

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

**8:30 A.M., FRIDAY, JUNE 11, 2004**

**AGENDA**

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

- I. DETERMINATION OF A QUORUM**
- II. PUBLIC COMMENT**
- III. MINUTES OF THE REGULAR MEETING OF MAY 11, 2004**  
*Staff Recommendation:* That the Committee approve the minutes as submitted.
- IV. RFP FOR THE EVALUATION OF OPERATING OBJECTIVES FOR THE WEST COAST BASIN**  
*Staff Recommendation:* That the Committee direct staff to issue the Request for Proposals for the Evaluation of Operating Objectives for the West Coast Basin.
- V. IN-LIEU PROGRAM**  
*Staff Recommendation:*
  - A. That the Committee direct staff to develop In-Lieu agreements with Long Beach at the In-Lieu payment rates specified.
  - B. That the Committee direct staff to develop In-Lieu agreements with Los Angeles at the In-Lieu payment rates specified.
- VI. GROUNDWATER BASIN UPDATE**  
*Staff Recommendation:* For information.
- VII. LEO J. VANDER LANS WATER TREATMENT FACILITY PROJECT UPDATE**  
*Staff Recommendation:* For information.
- VIII. ADJOURNMENT**

Posted by Abigail C. Andom, Deputy Secretary, June 3, 2004.

**MINUTES OF MAY 11, 2004  
REGULAR MEETING OF THE WATER RESOURCES COMMITTEE  
OF THE BOARD OF DIRECTORS  
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA**

A regular meeting of the Water Resources Committee of the Board of Directors of the Water Replenishment District of Southern California was held on May 11, 2004 at 8:34 a.m., at the District Office, 12621 E. 166th Street, Cerritos, California. Chairperson Albert Robles called the meeting to order and presided thereover. Deputy Secretary Abigail C. Andom recorded the minutes.

**I. DETERMINATION OF A QUORUM**

Attendees at the meeting were as follows:

Committee:	Directors Albert Robles and Robert W. Goldsworthy
Staff:	Robb Whitaker, Mario Garcia, Ted Johnson, Jason Weeks, Charlene King
Guest:	Fernando Paludi Harvey De la Torre of Central and West Basin Municipal Water Districts, Diem Vuong of Long Beach Water Department and Amy Rego of Metropolitan Water District

**II. PUBLIC COMMENT**

None.

**III. MINUTES OF THE REGULAR MEETING OF APRIL 12, 2004**

The minutes were approved as submitted.

**IV. COOPERATIVE EFFORT WITH LOS ANGELES COUNTY DEPT. OF PUBLIC WORKS FOR GROUNDWATER MODELING OF ALAMITOS BARRIER FOR RECYCLED WATER PERMIT COMPLIANCE**

Chief Hydrogeologist Ted Johnson stated that one of the permit requirements to operate the Leo J. Vander Lans Water Treatment Facility will be to track the movement of the recycled water through the aquifer systems and predict how long it will take to reach nearby drinking water wells, to determine the mass-balance of the recycled water in each aquifer, and to calculate the percent recycled water being pumped from the wells to ensure that it does not exceed permit limits. Mr. Johnson explained that this work can best be accomplished using a detailed groundwater fate and transport model of the barrier system. Although development of a detailed barrier model is normally an expensive and time-consuming effort, the District can get a head start and reduce the costs and time by utilizing the Los Angeles County Department of Public Work's (DPW) existing model of the Alamitos barrier. This model was developed over the past two years to improve barrier operations. Mr. Johnson explained that with some updates and modifications to the

existing model, it can be used for recycled water tracking to meet the District's permit requirement needs.

The estimated cost for this work is \$102,500, with WRD contributing \$62,500 and the DPW contributing \$40,000.

The Committee recommended that the Board to enter into an Agreement with the Los Angeles County Department of Public Works for groundwater modeling and recycled water tracking at the Alamitos Barrier.

**V. RFP FOR THE EVALUATION OF OPERATING OBJECTIVES FOR THE WEST COAST BASIN**

Assistant General Manager/Chief Engineer Mario Garcia stated that staff had drafted a request for proposal (RFP) for the operational objectives of West Coast Basin in order to find a more economical way of managing the basin.

Director Goldsworthy commented that he would like the RFP to be more comprehensive and address issues that are of concern to the District.

Mr. Fernando Paludi, West Basin Municipal Water District (WBMWD), stated that they would like this effort to be more collaborative involving WBMWD and the County of Los Angeles. Mr. Paludi explained that at the last WRD Technical Advisory Committee (TAC), some of the TAC members had wanted to hasten the process and have WBMWD excluded from the discussions. He stated that they would recommend that a steering committee be established with all the players involved and that the time frame be extended.

Mr. Diem Vuong, Long Beach Water Department, stated that the TAC would like to move forward in selecting a consultant for the project. Mr. Vuong stated that the consultant will coordinate with all the parties involved and will instruct them on how to proceed. He stated that he envisions this project to be a comprehensive overall plan, somewhere in the range of a \$500,000 study.

Director Robles stated that he concurs with Mr. Vuong and would like to see this plan as comprehensive as possible. He stated that he would like the consultant to provide guidance on the operations of the basin and would like to have participation from all the proper parties involved. Director Robles asked if WBMWD would consider sharing the financial cost of the project.

The Committee recommended that this item be reviewed at the next meeting.

## **VI. IN-LIEU PROGRAM**

Director Robles stated that he would like to postpone re-instituting the In-Lieu program until the impacts of the suspension has been determined.

Assistant General Manager/Chief Engineer Mario Garcia stated that he sees the general benefits of the In-Lieu program and recognizes the fact that the impacts may not be quantified for another 2-3 years. He recommended re-instituting the program at a much lower level.

Mr. Diem Vuong, Long Beach Water Department, stated that there is a regional benefit and that they will consider participating even with zero incentive.

Discussion followed. Director Goldsworthy recommended doing the Program on a case-by-case basis. Director Robles stated that he would like to see the results of the West Basin operational plan first in order to get the full benefit of the study.

Ms. Amy Rego, Metropolitan Water District (MWD), stated that MWD is interested in knowing whether or not the Program will be re-instituted as soon as possible because it uses in-lieu estimates for operational planning purposes.

## **VII. GROUNDWATER BASIN UPDATE**

Chief Hydrogeologist Ted Johnson provided an update on the groundwater conditions in the basins for the month of March of water year 2003-2004. Some highlights included: Precipitation (Los Angeles Civic Center Station): 9.21 inches (27% below average); Pumping: Central Basin - 87,923 af (10% higher than last year) and West Coast Basin - 22,910 af (6% lower than last year); Water levels at the Montebello Forebay Key Well 1601T: Elevation = 105.1 ft mean sea level (13.1 ft lower than last year and 22 ft below the upper water level goal); Spreading grounds: imported water -12,000 af (estimated out of current order for 27,600 af) and recycled water - 26,000 af (estimated. Permit will allow up to 45,000 af this year); and Barrier wells: imported - 11,058 af (9,800 af last year) and recycled -1,792 af (3,583 af last year) WCBBP only.

## **VIII. LEO J. VANDER LANS WATER TREATMENT FACILITY PROJECT UPDATE**

Assistant Engineer Charlene King stated that staff has been working with PK Contractors and its subcontractors to attend to certain control and operational problems for the Leo J. Vander Lans Water Treatment Facility to operate as smoothly. Ms. King explained that most recently the electric actuator of an RO flush valve was replaced, the MF control system was adjusted to reduce the volume of wash water returned to the waste

stream, and a leak that developed along an irrigation line was repaired. She also noted that currently two of the 108 RO pressure vessels are experiencing high permeate conductivity and staff is performing diagnosis to identify the causes.

**IX. ADJOURNMENT**

With no further business for the Committee, the meeting was adjourned at 10:20 a.m.

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Chairperson

ATTEST:

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Director



## MEMORANDUM

### ITEM NO. IV

*Prepared by:* Mario Garcia

*Reviewed by:*

**DATE: JUNE 11, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: RFP FOR THE EVALUATION OF OPERATING OBJECTIVES FOR THE WEST COAST BASIN**

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### SUMMARY

At its previous meeting, the Water Resources Committee provided comments on the above-mentioned RFP. Staff has since included additional information within the scope of work, and those items inserted are denoted by double underscores within the body of the RFP.

Of particular note are the section regarding an evaluation of impacts to the deferred projects within WRD's Capital Improvement Program (CIP) and the list of questions that the study should seek to answer.

The committee is requested to review the RFP again and direct staff accordingly.

### FISCAL IMPACT

No impact at this time. The cost of the study will be determined after proposals are received.

### STAFF RECOMMENDATION

That the Committee direct staff to issue the Request for Proposals (RFP) for the Evaluation of Operating Objectives for the West Coast Basin.

**REQUEST FOR PROPOSALS  
TO PROVIDE  
PROFESSIONAL SERVICES FOR**

**EVALUATION OF OPERATING OBJECTIVES  
FOR THE WEST COAST BASIN**



**PROPOSALS DUE:**

**JUNE \_\_, 2004  
5:00 P.M.**

WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA  
12621 E. 166TH STREET  
CERRITOS, CA 90703  
(562) 921-5521

REQUEST FOR PROPOSALS  
TO PROVIDE  
PROFESSIONAL SERVICES FOR

**EVALUATION OF OPERATING OBJECTIVES  
FOR THE WEST COAST BASIN**

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**The District and the West Coast Basin**

The Water Replenishment District of Southern California (WRD) is a special district established in 1959 under the California Water Code. WRD manages the groundwater resources of the Central and West Coast Basins, which supply water to about four million people over a service area that covers 420 square miles in southern Los Angeles County. WRD is responsible for maintaining adequate groundwater supplies, preventing seawater intrusion into the groundwater aquifers, and protecting groundwater quality against contamination.

WRD's powers and responsibilities overlie both the Central and West Coast Groundwater Basins, but the two are defined as separate geologic units. While the District manages the two basins in total, there are certainly characteristics unique to each basin that affect this management principle. For example, the methods by which each basin can be replenished are particularly different and thus impact the overall costs incurred by the District. Nonetheless, there is an accepted hydrogeologic connection between the two basins, and this fact should be recognized when evaluating any proposed action to either of the individual basins.

The West Coast Groundwater Basin is located on the coastal plain of Los Angeles County and is bounded by Ballona Creek and the Baldwin Hills on the north, the Newport-Inglewood Uplift zone on the east and the Pacific Ocean to the south and west. During the early half of the 1900s, groundwater production from the West Coast Basin steadily increased to meet the demands of a growing population. Overdraft conditions resulted and the natural groundwater flow gradient of inland to sea was effectively reversed and brought on the threat of seawater intrusion. Through a series of actions by the local groundwater producers, the courts ultimately established restrictions to groundwater extractions from the West Coast Basin. A stipulated agreement, which eventually became the judgment that limits pumping from the basin, was implemented by the early 1960s. To meet overall water demands that could no longer be satisfied through the use of groundwater alone, the Metropolitan Water District of Southern California (MWD) began delivering imported water to the entire West Coast Basin region.

The West Basin Judgment limits annual extractions from the basin to just over 64,000 acre-feet (AF). There are annual carryover and emergency provisions that can increase this allowable pumping amount, but normal production over the past 10 years has generally been on the order of 50,000 acre-feet per year (AFY). Despite the pumping limitation imposed by the judgment, area pumpers recognized that the amount allowed to be pumped (i.e. 64,000 AFY) on an annual basis still exceeded the safe yield of the basin, which was estimated to be about 24,000-30,000 AF. Further restrictions to "balance" this overdraft condition through reduced pumping were considered

unfeasible because the decreased levels to which the pumpers agreed were already deemed severe. Furthermore, as basin pressure levels recovered on the West Basin side of the Newport-Inglewood Uplift, there was a corresponding reduction in the amount of subsurface underflow coming in from the Central Basin side, effectively lessening natural inflow into the West Coast Basin. These factors helped to establish the pumping limits used to this day.

Finally, the threat of seawater intrusion remained because of the “reversed” groundwater gradient caused by inland pumping. To prevent this, the Los Angeles County Department of Public Works (a.k.a. the L.A. County Flood Control District) along with area pumpers devised a series of freshwater injection wells along the coast to create an artificial mound that would keep seawater at bay. As an added benefit, the inland groundwater gradient also allowed the injected water at these “barrier wells” to flow and replenish the basin aquifers.

Construction of the West Coast Basin Barrier Project began in 1952. The initial project in the cities of Manhattan Beach and Hermosa Beach, along with subsequent extensions to the north and south, comprise the current alignment. The barrier now stretches along the coast in a north-south orientation from the Los Angeles International Airport to the Palos Verdes Hills. The Dominguez Gap Barrier Project, a smaller system located in the southerly portion of the basin, was constructed in the early 1970s. It prevents seawater intrusion from the San Pedro Bay and generally extends from the Palos Verdes Hills to the Los Angeles River. The concentration of pumping by oil refining operations in the Dominguez Gap area (communities of Wilmington and Carson) provides a challenge in controlling seawater intrusion.

Today, there are over 400 active drinking water wells operated by approximately 110 groundwater pumpers within WRD’s service area. Of those, about 70 wells and 29 pumpers actively produce from the West Coast Basin. The larger pumpers include municipalities, privately-owned water purveyors, and oil refining operations. The geographic locations of the extractions are generally well dispersed throughout the basin, but again, there are still elevated levels of pumping in the Dominguez Gap area due in large part to the concentration of refineries. Total water demand of users overlying the West Coast Basin is on the order of 200,000 AFY, and groundwater production typically accounts for 25% of these total water needs.

The ultimate operation of the West Coast Basin took the above-mentioned conditions and factors into account and resulted in the management philosophy used today. Specifically, pumping restrictions have not been substantially altered from the original judgment values, pressure levels within the aquifers are allowed to remain low to induce subsurface underflow from Central Basin, and barrier injections are set to protect against seawater intrusion while minimizing water purchase costs.

## **Project Background**

WRD and local groundwater producers want to reassess past assumptions that helped formulate current operational objectives and investigate potential concepts and ideas that can improve the efficiency with which the basin is managed. There are certainly several factors that have changed since the original “operating model” for the basin was developed, and these factors need to be taken into account when assessing the appropriateness of current operations. In other words, it may be

the time to “change the course” of the traditional operating mode of the West Coast Basin and develop a long-term plan that will provide more efficiency and economic benefit to the region.

It is important to point out that while there is nothing inherently wrong with the current operating mode for the basin, it is prudent to investigate alternative goals and objectives to basin management that may fall more in line with current and projected conditions. In all likelihood, altering the basic objectives for basin management will, in turn, point to operational changes. If that is the path taken, then implementing a plan to achieve these new objectives must also be part of the formula.

Over the years, WRD has maintained the basin management concept described earlier (i.e. depressed pressure levels within the basin to sustain subsurface inflow from Central Basin coupled with injection at the barriers to protect against seawater intrusion) but with some variations in actual operation. For example, WRD’s In-lieu Program seeks to reduce groundwater extractions in the West Coast Basin by retiring pumping rights on a year-to-year basis. The participants to the program meet their demands through surface water deliveries instead of pumping groundwater, and this effectively keeps groundwater in the basin. While this program, in concept, should help to reduce the need for barrier injection water in the long run, its short-term impacts to basin operations are fairly limited and not noticeably apparent. The difficulty in seeing the benefits of in-lieu is compounded by the fact that water purchases for injection are increasing due to the expansion of the barriers (to improve their effectiveness in keeping the seawater out of the basin).

WRD has presented several project proposals related to the West Coast Basin. These have included such programs as in-lieu replenishment, inland injection at new and existing facilities, saline plume mitigation, alternate injection sources for the seawater barriers, and the like. In recent discussions with WRD’s Technical Advisory Committee (TAC), it was suggested that before any further capital projects are undertaken in the West Coast Basin the District evaluate a “re-operation” of the basin to achieve “optimum” operating conditions. There was no agreement, however, on the definition of and criteria for “optimum”.

Subsequent discussions with the TAC revealed that the goal is really to investigate other modes of operating the basin that would result in a net lower overall cost to all basin pumpers. WRD would add, however, that any changes in operation must **not** jeopardize the viability of the local groundwater resource.

Through this assessment, current goals and objectives must be reviewed and any proposed changes must be thoroughly analyzed. Should changes in goals/objectives be recommended, the manner and method in which to achieve those goals have to be developed. Plausible strategies should be tested through discussion and basin modeling, and a **practical and realistic** approach should be part of the final recommendations/findings.

## Goals and Objectives

The District wants to complete a comprehensive study that will assess current conditions as well as investigate potential changes to the operational management of the West Coast Basin. A key objective of this study is to find an operating strategy that will provide the same or better level of protection to the basin’s resources while reducing overall costs. This will involve researching and

reviewing available data as well as acquiring the necessary insight into the manner in which individual producers make decisions with respect to the use of groundwater.

A recommendation to maintain status quo or propose operational changes in the management of the West Coast Basin must be united with proper justification(s) to do one or the other. The study must identify specific projects and programs that could satisfy recommended operating objectives, and additionally, provide the necessary technical and economic analysis to estimate benefits and costs associated with the measures identified. As a final “reality check”, the study should only recommend strategies that are practical, realistic, and capable of being implemented.

### **Available Information**

WRD will make available for the study all existing reports and analyses within its current library. The consultant is responsible, however, for generating and securing any new information to properly complete the requested analysis.

Also, the USGS has developed for WRD a regional groundwater model (based on MODFLOW) for the Central and West Coast Basins. The District will make the model available to the consultant to be employed as needed, but as an option, WRD staff can perform a limited number of simulations in lieu of the consultant using its resources. Because the number and extent of the modeling runs can vary and the District is not able to commit its resources at this time, the consultant should assume it will perform all modeling work. Upon selection of the consultant, WRD reserves the option of reducing the modeling component cost through use of in-house staff once the modeling requirements are more clearly defined.

### **Scope of Work**

The following scope of work is a listing of tasks that shall, at a minimum, be completed by the study. This list, however, does not limit the consultant from developing and providing additional information that will result in a more thorough assessment for the proposed study.

#### ***Meetings/Interviews***

The consultant shall schedule and conduct several meetings with designated **WRD staff** and/or **pumper representatives** to fully understand the objectives of the study, to periodically ensure that the evaluation is satisfying its intended purpose, and to present draft and final findings and recommendations. The consultant should start the process by scheduling a kick-off meeting to discuss task objectives, project team, schedule, and additional background information. Other meetings and/or discussions between the consultant and WRD staff/designees shall occur in sufficient frequency to provide WRD with the status and progress of the project.

The consultant shall also plan to have, at a minimum, an initial meeting with the **TAC** to discuss the study and receive comments and input from the TAC members. Such meeting(s) shall coincide with the regularly scheduled monthly meetings of the TAC.

**Major groundwater producers** in the West Coast Basin shall be contacted to meet with and be interviewed by the consultant. These discussions should provide the consultant with sufficient knowledge of the operation of such producers and the decision-making that takes place with regard

to the use of groundwater. The consultant should, at a minimum, contact the major oil refining companies that extract groundwater and the larger water retailers serving the West Coast Basin area. The contacts made should comprise of at least 80% of the groundwater production from the basin. This information should then be used as a basis for justifying the practicality of a project or management program proposal.

The consultant shall also meet with other **stakeholders** such as West Basin Municipal Water District, L.A. County Department of Public Works, Watermaster (CA Department of Water Resources), etc. to gain further understanding of each agency's role in the overall operation of the basin and to identify potential impacts to these stakeholders.

The above-referenced meetings are separate from any presentations of findings and recommendations the consultant will be required to make. That task is covered in a later section.

### ***Research and Review***

The consultant shall review all existing books, reports, studies, pamphlets, and other documents pertinent to the characteristics, management, and operation of the West Coast Basin. A full and thorough understanding should be garnered of the history of the basin adjudication, the institutional structure of basin management, the current basin operating mode, the institutional/physical interaction with Central Basin, etc.

WRD will make available to the consultant any reports or other documentation in its library. This should not, however, limit the consultant in seeking other documentation available from other sources.

### ***Existing Basin Management Objectives***

The consultant will work closely with WRD staff to become familiar with all aspects of the West Coast Basin. This shall result in a comprehensive understanding of current extraction and replenishment practices within the basin as well as the operational scheme for the adjacent Central Basin insofar as it affects the West Coast Basin.

The current operating conditions, or *status quo*, shall be duly recorded and quantified in an acceptable manner so as to readily allow comparisons with other identified management scenarios. This quantification should include, but not necessarily be limited to, factors such as long-term costs, ease of implementation, effectiveness in satisfying basin objectives, and institutional impacts. The *status quo* may be used as a baseline from which to compare other proposed basin management scenarios.

The benefits and costs of the existing operational practices that satisfy the current basin management objectives shall be clearly described and quantified. A full economic evaluation including a long-term analysis shall also be included in the description.

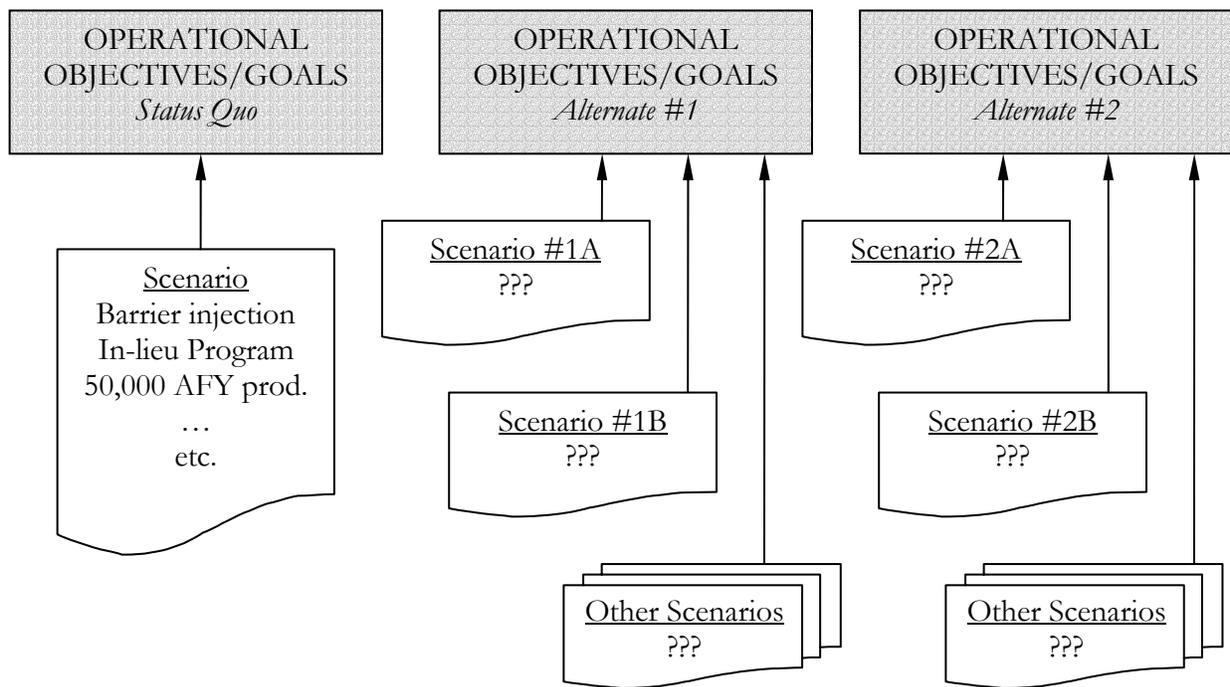
### ***Identify Alternate Basin Management Objectives and Scenarios***

In understanding the existing objectives (i.e. maintain protective elevation via water injection along the coastline to prevent seawater intrusion while sustaining current extraction quantities inland) for the West Coast Basin as well as the basin management practices currently in use to meet those objectives (e.g. seawater barrier injection, in-lieu replenishment), the consultant shall identify and

propose alternate goals of basin management that can be individually evaluated. Such goals and objectives, however, should be reasonably feasible and ultimately capable of being implemented (e.g. raise inland water levels or find optimal level to operate).

These alternate basin management objectives should be clearly described and the merits and drawbacks should be expressly noted. The various objectives should also be compared to the *status quo* condition to plainly show the differences.

In developing scenarios to meet alternate basin management objectives, current issues such as impacts to storage/conjunctive use programs should be taken into account. Concepts associated with the potential use of the Central and West Coast Basins for storage are actively being discussed and will be a major component of any strategy. The consultant should become familiar with these concepts through discussions and meetings with those involved in the Conjunctive Use Working Group (CUWG). Obviously, existing restrictions such as the basin adjudication should also be addressed within these scenarios.



### ***Evaluate Basin Management Scenarios***

After conferring with WRD staff, the consultant will evaluate three (3) to four (4) alternate scenarios identified in the previous task. Each scenario evaluated shall include a description of the basin management objective, a conceptual plan/strategy to achieve that objective, and, to the degree possible, a quantification of long-term benefits, costs and impacts. Each scenario should then be compared to the *status quo*. Additionally, if there are intangible benefits or impacts associated with a particular scenario, such issues shall be explained.

A comparison of long-term costs between varying scenarios will be key in selecting a preferred alternative. This evaluation/comparison activity, therefore, should aptly analyze long-term costs and/or savings as a means of justifying one method over another.

The evaluation of these various basin objectives and scenarios should include groundwater model simulation(s) to confirm expected outcomes. As previously mentioned, WRD staff will endeavor to work with the consultant to perform these simulations using the District's in-house regional groundwater model. Utilization of WRD staff, however, will depend on timing and various other factors affecting resource availability. Realizing that the complexity of the model runs will not be known until the scenarios are more fully developed, WRD staff will make every effort to allot such time as needed when this phase of the study draws closer.

After evaluating the various scenarios, the consultant shall recommend a preferred goal and strategy for basin management. The recommendation should state the benefits and advantages of the chosen objective and clearly lay out the proposed implementation strategy to achieve the stated basin objective. Within this implementation strategy, the necessary costs and schedule of needed funding should be shown to assist in WRD's budgeting/planning effort.

### ***Impacts to Proposed Capital Projects / Conjunctive Use Scenarios***

The WRD Board of Directors recently adopted a Capital Improvement Plan (CIP) that identifies potential projects and programs for future implementation. As part of the review of the CIP, the development of several projects associated with the West Coast Basin were deferred until this operational objectives analysis could be completed. The specific projects include the following:

- Expansion of the Goldsworthy Desalter
- Improvement and use of dedicated brine line for Goldsworthy Desalter
- Use of horizontal wells for Goldsworthy Desalter
- Conversion of the Orduña Wells to serve as injection facilities
- Development of injection/extraction wells inland of the seawater barrier

The consultant shall evaluate these projects in the context of the recommended operational plan for the basin to determine from a conceptual level whether the projects still make sense. If applicable, the use of the capital facilities listed above shall be identified, and the consultant shall recommend to WRD whether or not the facilities should be utilized in implementing the desired course of action.

The analysis should also include criteria for evaluating future programs/projects as they impact the recommended operational plan. This will involve a detailed listing of project concepts that are beneficial or detrimental to the stated goals/objectives of the plan.

### ***Prepare draft and final reports***

Prior to preparing a draft study report, the consultant shall present to WRD and its designees the analyses and findings from the previous tasks. The consultant shall make every effort to incorporate into the draft report any applicable comments and concerns expressed at these meetings by WRD

and its designees. At a minimum, the following questions and issues should be addressed by the report:

- 1) What are the operational parameters/components that make up the *status quo* basin management objectives for the West Coast Basin?
- 2) What are the long-term costs/benefits for continuing with the *status quo* scenario?
- 3) Are there other operational objectives that can also sustain the groundwater resources of the West Coast Basin?
- 4) What scenarios/projects/programs should be implemented to achieve these alternate objectives?
- 5) Do these alternatives provide the same or better level of protection to the groundwater resources?
- 6) What are the costs, benefits (e.g. avoided costs), and impacts associated with these scenarios?
- 7) Can the impacts be quantified and mitigated?
- 8) How do the identified alternate approaches compare with *status quo*?
- 9) What is the recommended strategy for the operation of the West Coast Basin?
- 10) How would the recommended alternative affect the need for or utility of the capital projects identified in WRD's Capital Improvement Plan?
- 11) How would the recommended alternative affect a conjunctive use/storage program for the basin?
- 12) How could a conjunctive use/storage program be incorporated into the recommended alternative?
- 13) How can future programs/projects be evaluated in context of the recommended alternative?
- 14) What specific criteria should be established to evaluate the utility of future programs/projects in light of the recommended alternative?

These questions, however, should only provide guidelines for the consultant and should not be construed as all inclusive. Other issues and concerns not listed above may be brought up during the course of the study and should be addressed accordingly by the report.

Upon completing the necessary research, investigation, and analysis, the consultant will prepare a draft report documenting the findings, evaluation, and associated recommendations. The report recommendations shall include, at a minimum, a preferred basin management objective, a proposed plan of action, and the associated cost and schedule for that plan. The report shall also incorporate appropriate pictures, graphs, and illustrations to effectively convey the content of the report. It must be of sufficient detail and at a level of completion that will allow WRD and its designees to comprehend the full breadth of the study. The consultant shall provide ten (10) bound copies of the draft report and an electronic version (e.g. Portable Document Format - PDF) to WRD. The report shall be clearly marked with the word "DRAFT".

After meetings to present the draft report to WRD and its designees, the consultant will provide sufficient time to review and comment on it. WRD may provide the draft report for review to basin pumpers and other stakeholders. WRD reserves the right to incorporate comments from these other entities into the overall review of the draft document.

The consultant shall incorporate all pertinent draft report comments from WRD and its designees into a final study report. Twenty (20) bound copies, one (1) unbound original, and an electronic version of the final report shall be delivered to WRD.

***Present preliminary and final recommendations***

WRD is governed by a board of directors that includes a structure of standing committees to oversee District business. In addition to the entire board of directors, there are at least two committees that hold an interest in this project. The consultant shall allow for a minimum attendance at five (5) committee and board meetings to present preliminary and final recommendations associated with the study. It is tentatively expected that preliminary findings will be provided to two committees during the course of the evaluation. At the conclusion of the study, final report recommendations will be provided to those same two committees as well as the full board of directors.

The final presentations shall include appropriate handouts and/or slideshows to properly convey a summary of the full report.

**SCHEDULE**

WRD would like to complete this study by the end of Calendar Year 2004. The proposal should include a detailed schedule by task to show completion by the above date.

## PROPOSAL REQUIREMENTS

**General Information:** Consultants proposing to conduct this project:

1. Must follow the instructions in this section;
2. Must be agreeable to meet the terms and conditions of the District's standard Agreement for Professional Services (Attachment A); and
3. Shall provide only the most pertinent information that will allow reviewers to understand the consultant's ability to fulfill all requirements.

**Format of Proposals:** To be considered, a proposal must be in a printed, bound format, on paper measuring 8½ inches by 11 inches. It must be divided into sections, with the sections placed in order as follows:

1. Identification of Respondent / Project Team (including project manager/main contact; WRD must be notified and pre-approve any change to the project team after proposal or award submittal, including sub-consultants, if any.)
2. Qualifications and Relevant Experience
3. Project Approach (divided into major tasks)
4. Project Schedule
5. Project Cost (divided into major tasks and showing assigned personnel to each task including estimated number of hours, billing rate, and total cost)
6. References

The body of the proposal must not exceed 15 pages, excluding the cover letter and table of contents. There is no page limit restriction for appendices.

**Number of Copies Required:** Submit eight (8) complete sets (copies) and one (1) electronic version (preferably in Portable Document Format - PDF) of the proposal.

**Place to Submit Proposals:** The street address and mailing address to which proposals shall be delivered is

ATTN: WEST COAST BASIN OPERATING PLAN PROPOSAL  
WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA  
12621 E. 166<sup>TH</sup> STREET  
CERRITOS, CALIFORNIA 90703

**Deadline for Receiving Proposals:** The deadline for submitting proposals is Friday, June \_\_, 2004 at 4:00 pm.

**Miscellaneous Information:** WRD reserves the right to reject all proposals submitted. If you have any questions regarding this RFP or require additional project details, please contact Mr. Jason Weeks at (562) 921-5521.

Appendix A  
WRD Standard Agreement for Professional Services



## **MEMORANDUM**

### **ITEM NO. V**

*Prepared by:* Jason Weeks

*Reviewed by:* Mario Garcia

**DATE: JUNE 11, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: IN-LIEU PROGRAM**

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### **SUMMARY**

District Staff has been evaluating the potential of re-implementing the In-Lieu Program in FY04/05. This item was discussed at the May meeting of the Water Resources Committee, at which time the Committee determined that participation in the program should be evaluated on a case by case basis. District staff will present the Committee with a summary of those parties that have expressed interest in participating in the In-Lieu Program in FY04/05.

### **OVERVIEW OF IN-LIEU PROGRAM**

The purpose of WRD's In-Lieu program is to provide an alternative source of replenishment water to those areas of the Central and West Coast basins that are difficult or relatively expensive to replenish. The District's In-Lieu program provides incentive payments to participating agencies in exchange for their retirement of water rights for the current year. The In-Lieu payment is intended to make up the cost difference between the retired groundwater right and the seasonally discounted imported water available from MWD.

Based on the District's FY04/05 replenishment assessment of \$128 per acre-foot and an assumed energy cost to extract groundwater of \$65 per acre-foot, the cost of groundwater to a water rights holder is assumed to be \$193 per acre-foot.

The assumed cost of seasonally available imported water is based on the MWD commodity rate plus any additional surcharges levied by a MWD member agency. For those participating agencies that are also MWD member agencies, the cost of the seasonally available water is \$300 per acre-foot for July-December 2004 and \$325 per acre foot for January-June 2005. For those participating agencies that purchase imported water through WBMWD, the cost of the seasonally available water is \$331 per acre-foot for July-December 2004 and \$356 per acre-foot for January-June 2005.

The table below summarizes the costs for seasonally available water from MWD and the proposed WRD In-Lieu payments for FY04/05.

<b>Treated Replenishment Water Rate (Long-Term Seasonal Storage)</b>					
	<b>Tier A</b>		<b>Tier B</b>		
	<b>MWD Member Agency</b>		<b>WBMWD Member Agency</b>		
	2004	2005	2004	2005	
	July-December	January-June	July-December	January-June	
MWD Commodity Rate	\$ 300	\$ 325	\$ 300	\$	\$ 325
Surcharge	\$ -	\$ -	\$ 31	\$	\$ 31
<b>Total (\$/AF)</b>	<b>\$ 300</b>	<b>\$ 325</b>	<b>\$ 331</b>	<b>\$</b>	<b>\$ 356</b>

<b>In-Lieu Calculations</b>					
<b>WRD In-Lieu Payment Summary</b>					
Cost Diff between LT Seasonal Storage and GW	\$ 107	\$ 132	\$ 138	\$	\$ 163
In-Lieu Incentive Payment	\$ -	\$ -	\$ -	\$	\$ -
<b>WRD In-Lieu Payment (\$/AF)</b>	<b>\$ 107</b>	<b>\$ 132</b>	<b>\$ 138</b>	<b>\$</b>	<b>\$ 163</b>

The District's draft FY04/05 budget contains an estimated In-Lieu Program of 10,303 acre-feet, with 6,000 acre-feet allotted for the lower Central Basin and 4,303 acre-feet allotted for the West Coast Basin. To date the following parties have expressed interest in participating in the FY04/05 In-Lieu Program:

- Long Beach (lower Central Basin) 6,000 acre-feet
- Los Angeles(West Coast Basin) 1,503 acre-feet

The remaining 2,800 acre-feet is available to other West Coast Basin pumpers. Staff will provide the committee with an update on the level of interest in the In-Lieu program.

**FISCAL IMPACT**

None at this time.

**STAFF RECOMMENDATION**

- A. That the Committee direct staff to develop In-Lieu agreements with Long Beach at the In-Lieu payment rates specified.
- B. That the Committee direct staff to develop In-Lieu agreements with Los Angeles at the In-Lieu payment rates specified.



## MEMORANDUM

### ITEM NO. VI

*Prepared by:* Ted Johnson

*Reviewed by:* Mario Garcia

**DATE: JUNE 11, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: GROUNDWATER BASIN UPDATE**

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### SUMMARY

Staff will present the committee with a monthly update on the groundwater conditions in the basins, including precipitation, water levels, pumping, replenishment, seawater barrier wells, and any other matters affecting the water resources of the basins. The following presents some highlights through April of Water Year 2003-2004 (October 1 - September 30):

#### Precipitation (Los Angeles Civic Center):

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- 12.58 inches (91% of average)

#### Pumping:

- Central Basin - 102,446 af (7% higher than last year)
- West Coast Basin - 26,681 af (7% lower than last year)
- Estimated Total Water Year Pumping: 252,000 af

#### Water Levels

- Montebello Forebay Key Well 1601T: Elevation = 101.5 ft mean sea level (measured on 4/23/04, 16.4 ft lower than last year and 25 ft below the upper water level goal). Water levels are currently dropping over a foot per week.

#### Spreading Grounds:

- Imported Water - 14,266 af (out of current order for 27,600 af)
- Recycled Water - 27,438 af (Permit will allow up to 45,000 af this year)

#### Barrier Wells:

- Imported - 12,971 af (11,798 af last year)
- Recycled - 1,897 af (3,825 af last year) WCBBP only.

### FISCAL IMPACT

None.

### STAFF RECOMMENDATION

For Information.



## **MEMORANDUM**

### **ITEM NO. VII**

*Prepared by:* Charlene King

*Reviewed by:* Mario Garcia

**DATE: JUNE 11, 2004**

**TO: WATER RESOURCES COMMITTEE**

**FROM: ROBB WHITAKER, GENERAL MANAGER**

**SUBJECT: LEO J. VANDER LANS WATER TREATMENT FACILITY PROJECT UPDATE**

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### **SUMMARY**

The contract to construct the Leo J. Vander Lans Water Treatment Facility, formerly known as the Alamitos Barrier Advanced Water Treatment Facility, was awarded to PK Contractors. Although all major components of the facility have been constructed and/or installed, minor work continues to address operational fixes during the start-up phase. As staff runs the plant on a periodic basis, certain control or operational problems are discovered. Staff is working with PK Contractors and its subcontractors to attend to these concerns in an expeditious manner so the plant can operate as smoothly as possible once the operating permit from Regional Board is issued.

Two of the 108 RO pressure vessels were experiencing high permeate conductivity. Staff identified that the "O" ring seals were broken due to high pressure. The seals were replaced and the facility is operating smoothly.

### **FISCAL IMPACT**

None

### **STAFF RECOMMENDATION**

For information.