The increase is due to higher staff and analytical costs by UCSB, and an increase in the amount of work (more wells to test and analyze and report on). Staff also recommends a 10% contingency on the project for a total project cost of \$42,500. This is a budgeted item.

### **WATER RESOURCES COMMITTEE RECOMMENDATION**

Enter into an agreement with the University of California Santa Barbara, subject to approval of form by District Counsel, for the 2009 Rio Hondo Groundwater Tracer Research Project.

**Title of Project:** 2009 Rio Hondo-Groundwater Tracer Study

**Principal Investigators:** Jordan F. Clark  
Professor  
Dept. of Earth Science  
University of California  
Santa Barbara, CA 93106  
(805) 893-7838  
jfclark@geol.ucsb.edu

**Duration:** 18 months (Jan 1, 2009-June 30, 2010)

**Total Funds Requested:** \$38,673 (see attached budget for details)

## 1. PROJECT OBJECTIVES

The 2009 Rio Hondo Groundwater Tracer Study is intended to directly determine groundwater transit times from the northern Rio Hondo Spreading Grounds (RHSG) to nearby production and monitoring wells. It will be conducted in conjunction with the Water Replenishment District of Southern California (WRD) and coordinated with modifications to Well# 200065 designed to isolate different portions of the screen at the well. The experiment will test the hypothesis that the travel time of recharge water from the RHSG to Well#200065 can be increased from 16 weeks (4 months) as defined in the 2003 and 2005 experiments to beyond 26 weeks (6 months) following well modifications. Additional production wells and monitoring wells will also be sampled to compare with the results from the earlier tests. The experiment will follow similar procedures of the 2003 and 2005 tracer experiments, which are described by McDermott et al. (2008).

The specific goals of this study are:

**I) Inject sulfur hexafluoride (SF<sub>6</sub>) tracer and quantify its concentration in the northern RHSG over a period of one to two weeks.** SF<sub>6</sub>, a non-toxic and non-reactive gas, is an ideal tracer of groundwater flow (Wilson and Mackay, 1993, 1996; Gamlin et al., 2001; Clark et al., 2004). It has been used recently by the UCSB group to directly determine the travel time from recharge basins to production and monitoring wells at a number of sites in southern California, including the San Gabriel and Rio Hondo spreading grounds. During the 2003 San Gabriel and Rio Hondo experiment, SF<sub>6</sub> was injected three times (every 2 to 6 days) into the spreading basins by bubbling for 20 to 30 minutes at one location. Periodic sampling of the basins showed that mean concentrations in the northern Rio Hondo ponds ranged between about 10 and 60 pmol/l (1 pmol = 10<sup>-12</sup> moles or 0.15 ng of SF<sub>6</sub>). The ponds were relatively well mixed; the standard deviation of the spatially distributed samples was generally less than 10% of the mean. Similar results were seen during the 2005 experiment.

SF<sub>6</sub> will be injected into the six northern Rio Hondo spreading ponds (#1E, #2E, #3E, #4E, #5E, and #7E) by bubbling following the procedures used during the earlier experiments. The tracer concentration will be monitored in the surface water during the course of the one to two week injection period by personnel from WRD.

**II) Travel times of the tracer will be determined by sampling groundwater at Well#s 200065 (above and below the packer), 200061 (above and below the packer), and the nearby monitoring wells 100904, 100905, 100906, 100907, 100830, 100834.** Initially, samples will be collected monthly in triplicate by personnel from WRD and sent to UCSB for analysis. During the 2003 experiment, SF<sub>6</sub> was first detected at Well# 200065 after 16 weeks and was observed in all subsequent samples. The concentration maximum was 0.7 pmol/l or about 2% of

the mean concentration observed in the spreading basins and was observed at week 52. These results were confirmed during the 2005 experiment.

The purpose of coordinating the tracer experiment with the well modifications is to gain a better understanding of the relationship between depth and arrival time. In particular, we have hypothesized that the early arrival of tracer at Well# 200065 is due to very young water flowing into the top of the well screen as was seen at Well# 200061. The travel time to the lower portion of the screen is most likely much longer and we expect it to be greater than 6 months. By isolating the upper and lower portions of Well# 200065, we should be able to determine whether or not the very recent recharge water is being produced from only the upper portion of the well screen. The final sampling plan will be developed with personnel from WRD. Background samples will be collected prior to tracer addition from all wells, then biweekly or monthly for the duration of the experiment so that these results can be compared with the 2003 and 2005 experimental results.

## **2. SPECIFIC APPROACH**

The methodology to be used during the proposed tracer study was developed by Dr. Jordan Clark at UCSB (e.g., Gamlin et al., 2001; Clark et al., 2004; McDermott et al., 2008). During the initial phase of the proposed project, SF<sub>6</sub> will be injected into surface water in the northern RGSG ponds following a large storm event between February and April 2009 when the ponds are full. During the second phase, groundwater samples will be collected at selected wells by WRD staff and analyzed for the tracer at UCSB so that travel times can be determined.

Because it is vital to know the initial conditions of the recharge water, SF<sub>6</sub> surveys in the recharge area will be conducted daily during the injection. Each survey will consist of collecting 25-30 samples evenly distributed throughout the spreading area. More than 100 SF<sub>6</sub> samples will be analyzed during the initial phase of the proposed project.

The SF<sub>6</sub> samples will be analyzed using a head space method similar to that described by Clark et al (2004). In the field, pre-weighed 15 ml Vacutainer™ will be partially filled (about 8 ml of water). These containers will be sent to UCSB where they will be weighed (to determine the sample size) and carefully filled with ultra-high purity nitrogen gas (so that the final pressure is equal to 1 atmosphere). The head space gas will be injected through a column of Mg(ClO<sub>4</sub>)<sub>2</sub> (to remove water vapor) into a small sample loop of known volume (about 1.5 ml). Subsequently, the gas in the sample loop will be flushed into a gas chromatograph equipped with an electron capture detector with ultra-high purity nitrogen carrier gas. SF<sub>6</sub> will be separated from other gases with a Molecular Sieve 5a column held at room temperature. The detector response is determined by running gas standards purchased from Scott-Marrin, Inc. Error on

duplicate measurements is typically  $\pm 5\%$ . Laboratory experiments have shown that SF<sub>6</sub> samples can be stored for at least 6 months without appreciable loss of SF<sub>6</sub> in Vacutainer™.

### 3. BUDGET JUSTIFICATION

Jordan Clark is the lead PI and will assume overall responsibility for the proposed work. He has used SF<sub>6</sub> as a tracer in ground and surface waters in more than a dozen experiments. The graduate student technician will assist with the field operation and with the laboratory work at UCSB.

Direct costs of this project include laboratory salary for the PI and laboratory assistant, supplies for the analysis of SF<sub>6</sub> (nitrogen gas for the GC, vacutainers, replacement gas standard, tubing, etc.), miscellaneous field supplies (SF<sub>6</sub> tracer gas, tubing, replacement pump, etc.) travel to the field area, WRD for discussions, and to a national meeting to present the experimental results. The analytical costs for SF<sub>6</sub> are based on the number of days in the laboratory rather than the number of samples to be analyzed. The marginal cost of running additional samples is small because the majority of the time spent in the laboratory is used to run standards and ensure that the analytical background is sufficiently low. Travel costs include per diem and car rental for 2 people to work in the field during the initial phase of this project and 2 trips to WRD to attend meetings and discuss the results.

### 4. REPORTING

Two progress and a final report will be prepared. The first progress report will be due one month after the completion of the first part of the experiment (injection and background monitoring of the SF concentrations in the groundwater), the second will be due nine months after the beginning of the tracer injection period, and the final report will be due two months after the completion of the experiment. Drafts of the reports will be delivered to WRD for review prior to their submission.

### 5. REFERENCES

- Clark, J. F., G. B. Hudson, M. L. Davisson, G. Woodside, and R. Herndon (2004) Geochemical imaging of flow near an artificial recharge facility, Orange County, CA. *Ground Water*, 42, 167-174.
- Cook, P. G. and D. K. Solomon (1997) Recent advances in dating young ground water: chlorofluorocarbons, <sup>3</sup>H/<sup>3</sup>He and <sup>85</sup>Kr. *Journal of Hydrology* 191, 245-265.
- Gamlin, J. D., J. F. Clark, G. Woodside, and R. Herndon (2001) Tracing groundwater flow patterns in an area of artificial recharge using sulfur hexafluoride. *Journal of Environmental Engineering, ASCE*. 127, 171-174.

- McDermott, J. A., D. Avisar, T. Johnson, and J. F. Clark (2008) Groundwater travel times near spreading ponds: Inferences from geochemical and physical approaches. *Journal of Hydrologic Engineering, ASCE*, 13, 1021-1028.
- Wilson, R. D. and D. M. Mackay (1993) The use of sulphur hexafluoride as a conservative tracer in saturated sandy media. *Ground Water*, 31, 719-724.
- Wilson, R. D. and D. M. Mackay (1996) SF<sub>6</sub> as a conservative tracer in saturated media with high intragranular porosity or high organic carbon content. *Ground Water*, 34, 241-249.

Budget

|                |  |
|----------------|--|
| <b>P.I.s:</b>  | <b>Jordan F. Clark</b>                         |
| <b>AGENCY:</b> | <b>WRD</b>                                     |
| <b>PERIOD:</b> | <b>1/1/09 to 6/30/10</b>                       |
| <b>TITLE:</b>  | <b>2009 Rio Hondo-Groundwater Tracer Study</b> |

|   |         |                 |
|---|---------|-----------------|
| <b>SALARIES:</b>                        |         | <b>Year 1</b>   |
| Jordan F. Clark, Associate Professor II |         |                 |
| 1 mos. @ 100% @                         | \$8,644 | \$8,644         |
| Lab Assistant III                       |         |                 |
| 400 hr. @ @ \$20/hr                     |         | \$8,000         |
| <b>Total Salaries:</b>                  |         | <b>\$16,644</b> |

|   |  |                |
|---|--|----------------|
| <b>BENEFITS:</b>                              |  |                |
| Jordan F. Clark, Associate Professor II       |  |                |
| \$8,644 @ 12.7% *                             |  | \$1,098        |
| Resident Graduate Student Researcher III, TBN |  |                |
| \$8,000 @ 22% *                               |  | \$1,760        |
| <b>Total Benefits:</b>                        |  | <b>\$2,858</b> |

**TOTAL SALARIES & BENEFITS: \$19,502**

**TRAVEL**

|                                    |                |
|------------------------------------|----------------|
| Travel for Field Work and Meetings | \$2,000        |
| Travel to National Meeting         | \$1,500        |
| <b>Total Travel:</b>               | <b>\$3,500</b> |

**OTHER DIRECT COSTS:**

|   |                |
|---|----------------|
| Chemical Analyses and other laboratory supplies | \$1,000        |
| Field Supplies                                  | \$500          |
| Computer Supplies                               | \$500          |
| Telephone, shipping, etc                        | \$500          |
| <b>Total Other Direct Costs:</b>                | <b>\$2,500</b> |

**TOTAL DIRECT COSTS: \$25,502**

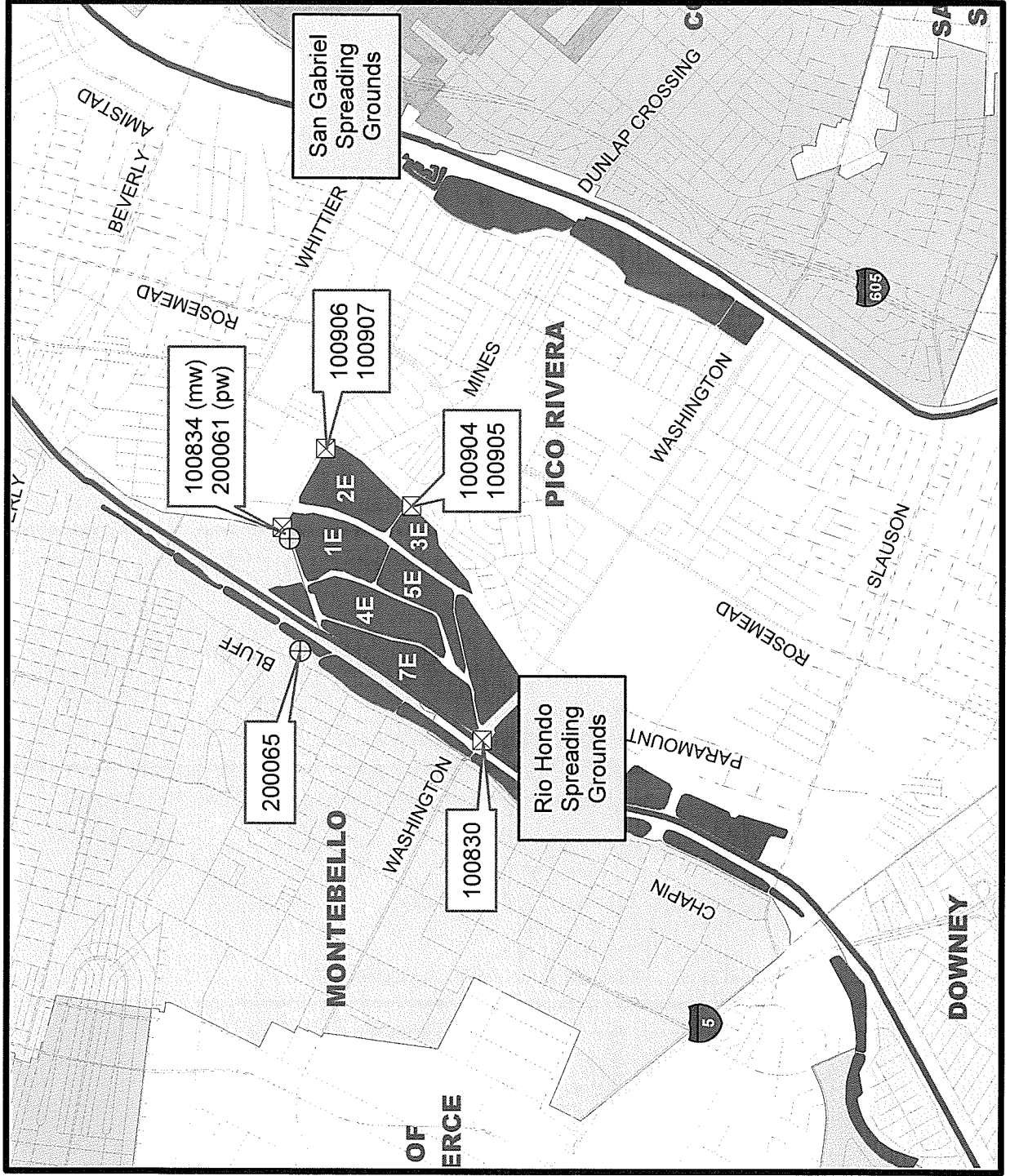
**INDIRECT COSTS:**




\$25,502 @ 51.5% \$13,134

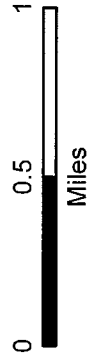
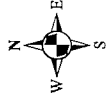
|                       |                 |
|-----------------------|-----------------|
| <b>TOTAL REQUEST:</b> | <b>\$38,636</b> |
|-----------------------|-----------------|

\* Based on employee's actual benefit rate.

# Production and Monitoring Wells Used for 2009 Tracer Test



-  Production Well
-  Monitoring Well
-  Pond to Receive Tracer





## MEMORANDUM

ITEM NO. 9

*Prepared by: Sheryll Moffat*

*Reviewed by: Abbie Andom*

*Approved by: Robb Whitaker*

**DATE: DECEMBER 19, 2008**

**TO: BOARD OF DIRECTORS**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: SUPPORT REAPPOINTMENT OF FRANCES SPIVY-WEBER TO THE STATE WATER RESOURCES CONTROL BOARD**

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### SUMMARY

At its meeting on December 12, 2008, the External Affairs Committee discussed the reappointment of Frances Spivy-Weber to the State Water Resources Control Board (SWRCB). During her nearly 20 months on the SWRCB, Ms. Spivy-Weber has displayed a remarkable depth of knowledge and has exercised leadership in policy and regulatory arenas that are especially important to the District. The District would like to support Ms. Weber's reappointment to the SWRCB.

### FISCAL IMPACT

None.

### EXTERNAL AFFAIRS COMMITTEE RECOMMENDATION

Support the reappointment of Frances Spivy-Weber to the State Water Resources Control Board.



**MEMORANDUM**

**ITEM NO. 10**

*Prepared by: Abbie Andom  
Reviewed by: Elsa Lopez  
Approved by: Robb Whitaker*

**DATE: DECEMBER 19, 2008**  
**TO: BOARD OF DIRECTORS**  
**FROM: ROBB WHITAKER, GENERAL MANAGER**  
**SUBJECT: PROJECT LABOR AGREEMENTS RESOLUTION**

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**SUMMARY**

At the October 28, 2008 External Affairs Committee meeting, the Committee directed District Counsel to prepare a resolution for Board approval expressing the intent of WRD to, when appropriate, have project labor agreements (PLA) for its construction projects. The External Affairs Committee met on December 12 and recommended adoption of the resolution.

**FISCAL IMPACT**

Unknown at this time.

**EXTERNAL AFFAIRS COMMITTEE RECOMMENDATION**

Adopt Resolution No. 08-838.

**RESOLUTION NO. 08-838**

**A RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA  
ESTABLISHING A POLICY RELATING TO PROJECT LABOR AGREEMENTS**

**WHEREAS**, the Water Replenishment District of Southern California ("District") recognizes the importance of ensuring optimum productivity and orderly performance of District construction projects; and

**WHEREAS**, a Project Labor Agreement is a pre-hire agreement designed to provide a safe, efficient and economical means of completing major construction projects; and

**WHEREAS**, the interests of the public are best served when construction projects are completed on schedule and within budget, Project Labor Agreements minimize cost overruns by preventing strikes, work stoppages, picketing, lobbying slowdowns and other interferences with work; and

**WHEREAS**, Project Labor Agreements contain a "no strike" clause and all workers agree to use a specific dispute resolution process to settle any controversies that may arise on a project; and

**WHEREAS**, it is in the best interest of the public to hire a skilled workforce to complete complex construction projects, Project Labor Agreements facilitate the hiring of the most of qualified construction personnel by establishing an employment process administered through local contractors and labor unions; and

**WHEREAS**, the District desires to establish uniform working rules and conditions to ensure the successful completion of major construction projects; through Project Labor Agreements, the District is able to work with local contractors and labor unions to stabilize wages, hours and working conditions for workers employed on a project; and

**WHEREAS**, Project Labor Agreements improve the quality of life for workers by offering better pay, health insurance and other benefits which translate into a better local economy;

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE WATER REPLENISHMENT DISTRICT DOES HEREBY FIND, DETERMINE AND RESOLVE AS FOLLOWS:

**Section 1.** When deemed appropriate by the District's Board of Directors, the District will endeavor to enter into Project Labor Agreements for future major construction projects.

**Section 2.** The District Secretary shall certify to the adoption of this Resolution.

**PASSED, APPROVED AND ADOPTED THIS \_\_\_\_<sup>th</sup> day of \_\_\_\_\_ 2008 by the following vote:**

AYES:  
NOES:  
ABSENT:  
ABSTAIN:

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA

\_\_\_\_\_  
Rob Katherman, President

ATTEST:

\_\_\_\_\_  
Willard H. Murray, Jr., Secretary

\_\_\_\_\_  
DATE



## MEMORANDUM

ITEM NO. 11

*Prepared by: Sheryll Moffat*

*Reviewed by: Michael Gagan*

*Approved by: Robb Whitaker*

**DATE: DECEMBER 19, 2008**

**TO: BOARD OF DIRECTORS**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: WRD HISTORY REPORT**

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### SUMMARY

The 1955 Replenishment District Act was one of many groundwater management options considered by the Legislature, just as the formation of a district encompassing two basins under the Act was one of several possible structures considered by Central and West Basin pumpers.

This essay describes the local forces at work behind legislative efforts in 1951 and 1953 to deal with the rapidly deteriorating groundwater basins, the alternatives considered by the Legislature and how local and state efforts culminated with the formation of the Committee of Twelve in 1954 and the adoption of the Replenishment District Act a year later.

*Next month: With the adoption of the Replenishment District Act, local pumpers considered several options for the governance of groundwater replenishment. Why did they decide in the end to go with one district rather than two and one district including two basins rather than three?*

*And, returning briefly to the campaign for District formation, Department of Water Resources Division Engineer gives a sobering report to a joint dinner meeting of the two Associations on "New Findings Regarding the Geology of Central and West Basins and Problems Related to Groundwater Replenishment."*

### FISCAL IMPACT

None.

### STAFF RECOMMENDATION

For information.

December 2008

## **Legislating Groundwater Replenishment for the Central and West Coast Basins**

The Water Replenishment District Act adopted by the Legislature in 1955 was the culmination of a process that began 12 years earlier with the formation of the West Basin Water Survey Committee. Concerned principally with quantifying the extent of overdraft and seawater intrusion in areas of the West Basin, the small Survey Committee became the larger West Basin Ground Water Conservation Group in 1945. As a first step to address a water imbalance that was "truly alarming," the Ways and Means Committee of the Water Conservation Group recommended the creation of a non-profit corporation to legally assess its members for costs incurred in addressing common water problems, and thus the West Basin Water Association was formed in 1946.

The first objective of the Association was to sponsor creation of a municipal water district to provide imported water to areas of West Basin not already included in the Metropolitan Water District service area. At the time, only the West Basin cities of Long Beach, Los Angeles and Torrance were Metropolitan members. A second objective of the Association was to organize and expedite the fact-gathering process required to adjudicate the Basin pursuant to an action filed a year earlier. The West Basin Municipal Water District was approved by the voters in 1947 and annexed to Metropolitan in 1948. The Association's Legal Settlement Committee became the clearinghouse for adjudication matters.

Most pumpers at the time thought that the annual overdraft in West Basin, which was roughly twice the rate of natural replenishment, would ease as a result of curtailment of pumping by virtue of the adjudication. The expectation as well was that many groundwater pumpers would readily switch to imported water to meet their own demands. The combination of groundwater curtailment and increased reliance on imported water would restore the Basin to a natural balance and retard sea water intrusion.

The formation process was similar on the Central Basin side, but occurred much more quickly because the West Basin experience provided a template. The Central Basin Ground Water Conservation Group was formed in 1949. A Ways and Means Committee was appointed to study water problems in the area. The Committee promptly identified the reduction of natural replenishment originating from the Upper San Gabriel and

increased groundwater production in the Central Basin as major problems. Central Basin was also at risk of sea water intrusion at the Alamitos Gap as well as from West Basin. The Ways and Means Committee recommended the formation in 1950 of the Central Basin Water Association. The immediate objective of the Association was to sponsor creation of a municipal water district to provide imported water service to areas of Central Basin not already included in the Metropolitan Water District service area. At the time, only the Central Basin cities of Compton, Long Beach and Los Angeles were Metropolitan members. The Central Basin Municipal Water District was approved by the voters in 1952 and annexed to Metropolitan in 1954. Many Central Basin pumpers thought at the time that the creation of the Municipal Water District, in combination with a possible replenishment program to be undertaken by the Los Angeles County Flood Control District, would render unnecessary an adjudication of water rights and a curtailment of pumping.

Since the late 1930s, the Flood Control District had functioned on a limited basis as the *de facto* groundwater replenishment agency for the area. The Rio Hondo Coastal Spreading Grounds began operations in 1938 and the San Gabriel Spreading Grounds a year later. The spreading operations increased the volume of storm water captured for replenishment. While flood control was the main objective of the spreading grounds, pumpers in Central Basin saw the replenishment benefit of purchasing untreated imported water for spreading in the existing spreading grounds. At the same time, pumpers in West Basin saw long-term promise in sites being tested by the Flood Control District for spreading operations in Redondo Beach and near Los Angeles Airport. West Basin pumpers also saw a future for spreading reclaimed water and for injecting it into barriers that may someday be built to retard sea water intrusion.

By the early 1950s, both basins were in peril. Pumpers feared a catastrophic collapse from which neither basin would recover. The volume of natural replenishment originating from the Upper San Gabriel, the main source of natural replenishment for both basins, was declining sharply from year to year. Well levels in both basins were dropping precipitously. Many Central Basin wells were going dry. Land was subsiding in the Wilmington area and was threatened elsewhere, risking permanent reduction of the storage capacity of the basins. Sea water intrusion was migrating further inland and contaminating West Basin wells at an alarming rate. It would not be long before some areas would be forced to institute bucket brigades to bring potable water to their communities. In the face of these grave conditions, ground water producers pumped more, not less, further jeopardizing the survival of the basins.

Most pumpers realized that curtailment through adjudication, even if successful, would not be enough to save the respective basins. A supplementary supply of water through

the formation of municipal water districts in and of itself would not be enough. Some form of groundwater replenishment, using a combination of imported and reclaimed water, would have to be devised.

What were the possible sources of supply for replenishment? What methods of replenishment could be expanded or developed? Who should pay for the water and the related costs of replenishment? What kind of agency should be responsible for the replenishment operation? What should the governance of that agency look like? These questions preoccupied the pumping community for the better part of the 1950s.

### **Governance Options**

In 1948, the Los Angeles Advisory Committee on Water Conservation, consisting of water interests including pumpers, recommended to the County Board of Supervisors that it sponsor legislation to create a special district for the purpose of water conservation and groundwater replenishment. The West Basin Municipal Water District in 1950 explored the idea of becoming a replenishment agency, but was not certain of its legal authority. Central Basin pumpers floated the idea that "zones of benefit" should be created to raise money to purchase water for replenishment. There was some sentiment that the Los Angeles Flood Control District should formally become the replenishment agency for both basins, relying on a special property tax to fund its replenishment operations. In announcing campaign plans to form the Central Basin Municipal Water District, the Central Basin Water Association said an objective of the new District would be to buy imported water for spreading. The Metropolitan Water District was exploring the idea of forming special replenishment districts to address the needs of over-drafted basins throughout its service area, with a special eye on the Central and West Coast Basins.

It would take a few years to sort out locally and in Sacramento, but it was clear to all parties that something simply had to be done to protect both basins from permanent collapse. No one was quite sure what that something was, although there was no shortage of ideas. Measures considered by the Legislature between 1951 and 1955 reflected the growing sense of urgency of area pumpers, the state's interest in preserving the basins and possible options for governing and financing ground water replenishment. The Water Replenishment District Act finally emerged as the preferred option for pumpers in the West Coast and Central Basins.

## 1951 Legislation

### **Los Angeles County Flood Control District**

At the urging of both Associations and with drafting support from the attorney for the West Basin Water Association, the Flood Control District sponsored AB 2041 (Geddes) and AB 3098 (Geddes). AB 2041 permitted the Board of Supervisors to create one or more water conservation zones and to assess an *ad valorem* tax (property tax) not exceeding \$0.05 per \$100.00 of assessed valuation for the purpose of acquiring and spreading imported or reclaimed water within the zones. Each zone could exist for no more than a five year period; each could be renewed. The zones would provide the first mechanism for financing replenishment but would exist on an interim basis, for purposes of triage only.

AB 3098 authorized the Flood Control District to cooperate with other agencies in operating and maintaining facilities for conserving flood waters or waters imported or reclaimed when such waters are furnished without cost to the District. Once the interim zones expired, the Flood Control District could build and maintain facilities, but was not authorized to pay for the water. Neither the County nor the Flood Control District was interested in requiring property tax payers to financially underwrite water costs on a long-term basis. The pumpers would have to come up with a more permanent way to finance the substantial water purchase costs of replenishment.

### **West Coast Basin Sea Water Barrier**

Sponsored by the West Basin Water Association, AB 784 (Chapel) appropriated \$750,000 (\$6 million in 2008 dollars) to the State Department of Public Works for specific purposes designed to study and repel sea water intrusion, not the least of which was the construction a year later of the West Coast Barrier Demonstration Project and the purchase of water to inject. The State would finance and own the Barrier; the Flood Control District would build it under contract to the State and buy the water from state funds through the West Basin Municipal Water District. This legislation was merged with AB 2712 (Dickey) which mirrored Assemblyman Chapel's bill in its final form. Initially, the Demonstration Project would consist of five injection wells and 30 monitoring wells in Manhattan Beach and the south area of Hermosa Beach. It was anticipated that temporary funding under Zone II, once established, would build out a more extensive barrier system and pay for the imported or reclaimed water required for injection.

### **Protection of Groundwater Rights**

It was widely assumed that the formation of the West Basin Municipal Water District would encourage ground water pumpers to reduce pumping and increase their reliance

on imported water. Pumpers were reluctant to do that, however, for fear they would lose their rights. Rather than curtailing the production of groundwater, the filing of the adjudication petition in 1945 resulted in a race to pump even more. AB 3414 (Stanley) provided for the non-forfeiture of established rights to ground water for producers who reduce or stop pumping and use an imported non-tributary supply instead. This legislation was sponsored by the West Basin Water Association.

### **Municipal Water Districts and Replenishment**

To clarify the authority of municipal water districts to purchase water for replenishment, AB 836 (Stanley) amended the Municipal Water District Act to permit municipal water districts to cooperate or contract with other agencies for purposes of water conservation, reclamation and replenishment. This bill was sponsored by the West Basin Municipal Water District. For a variety of reasons, not the least of which are the non-conforming boundaries of municipal water districts and the basins they partly overlie, the municipal water district replenishment option was never exercised; the provision relating to reclamation has been widely employed.

### **1953 Legislation**

#### **Metropolitan Makes a Move**

Concerned about rapidly deteriorating ground water basins throughout Southern California, and most especially in the urban core of Los Angeles County, the Metropolitan Water District sponsored remarkably comprehensive water replenishment legislation in 1953. AB 2699 (Lanterman) would authorize Metropolitan member agencies to create "special replenishment districts" that would be based on territory "supplied with ground water from sources common to such territory." The districts could include areas already part of Metropolitan or contiguous to Metropolitan areas. They could be initiated by petition of groundwater producers (either 10% of the producers or producers pumping 10% or more of the groundwater in the proposed territory) or by the board of a member agency. The governing body of the initiating member agency would be the governing body of the special replenishment district and would have authority to annually adopt a replenishment assessment.

All wells would have to be registered with the district and production from them would have to be reported quarterly. The district would produce an annual engineering survey report with detailed information on groundwater conditions, annual and accumulated overdraft, and the replenishment assessment required to meet water purchase costs. The district would publish each year "The Record of Ground Water Production" and "The Record of Replenishment Assessments and Charges".

While the Associations took no formal position on the bill, it did enjoy the support of major pumpers in both basins, including the City of Los Angeles. The Executive Secretary of both Associations, Carl Fossette, said the bill “may provide the most equitable means yet suggested for overcoming the overdraft upon ground waters of the Central Basin...Those using the waters of the basin would be assessed in accordance with the amount used and holders of property using no water would not be charged with the costs of basin replenishment.”

Despite vigorous lobbying on its behalf, the Metropolitan bill faced a deluge of opposition from an array of interests that included agricultural groups up and down the state, non-Metropolitan water agencies in Southern California and even pumpers within its service area. There was also the political reality that the boundaries of Metropolitan member agencies in existence or to be formed did not correspond to territory “supplied with ground water from sources common to such territory.” In the end, the bill was referred to interim study by the Joint Legislative Committee on Water Problems. It was not reintroduced. Many of its features, however, were incorporated into what two years later became the Water Replenishment District Act.

### **Orange County Water District Seeks Its Own Replenishment Authority**

The Orange County Water District was not a Metropolitan member agency, had no interest in the Metropolitan approach to the governance of replenishment and had in mind a different formula for financing replenishment. The District sponsored SB 91 (Murdy) in 1953 to permit an assessment on groundwater pumping to purchase imported water to address the annual overdraft and an *ad valorem* tax on real property to purchase imported water to address the accumulated overdraft. Carl Fossette noted that “the procedure contemplated is a departure from anything previously tried in overdrawn basins. The Orange County plan is being followed with interest in the hope that it may prove helpful to other ground water basins.” While it was not the first law to authorize the use of a property tax to purchase water for replenishment, it was the first to permit the imposition of an assessment on groundwater pumping to address an annual overdraft.

There was an effort to expand SB 91 to apply to overdrawn basins statewide, and in fact, the original draft had been in consultation with some Central Basin pumpers who wanted to be included. Ultimately, the application of the bill was limited to the Orange County Water District service area by virtue of efforts “by interests outside of Orange County” to prohibit an assessment on adjudicated rights. Those interests included the State Farm Bureau and agricultural groups who opposed the quantification and reporting of groundwater rights and the very idea of an assessment on their use. During

legislative hearings, they argued that the bill established a dangerous precedent in California water law and doubted its constitutionality.

### **Putting a Lid on Hawthorne**

Concerned that some pumpers, most notably the City of Hawthorne, continued to pump in volumes far exceeding what could be presumed to be their eventual court-awarded rights given the 1952 Referee's Report, the West Basin Water Association sponsored AB 2984 to provide for an injunction against unrestricted pumping where an adjudication is pending, but before a final judgment is entered. Under the bill, the State Engineer may apply for an injunction to restrict pumping where adjudication of water rights is in process and where continued unrestricted pumping would do irreparable injury to waters of the basin. The constitutionality of the bill was doubted even by the attorneys who helped draft it, but its introduction and passage did serve to stabilize groundwater pumping by Hawthorne.

### **1955 Legislation**

Following the 1953 legislation session, pumpers in both basins were in a quandary. As their respective ground water conditions worsened, institutional options for a permanent way to finance replenishment appeared to be disappearing. The Flood Control District alternative would be temporary at best, and even that option would not be implemented for another year because of opposition from the City of Los Angeles. Legislation expanding the authority of municipal water districts to include the purchase of water for replenishment would not help because as a practical matter it was an authority that could not be exercised. Even though it made for robust and thoughtful discussion, the Metropolitan Water District proposal had a politically impossible uphill climb. And there did not seem to be a legislative appetite for extending the Orange County Plan beyond Orange County. If there were to be future replenishment districts, the Legislature would not create them by statute.

It was in this environment that West Basin Water Association President Ben Haggott approached W.S. Rosecrans, President of the Water Conservation Association of Southern California with a suggestion. Haggott told Rosecrans that there was a need for all segments of the water industry in the state to meet to discuss potential legislation to address critical ground water problems.

Rosecrans convened a meeting of what he called the "Study Committee of Underground Water Legislation" in September 1954. He invited 45 different agencies to attend and most did. A result of the meeting was the formation of the "Committee of Twelve" to develop ground water legislation that might enjoy more of a statewide

consensus than previous efforts.\* Ben Haggott of the West Basin Water Association was appointed Chairman of the Committee. James Krieger, attorney for the Western Municipal Water District in Riverside County was charged with drafting whatever legislation would emerge. Division of Water Resources Principal Hydraulic Engineer Max Bookman, who was also the West Basin Watermaster, served as a state-appointed advisor to the Committee.

Notwithstanding the statewide composition of the Committee, it was dominated by the five members representing the West Coast and Central Basin areas and the final product of the Committee reflected that fact. Ben Haggott and Louis Alexander, representing the two Associations, were the principal architects of the legislation.

Over the next five months, the Committee of Twelve met several times, reviewed over 100 recommendations and struggled with issues that were often contentious within the Committee and between Committee members and their appointing authorities. The final result of their work was the enactment of two very significant inter-related pieces of legislation that have remained essentially intact for more than five decades.

### **Recordation of Water Extractions and Diversions**

The West Coast Basin adjudication proceedings were by 1955 in their tenth year. Much of the time and expense of the proceedings owed to the fact that there was no legally certain way to accurately quantify who pumped how much. SB 1557 (Cunningham) provided for the Recordation of Water Extractions and Diversions. It required parties extracting 25 acre-feet or more to report to the Division of Water Resources by March 1 of each year the quantity of water taken in the previous calendar year and the method of measurement used. Failure to comply could result in a fine of \$500. More critically, it could result in a finding of "non-beneficial use" and the loss of any prescriptive right that might otherwise accrue in the event of adjudication.

"The purpose of the bill," Fossette said, "was to provide accurate records of water extraction from the overdrawn basins of Riverside, San Bernardino, Los Angeles, Ventura and Santa Barbara Counties, and to reduce the high cost of water litigation in those areas." In the event of adjudication, pumpers in Central Basin did not want to repeat the West Basin experience. Orange and San Diego Counties were included in the original bill, but were amended out at the request of water interests in those counties.

The law worked as intended in the subsequent Central Basin adjudication. Even though Central Basin included a much larger area with far more pumpers, the Central Basin adjudication from start to finish took 17 years less than the West Basin adjudication.

## **The Water Replenishment District Act**

The Water Replenishment District Act was embodied in AB 2908 (Backstrand). It created a procedure for forming and governing a district and outlined the purposes and powers such a district would have and the financing tools it could use to perform those duties. In its essential provisions, it has remained unchanged since adoption.

Some of its provisions were borrowed from previous bills. The required engineering survey report, for example, mirrored language that was in the Metropolitan legislation in 1953. There were other similarities with significant differences. The provision authorizing a replenishment district to levy an *ad valorem* tax did not limit the tax to a specific purpose or limit the duration it may be imposed. The Orange County legislation limited the use of the tax to costs incurred in addressing the accumulated overdraft only. The Flood Control District legislation limited the length of time the tax could be imposed. The uses to which proceeds from a replenishment assessment may be used are similarly not as limited as they were in the Metropolitan legislation and the Orange County statute and the requirement that the assessment be "uniform" for all groundwater produced was explicit in the Replenishment District Act but not in the others.

The major elements of the Water Replenishment District Act had not surfaced at all in earlier legislation. There was, first of all, the sweeping array of legal powers a district would have. For the purpose of replenishing groundwater supplies, the Act provided that a district may do any or all of the following things with respect to water: buy, sell and exchange it, distribute, spread, sink, and inject it, store it, transport it, reclaim, recycle, purify and treat it, "or otherwise manage and control water for the beneficial use of persons or property within the district." To finance its operations, it could levy an assessment on pumping, a tax on property and a rate on water it sells. Many of these powers were tailored for possible application to conditions specific to the West and Central Basins whose pumpers wanted a replenishment district to have maximum legal and financial flexibility to deal with groundwater conditions then existing or that might arise.

The procedure for forming a district, similar to that for municipal water districts, had not appeared in earlier replenishment legislation. The pumpers wanted "local control" to minimize the discretionary role of the County Board of Supervisors and the State in either district formation or the affairs of a district, once formed. To cement its independence as a special district with broad public support, they wanted the district's formation to result from a voter petition and a subsequent election. They wanted a governance entity with police power to enforce groundwater reporting requirements as well as the collection of a property tax and a replenishment assessment. Anticipating, at

least at the time, that a new district or districts would finance the build-out of the barrier system in the respective basins and undertake other possible construction projects, they also wanted the replenishment district to have the power of eminent domain.

There is a provision in the Act that requires a replenishment district to investigate and determine the cost of using existing and available facilities of another agency “to avoid duplication of similar operations” before deciding whether to build facilities that meet the same purpose. This provision was included at the request of the Flood Control District to protect its investment in the spreading grounds (the State owned the West Coast Basin Barrier at the time). While acknowledging the Flood Control District’s concern, the pumpers crafted the language to preserve final discretion to a replenishment district to use or not use facilities of another agency.

The Replenishment District Act was never just about artificial replenishment. One of its most significant provisions authorized a replenishment district to pay the costs of adjudication proceedings. When asked why it was included, Haggott said that “West Basin needed the provision in the act to permit adjudication of the upstream system of the Central Basin and in the upper San Gabriel Valley in order to find some means to stop the cutting off of upstream replenishment to West Basin.” While revealing the intention of West Basin pumpers, this provision was never used for that purpose. However, an amendment to the Act in 1961 authorized the recently-created Central and West Basin Replenishment District to serve as plaintiff against its own pumpers in the Central Basin adjudication. This provision in the Replenishment District Act enabled the District to pay the costs of that adjudication, as well as the costs of defending the West Basin judgment against the Hawthorne appeal. The costs in each instance were paid from property tax revenue to the District and not from the replenishment assessment.

Even before the Water Replenishment District Act was adopted, pumpers were exploring what needed to be done to create a district for each basin. Much on their minds was the question of boundaries. Haggott said shortly after AB 2908 was introduced that “a replenishment district could include the West Basin only or it could include the Central Basin and the upper San Gabriel Valley.” Shortly after AB 2908 was adopted, R.R. Thorburn of Standard Oil of California said, “West Basin receives its water from the Central Basin and the Central Basin in turn receives its water from San Gabriel Basin...the Upper San Gabriel Valley Basin was definitely a part of the replenishment problem and that perhaps a replenishment district should include all three basins.”

The Replenishment District Act was purposefully written in such a way as to make any of the options possible.

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\*The Committee of Twelve:

- Ben Haggott, Chairman (West Basin Water Association)
- Louis J. Alexander (Central Basin Water Association)
- Warren Butler (Compton appointee to the Metropolitan Board)
- Paul Bailey (Orange County Water District)
- Rex Goodcell (Assistant Los Angeles City Attorney assigned to the Department of Water & Power; Chairman, West Basin Settlement Committee)
- Ransom W. Chase (Member, Los Angeles Board of Water & Power Commissioners, Los Angeles appointee to the Metropolitan Board)
- J.J. Deuel (California Farm Bureau Federation)
- Robert Dubrow (Irrigation Districts Association of California)
- James Krieger (Western Municipal Water District attorney)
- A.C. Reynolds (California Mutual Water Company Association)
- Ralph H. Taylor (Agricultural Council of California)
- G.I. Wilde (United Water Conservation District, Ventura County)



## MEMORANDUM

ITEM NO. 12

*Prepared by:* Adeline Yoong  
*Reviewed by:* Elsa Lopez  
*Approved by:* Robb Whitaker

**DATE:** DECEMBER 19, 2008  
**TO:** BOARD OF DIRECTORS  
**FROM:** ROBB WHITAKER, GENERAL MANAGER  
**SUBJECT:** LEGISLATIVE REPORT

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### SUMMARY

#### **Legislative Calendar**

##### State Legislature

- December 1, 2008 – 2009-10 Regular Session convenes
- January 1, 2009 – Statutes take effect
- January 5 – Legislature reconvenes
- January 10 – Budget must be submitted by Governor
- January 30 – Last day to submit bill requests to the Office of Legislative Counsel
- February 27 – Last day for bills to be introduced

##### Congress

- Week January 5, 2009 – 111<sup>th</sup> Congress convenes
- January 20 – Inauguration Day

#### **Legislative Report**

Verbal updates will be provided on state and federal matters.

### FISCAL IMPACT

None.

### EXTERNAL AFFAIRS COMMITTEE RECOMMENDATION

For information.