

**REVISED AGENDA  
IRVINE RANCH WATER DISTRICT  
BOARD OF DIRECTORS  
REGULAR MEETING**

**May 23, 2011**

**PLEDGE OF ALLEGIANCE**

**CALL TO ORDER**            5:00 P.M., Board Room, District Office  
15600 Sand Canyon Avenue, Irvine, California

**ROLL CALL**                    Directors Reinhart, Matheis, Swan, Withers and President LaMar

**NOTICE**

If you wish to address the Board on any item, including Consent Calendar items, please file your name with the Secretary. Forms are provided on the lobby table. Remarks are limited to five minutes per speaker on each subject. Consent Calendar items will be acted upon by one motion, without discussion, unless a request is made for specific items to be removed from the Calendar for separate action.

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**COMMUNICATIONS TO THE BOARD**

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1.    A. Written:
- B. Oral: Mrs. Joan Irvine Smith relative to the Dyer Road Wellfield.
2.    ITEMS RECEIVED TOO LATE TO BE AGENDIZED  
     Recommendation: Determine that the need to discuss and/or take immediate action on item(s) introduced come to the attention of the District subsequent to the agenda being posted.

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**PRESENTATION**

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| 3. | <u>SCIENCE FAIR WINNERS</u><br><br>Each year, IRWD presents awards to local students for their water-related projects entered in the Irvine Unified School District Science Fair. |  |
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**WORKSHOP**

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| 4. | <u>FISCAL YEAR 2011/12 DRAFT CAPITAL BUDGET</u><br><br>This item is presented for information purposes prior to consideration of final adoption at the June 13, 2011 board meeting. |  |
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**CONSENT CALENDAR**

**Next Resolution No. 2011-19**

**Items 6-14**

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5. MINUTES OF REGULAR BOARD MEETINGS

Recommendation: That the minutes of the May 9, 2011 Regular Board Meeting be approved as presented.

6. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: Ratify/approve the meetings and events for Steven LaMar, Doug Reinhart, and Peer Swan as delineated above.

7. APRIL 2011 FINANCIAL REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report and the Monthly Interest Rate Swap Summary for April 2011; approve the April 2011 Summary of Wire Transfers and ACH payments in the total amount of \$11,380,142.82; and approve the April 2011 Warrants Nos. 319297 through 319955, workers' compensation distributions and voided checks in the total amount of \$10,067,674.50.

8. DISTRICT STRATEGIC MEASURES DASHBOARDS

Recommendation: That the Board receive and file the Strategic Measures Dashboards and Information items.

9. UPCOMING PROJECTS STATUS REPORT

Recommendation: Receive and file.

10. 2011 STATE LEGISLATIVE UPDATE

Recommendation: That the Board take a *Watch* position on AB 403 (Campos), and take a *Support* position on AB 964 (Huffman), an *Oppose* unless amended position on SB 46 (Correa), and an *Oppose* position on the April 15, 2011 amendments to AB 134 (Dickenson), AB 506 (Wiecowski), and SB 474 (Evans).

11. PROJECT GREENFILL COOPERATIVE AGREEMENT

Recommendation: That the Board authorize the General Manager to execute a Cooperative Agreement with the County of Orange for mutually agreed-upon locations for project Greenfill, a plan to install water bottle filling stations throughout IRWD's service area.

<b>CONSENT CALENDAR - Continued</b>	<b>Next Resolution No. 2011-19</b>	<b>Items 6-14</b>
<p>12. <u>RATIFICATION OF PROPOSED BY-LAWS FOR THE ORANGE COUNTY SPECIAL DISTRICT SELECTION COMMITTEE</u></p> <p>Recommendation: That the Board approve the draft by-laws for the Orange County Special District Selection Committee.</p> <p>13. <u>MICHELSON WATER RECYCLING PLANT BIOSOLID AND ENERGY RECOVERY FACILITIES - VARIANCE NO. 6</u></p> <p>Recommendation: That the Board approve Variance No. 6 to the Black &amp; Veatch Engineering Services Agreement in the amount of \$87,500 to complete the biogas utilization validation study for the MWRP Biosolids and Energy Recovery Facilities, project 20847.</p> <p>14. <u>VARIANCE REQUEST FOR STRAND RANCH RECOVERY FACILITIES DESIGN</u></p> <p>Recommendation: That the Board approve Variance No. 4 to the Professional Services Agreement with Kennedy Jenks/Consultants in the amount of \$75,246 for additional meetings, enhanced outside agency coordination and additional design services.</p>		

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**ACTION CALENDAR**

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<p>15. <u>EPA WATERSENSE PROGRAM: WATER SOFTENERS</u></p> <p>Recommendation: That the Board oppose the Environmental Protection Agency's (EPA) development of draft efficiency and performance specifications for residential cation exchange water softeners, and that IRWD join coalition efforts against the development of WaterSense standards for self-regenerating water softeners.</p> <p>16. <u>PROPOSAL TO PROVIDE CROSS-CONNECTION AND BACKFLOW PREVENTION SERVICES TO THE CITY OF SAN JUAN CAPISTRANO</u></p> <p>Recommendation: That the Board approve the terms and conditions for IRWD to provide cross-connection and backflow prevention services to the City of San Juan Capistrano and to authorize the General Manager to execute a Consultant Services Agreement with the City of San Juan Capistrano, subject to legal counsel review.</p>		
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**ACTION CALENDAR - Continued**

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17. ORANGE PARK ACRES TRANSMISSION PIPELINE PROJECT  
CONTRACT CHANGE ORDER NO. 9

Recommendation: That the Board approve Contract Change Order No. 9 with Leatherwood Construction, Inc. in the amount of \$264,882 for the Orange Park Acres Transmission Pipeline Project, project 11408.

18. WELLS 21 AND 22 DESALTER PROJECT PIPELINES AND WELLHEAD  
FACILITIES EXPENDITURE AUTHORIZATION, VARIANCE, AND  
CONSULTANT SELECTIONS

Recommendation: That the Board approve an Expenditure Authorization in the amount of \$388,500; authorize the General Manager to execute Variance No. 3 in the amount of \$183,500 with RBF Consulting for design and engineering construction support services; authorize the General Manager to execute a Professional Services Agreement in the amount of \$70,274 with Ninyo and Moore for construction phase geotechnical services; and authorize the General Manager to execute a Professional Services Agreement in the amount of \$109,885 with Borchard Surveying for construction phase surveying services for the Wells 21 and 22 Desalter Project Pipelines and Wellhead Facilities, project 10286.

19. WATER SUPPLY ASSESSMENT FOR HERITAGE FIELDS (PLANNING  
AREAS 30 AND 51) AND VERIFICATION OF SUFFICIENT WATER  
SUPPLIES FOR TENTATIVE TRACT NOS. 17283, 17364, 17366, 17368  
AND 17202 (PLANNING AREA 51)

Recommendation: That the Board approve the water supply assessment for Planning Areas 30 and 51 and verification of sufficient water supplies for Tentative Tract Nos. 17283, 17364, 17366, 17368 and 17202 in Planning Area 51.

20. RECONSIDERATION OF THE AGREEMENT BETWEEN MUNICIPAL  
WATER DISTRICT OF ORANGE COUNTY (MWDOC) AND ITS  
MEMBER AGENCIES ON BUDGET, ACTIVITIES, CHARGES AND  
OTHER SERVICES AS APPROVED BY THE IRWD BOARD ON  
JANUARY 24, 2011

Recommendation: Background: in light of the recent actions at MWDOC, Director Swan has requested the Board discuss reconsideration of the subject agreement.

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**OTHER BUSINESS**

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Pursuant to Government Code Section 54954.2, members of the Board of Directors or staff may ask questions for clarification, make brief announcements, make brief reports on his/her own activities. The Board or a Board member may provide a reference to staff or other resources for factual information, request staff to report back at a subsequent meeting concerning any matter, or direct staff to place a matter of business on a future agenda. Such matters may be brought up under the General Manager's Report or Directors' Comments.

21. A. General Manager's Report

B. Directors' Comments

1)

2)

3)

4)

5)

C. CLOSED SESSION: CONFERENCE WITH LABOR NEGOTIATOR PURSUANT TO  
(Government Code Section 54957.6)

Agency designated representative: Steven LaMar

Unrepresented employee: Paul D. Jones II

D. Adjourn

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**OTHER BUSINESS - Continued**

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Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Irvine Ranch Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Board Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance to the Board of Directors Room of the District Office.

The Irvine Ranch Water District Board Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

May 23, 2011

Prepared by: E. Akiyoshi/M. Hoolihan

Submitted by: G. Heiertz

Approved by: Paul Jones

Handwritten signatures and initials: KNL, su, PAW, Cool, and others.

**WORKSHOP**

**FISCAL YEAR 2011-12 DRAFT CAPITAL BUDGET**

**SUMMARY:**

Projected Fiscal Year (FY) 2011-12 Capital Budget expenditures will be presented for the Committee's review. The projected expenditures for FY 2011-12 are \$114.1 million. This item is presented for information purposes prior to the Board of Directors Capital Budget Workshop that is scheduled for May 23, 2011.

**FISCAL IMPACTS:**

The table below shows the major project groups for the FY 2011-12.

<i><b>Project Group</b></i>	<i><b>FY11-12, \$M</b></i>
MWRP Phase 2 Expansion	\$ 31.1
OCSO CORF and Solids Handling	13.0
Wells 21 and 22	10.0
Water Banking	9.5
Baker Water Treatment Plant	8.1
East Orange Regional Transmission Main	5.4
MWRP Biosolids Handling	4.9
Alton Parkway Pipelines	2.7
Well 78	2.1
Tustin Legacy Well 1 Site Acquisition and Drilling	1.9
<i>Subtotal</i>	\$ 88.7
<i><b>Total of all Projects (Preliminary)</b></i>	<i><b>\$ 114.1</b></i>

For the previous fiscal year, FY 2010-11, the Capital Budget expenditures were estimated to be \$142.3 million. Actual expenditures are estimated to be \$104.0 million, or 73% of projected expenditures.

Staff will provide the Committee with a detailed overview of the Capital Budget proposed for FY 2011-12 using a PowerPoint presentation. A draft of this PowerPoint presentation is attached as Exhibit "A".

**ENVIRONMENTAL COMPLIANCE:**

Not required.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 18, 2011. The draft FY 2011-12 Capital Budget summary presented to the Committee was \$114.1 million.

RECOMMENDATION:

THIS ITEM IS PRESENTED FOR INFORMATION PURPOSES PRIOR TO  
CONSIDERATION OF FINAL ADOPTION AT THE JUNE 13, 2011 BOARD MEETING.

LIST OF EXHIBITS:

Exhibit "A" – Capital Budget Presentation  
Exhibit "B" – Draft Capital Budget



Irvine Ranch Water District

## Fiscal Year 2011/12 Capital Budget

### Board of Directors Workshop



May 23, 2011

**DRAFT**



Irvine Ranch Water District

## Capital Budget Presentation

- Background and projected expenditures for previous fiscal year: FY2010/11
- FY2011/12 Capital Budget Summary
- Flagged Projects
- Capital Budget Schedule



## Background and Summary

- FY 2010/11
  - Projected capital expenditures: \$142.3 M
  - Actual expenditures are projected: \$104.0 M
    - MWRP Phase II Expansion
    - Wells 21 and 22 Desalter
    - OPA Pipeline Replacement
    - Cienega Filtration
  - The spending curves for these projects account for the majority of the difference between actual and projected expenditures
- FY 2011/12 projected expenditures: \$114.1 M



## Top 10 Project Group Summaries

1.	MWRP Phase 2 Expansion	\$31.1
2.	OCSD CORF and Solids Handling	13.0
3.	Wells 21 and 22	10.0
4.	Water Banking	9.5
5.	Baker Water Treatment Plant	8.1
6.	East Orange Regional Trans. Main	5.4
7.	MWRP Biosolids Handling	4.9
8.	Alton Parkway Pipelines	2.7
9.	Well 78	2.1
10.	Tustin Legacy Well 1	1.9
	<hr/> Subtotal	<hr/> \$88.7



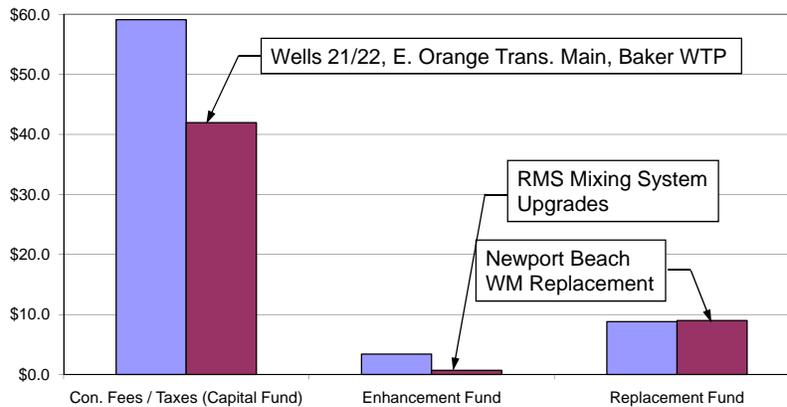
## Capital Budget Funding Sources

	Domestic Water	Sewer / Reclaimed
Connect. Fees / Taxes (Capital Funds)	\$42.0	\$49.3
User Rates		
Enhancement Fund	\$0.7	\$2.6
Replacement Fund	\$9.0	\$10.5
<b>Total Projected Expenditures</b>	<b>\$51.6</b>	<b>\$62.4</b>



## Water Funding Sources

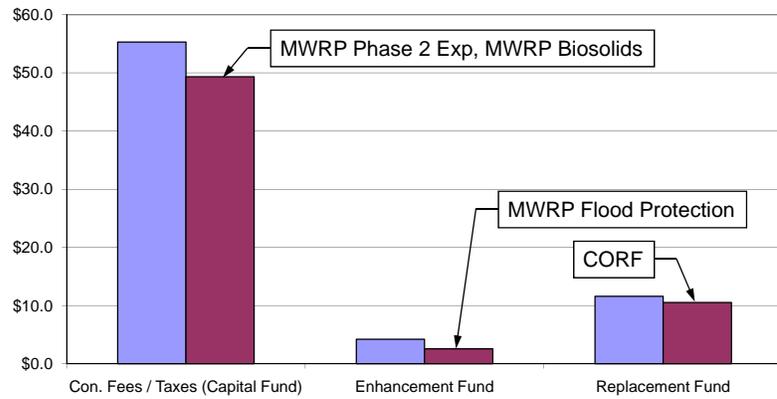
FY2010/11 vs. FY2011/12  
\$71.3 M vs. \$51.6 M



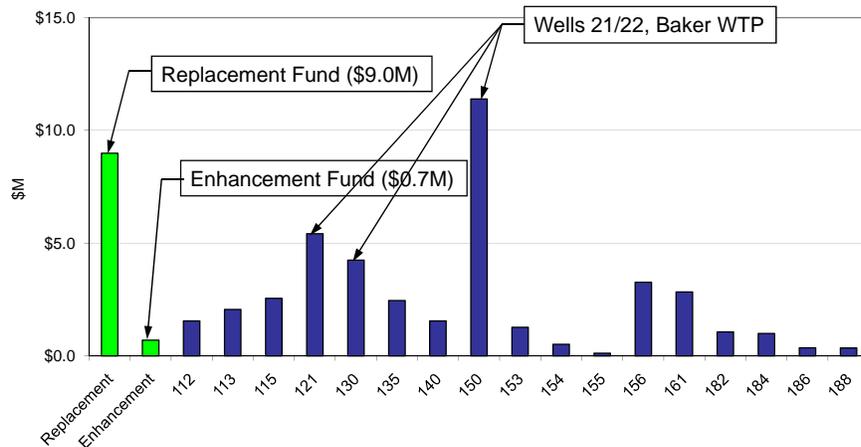


## Sewer Funding Sources

FY2010/11 vs. FY2011/12  
\$71.1 M vs. \$62.4 M

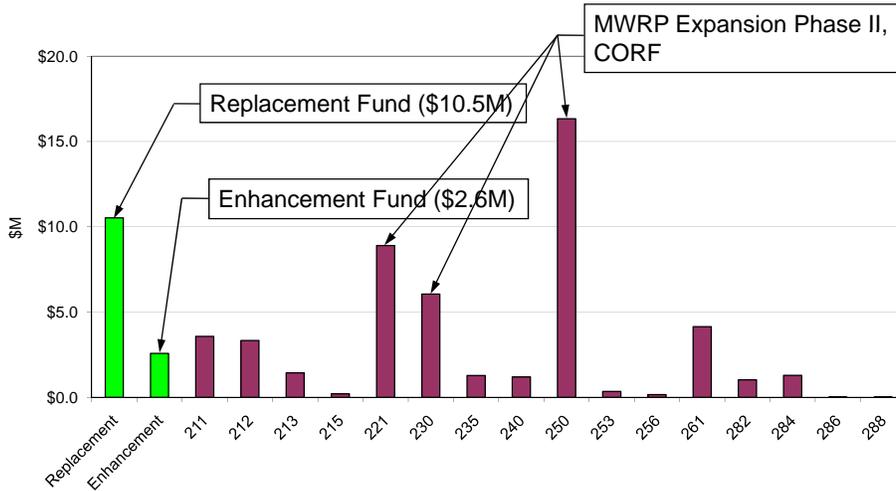


## Water Expenditures by Source of Funds (\$51.6 M)





## Sewer Expenditures by Source of Funds (\$62.4 M)



## Current Flagged Projects

- Project 10286 – Wells 21/22 Wellhead, Pipeline, Treatment
- Project 10835 – NTS: South San Joaquin Marsh
- Project 10867 – NTS: Cienega Selenium and Nitrate Removal
- Project 10942 – SJM Misc. Replacement and Improvements
- Project 11419 – Tustin Legacy Well 1 Site Acquisition and Drilling
- Project 11461 – Lake Forest Well 2 Replacement Drilling/Wellhead
- Project 11469 – Great Park SAMP Update
- Project 21469 – Great Park SAMP Update
- Project 24304 – Legacy Park Phase 2, Sewer Lift Station
- Project 30317 – PA 39 Bake Parkway Bridge 24" RW Relocation
- Project 31469 – Great Park SAMP Update

***Additional Projects ?***



## Capital Budget Schedule

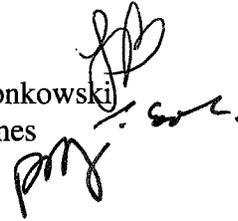
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- June 13 – Board Consideration of Capital Budget

**NOTE:**

**A COPY OF EXHIBIT "B" MAY BE  
OBTAINED FROM THE DISTRICT  
SECRETARY**

May 23, 2011  
Prepared and  
Submitted by: L. Bonkowski  
Approved by: P. Jones



CONSENT CALENDAR

MINUTES OF REGULAR BOARD MEETING

SUMMARY:

Provided are the minutes of the May 9, 2011 Regular Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE MAY 9, 2011 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – May 9, 2011 Regular Board Meeting

## EXHIBIT "A"

### MINUTES OF REGULAR MEETING – MAY 9, 2011

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President LaMar on May 9, 2011 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

Directors Present: Swan, Reinhart, LaMar, and Withers

Directors Absent: Matheis

Also Present: General Manager Jones, Assistant General Manager Cook, Director of Planning/Water Resources Heiertz, Director of Engineering Burton, Secretary Bonkowski, Legal Counsel Arneson, Director of Operations Pedersen, Director of Public Affairs Beeman, Mr. Tom Bonkowski, Ms. Kirsten McLaughlin, Mr. Ron Crim, Mr. Paul Weghorst, Ms. Fiona Sanchez, Mr. Jim Reed, Mr. Bruce Newell, Mr. James Pasmour and other members of the public and staff.

WRITTEN COMMUNICATION: None

ORAL COMMUNICATION:

Mrs. Joan Irvine Smith addressed the Board of Directors with respect to the Dyer Road Wellfield. Mrs. Smith said it was her understanding that currently wells 5, 7, C-8, C-9, 10, 11, 12, 15, 16 and 18 will operate in accordance with the District's annual pumping plan. Wells 1, 2, 3, 4, 6, 13, 14 and 17 will be off. The District's currently planned pumping for May is 4,645 AF. This was confirmed by Mr. Jones, General Manager of the District.

With respect to the Orange County Basin Groundwater Conjunctive Use Program being coordinated by Municipal Water District of Orange County (MWDOC) and Orange County Water District (OCWD), a Notice of Completion was approved by the OCWD Board of Directors on March 19, 2009. Metropolitan Water District has given notice to OCWD to extract 22,000 acre feet in fiscal year 2009/10. The extraction is being performed by agencies that constructed conjunctive use wells under this program. IRWD is not a participant. This was confirmed by Mr. Jones.

With respect to the OCWD annexation of certain IRWD lands, on June 5, 2009, IRWD received a letter from OCWD noting that OCWD has completed the formal responses to comments they previously received on the draft program Environmental Impact Report. The letter further noted that with this task completed, OCWD has exercised its right to terminate the 2004 Memorandum of Understanding (MOU) regarding annexation. OCWD also indicated that due to the lack of progress on the annexation issue, the draft program Environmental Impact Report will not be completed. On June 8, 2009, OCWD completed the Long-Term Facilities Plan which was received and filed by the OCWD Board in July 2009. Staff has been coordinating with the City of Anaheim (Anaheim) and Yorba Linda Water District (YLWD) on their most recent annexation requests and has reinitiated the annexation process with OCWD. IRWD, YLWD and Anaheim have negotiated a joint MOU with OCWD to process and conduct environmental analysis of the annexation requests. The MOU was approved by the OCWD Board on July 21, 2010. This was confirmed by Mr. Jones.

With respect to the Groundwater Emergency Service Plan, IRWD has an agreement in place with various south Orange County water agencies, MWDOC and OCWD, to produce additional groundwater for use within IRWD and transfer imported water from IRWD to south Orange County in case of emergencies. IRWD has approved the operating agreement with certain south Orange County water agencies to fund the interconnection facilities needed to affect the emergency transfer of water. MWDOC and OCWD have also both approved the operating agreement. This was confirmed by Mr. Jones.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED – None.

### PRESENTATIONS

#### CALIFORNIA SOLAR INITIATIVE INFRASTRUCTURE PROGRAM CASH INCENTIVE – EAST IRVINE ZONE 3 PHOTOVOLTAIC SYSTEM INSTALLATION

Using a PowerPoint presentation, Mr. Tom Bonkowski, who was Project Manager for the construction of the Photovoltaic (PV) System project and instrumental in the District receiving cash incentives from Southern California Edison (SCE), provided the Board an overview of the PV project. Mr. James Pasmour from SCE presented the General Manager and Board President with a cash incentive of \$492,583 through the California Solar Initiative Infrastructure program for the construction of this project.

### PARTNER COMMENDATION

In celebration of the District's 50<sup>th</sup> anniversary, General Manager Jones presented Mr. Pasmour with a framed commendation recognizing SCE as a key "Partner in Service". Mr. Jones said that SCE and IRWD have enjoyed a long history of creative collaboration on energy efficiency and financial incentive issues. Mr. Jones said that these issues range from partnerships such as Savings-by-Design programs, Industrial Energy Efficiency Programs, California Solar Initiative Infrastructure projects, Agricultural Energy Efficiency Programs, Standard Performance Programs, Critical Peak Pricing Program, Energy Efficiency Program Contracts, and conservation credit programs. IRWD and SCE have collaborated on more than 25 energy efficiency programs.

### CONSENT CALENDAR

On MOTION by Withers, seconded and unanimously carried, THE BOARD APPROVED CONSENT CALENDAR ITEMS 5 THROUGH 9 AS FOLLOWS:

#### 5. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the April 25, 2011 Regular Board Meeting be approved as presented.

CONSENT CALENDAR (CONTINUED)

6. RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS

Recommendation: That the Board ratify/approve the meetings and events for Steven LaMar, Mary Aileen Matheis, Douglas Reinhart, Peer Swan and John Withers.

7. IRWD APARTMENT CONSULTANT – CONTRACT RENEWAL

Recommendation: That the Board authorize the General Manager to execute a professional services contract with Market-THINK, LLC for a period of two years at a total fee not to exceed \$93,600 to provide advisory services related to the operation of the Sycamore Canyon and Wood Canyon Villa apartment properties.

8. DESIGNATION OF AUTHORIZED AGENTS FOR WORKING WITH FEDERAL AND CALIFORNIA EMERGENCY MANAGEMENT AGENCIES

Recommendation: That the Board adopt the following resolution by title rescinding Resolution No. 2007-44 and authorizing its agents to provide to the State Office of Emergency Services all matters pertaining to such state disaster assistance the assurances and agreements required.

RESOLUTION NO. 2011 - 18

RESOLUTION OF THE BOARD OF DIRECTORS  
OF IRVINE RANCH WATER DISTRICT,  
RESCINDING RESOLUTION NO. 2007-44  
AND AUTHORIZING ITS AGENTS TO PROVIDE TO  
THE STATE OFFICE OF EMERGENCY SERVICES ALL  
MATTERS PERTAINING TO SUCH STATE DISASTER  
ASSISTANCE THE ASSURANCES AND AGREEMENTS REQUIRED

9. EASEMENT FOR REPLACEMENT OF WELL 107 FROM THE CITY OF IRVINE

Recommendation: That the Board authorize the General Manager to execute documents to acquire an easement from the City of Irvine for a total cost of \$36,500 for the replacement of Well 107.

ACTION CALENDAR

PROCUREMENT OF ORACLE CUSTOMER CARE AND BILLING SOFTWARE AND UNLIMITED LICENSE AGREEMENT FOR TECHNOLOGY LICENSES

Director of Finance Cherney reported that the District is currently nearing completion of the first wave of implementation of the Oracle Enterprise Resource Planning (ERP) software, focused on financial management and human resources. At the time the initial licenses were procured, the District also negotiated a number of price-holds with Oracle for replacement of and/or new

systems for Utility Billing, Enterprise Asset Management, Customer Relationship Management and Budgeting and Planning. Ms. Cherney said that in March 2011, the Committee directed staff to move forward with the replacement of the District's utility billing and customer relationship management software, and to bring the other areas back for further review at a later date.

Ms. Cherney said that staff has negotiated additional price discounts with Oracle and recommends that the District enter into an agreement with Oracle to purchase the Customer Care and Billing applications licenses and exercise its rights under the technology license Unlimited License Agreement at a cost of \$1,102,453 for licenses and \$487,352 for first year maintenance and support, for a total of \$1,589,805.

In May 2010, IRWD purchased a base level of Oracle technology licenses and the necessary Oracle application licenses through DLT Solutions. The balance of the technology licenses could not be purchased at that time because the design of the system architecture, which drives the number of licenses required for purchase, had not been developed yet. Staff worked with the Oracle technology team and the District's systems implementation partners from AST Corporation to establish a system architecture that would ensure high availability and performance for these critical applications. Staff negotiated a proposal from Oracle which provided for a two-step license procurement of the necessary technology licenses.

Director Swan said that this item was reviewed by the Finance and Personnel Committee on May 2, 2011 and the Committee asked staff to prepare a 10-year cost summary projection for Oracle's applications and technology which has been provided in the write-up. He also said that the existing system had been modified a few times, and that the District occasionally has to make an expensive change in its systems. In response to Director Reinhart's comment that the system was to have flexibility in order to offer a cost effective program to other agencies, Ms. Cherney said that staff will build a proforma on the program. On MOTION by Swan, seconded and unanimously carried, **THE BOARD APPROVED TWO EXPENDITURE AUTHORIZATIONS IN THE AMOUNT OF \$800,000 EACH, AUTHORIZED A BUDGET OF \$800,000 EACH FOR TWO NEW CAPITAL PROJECTS, AND APPROVED THE PROCUREMENT FROM ORACLE OF THE CUSTOMER CARE AND BILLING APPLICATIONS LICENSES AND THE UNLIMITED LICENSE AGREEMENT FOR TECHNOLOGY LICENSES IN TOTAL NOT TO EXCEED \$1.6 MILLION.**

#### HANDY CREEK BRIDGE DISTRIBUTION MAIN RELOCATION CONSTRUCTION AWARD

General Manager Jones reported that the Orange County Public Works (County) is moving forward with the removal and replacement of the Handy Creek Bridge in Orange Park Acres. The project is located along Orange Park Boulevard, approximately 1,100 feet south of Santiago Canyon Road. The proposed bridge construction will require the relocation of IRWD's existing domestic water pipeline within Orange Park Boulevard.

Director of Engineering Burton said Stantec, Inc. was retained to prepare the construction documents and that the project was advertised to a select list of four contractors. All four contractors attended a pre-bid meeting with the bid opening held on April 27, 2011 with three contractors submitting responsive bids. The apparent low bidder was GCI Construction, Inc. with a bid of \$198,527. He said that the engineer's estimate was \$144,000. On MOTION by Withers, seconded and unanimously carried, **THE BOARD AUTHORIZED THE ADDITION**

OF PROJECT 11607 TO THE FY 2010-11 CAPITAL BUDGET IN THE AMOUNT OF \$280,500; APPROVED AN EXPENDITURE AUTHORIZATION FOR SAME; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH GCI CONSTRUCTION, INC. IN THE AMOUNT OF \$198,527 FOR THE HANDY CREEK BRIDGE DISTRIBUTION MAIN RELOCATION PROJECT 11607.

CONSTRUCTION OF PILOT PROJECT GROUNDWATER RECHARGE FACILITIES AT THE STOCKDALE WEST RANCH

General Manager Jones reported that on December 22, 2010, the District purchased the Stockdale West Ranch property which is adjacent to the Strand Ranch. Staff is working with Buena Vista Water Storage District (BVWSD) and Rosedale-Rio Bravo Water Storage District (Rosedale) to construct recharge facilities on the Stockdale West Ranch for a one-year pilot project utilizing additional water available for recharge under the BVWSD and IRWD Exchange Program. This project will also provide valuable information which can be used for the design of a long-term water banking program on the property.

Using a PowerPoint presentation, Water Resources Manager Weghorst provided an overview of the pilot recharge project. Mr. Weghorst provided maps noting that the Stockdale West Ranch is located adjacent to the Strand Ranch in Kern County and is comprised of approximately 323 acres. He said that the anticipated future plan for the property is to expand the District's water banking program by constructing recharge basins, conveyance facilities and extraction wells on this property. He described the source of water noting that the BVWSD unbalanced Exchange program includes high flow Kern River water which will be stored on a 2-for-1 basis consistent with this agreement where IRWD received 50% of the water recharged after losses; the water is exportable; and the dry-year value of the water is > \$300 per AF.

Mr. Weghorst provided an overview of the benefits of the pilot project noting that it will take advantage of the Kern River supplies available this summer and fall from BVWSD, and augment the BVWSD program by allowing an additional 10,000 AF of water to be delivered this year.

Mr. Weghorst said the pilot project will be operated by Rosedale-Rio Bravo Water Storage District and augments the 17,500 AF to be recharged at the Strand Ranch Integrated Banking Project. He said that water will be stored in IRWD's 50,000 AF storage account at the Strand Ranch.

Mr. Weghorst reviewed the schedule as well as the expected cost of the project. He said that Dee Jasper & Associates will finalize the design and provide construction management services for the pilot project at an estimated cost of \$217,896. An additional \$20,000 for additional survey, geotechnical and environmental work will likely be required. Wood Brothers will construct the pilot project facilities for a not-to-exceed amount of \$2,500,000. BVWSD will fabricate the concrete transfer structures for an estimated amount of \$105,950. Lamont Fence Company will secure the site with fencing for \$70,035. Additional staff time and legal time will also be required in the amount of \$60,000.

Director Reinhart raised concern if the contractor would be able to complete the project to meet the tight schedule. Mr. Jones noted that staff has reviewed the proposed environmental clearance without any objections from the Kern Water Authority. Also, Mr. Jones said that staff is

continuing to negotiate with the contractor relative to a not-to-exceed amount for the final cost. On MOTION by Reinhart, seconded and unanimously carried, THE BOARD AUTHORIZED THE ADDITION OF PROJECT 11595 "STOCKDALE WEST FACILITIES" TO THE FY 2010-11 CAPITAL BUDGET TO FUND THE PILOT PROJECT; APPROVED AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$3,273,600 FOR PROJECT 11595; APPROVED NOT-EXCEED-COSTS IN THE AMOUNT OF \$2,500,000 AND AUTHORIZED THE GENERAL MANAGER TO ENTER INTO A CONSTRUCTION CONTRACT WITH WOOD BROS. INC FOR CONSTRUCTION OF THE PILOT PROJECT FACILITIES; APPROVED VARIANCE NO. 1 IN THE AMOUNT OF \$217,896 TO THE PROFESSIONAL SERVICES AGREEMENT WITH DEE JASPAR & ASSOCIATES FOR FINAL DESIGN AND CONSTRUCTION MANAGEMENT SERVICES FOR THE PILOT PROJECT FACILITIES; AUTHORIZED THE GENERAL MANAGER TO ENTER INTO A CONSTRUCTION CONTRACT IN THE AMOUNT OF \$70,035 WITH LAMONT FENCE COMPANY FOR THE INSTALLATION OF PERIMETER FENCING AT THE STOCKDALE WEST RANCH; AUTHORIZED STAFF TO REIMBURSE BUENA VISTA WATER STORAGE DISTRICT IN THE AMOUNT OF \$105,950 FOR THE CONSTRUCTION OF FIVE TRANSFER STRUCTURES; AUTHORIZED STAFF TO FILE A NOTICE OF EXEMPTION CONSISTENT WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FOR THE ONE-YEAR PILOT PROJECT; AND AUTHORIZED STAFF TO PREPARE AND EXECUTE A MEMORANDUM OF UNDERSTANDING BETWEEN IRWD, BUENA VISTA WATER STORAGE DISTRICT AND ROSEDALE THAT ESTABLISHES THE PILOT PROJECT WILL BE OPERATED CONSISTENT WITH THE KERN RIVER WATER AND BANKING AGREEMENTS.

#### GENERAL MANAGER'S REPORT

General Manager Jones reported that he attended an OCWD Board meeting last Wednesday where they moved forward with establishing an Ad Hoc Committee for considering a consolidation with MWDOC. Mr. Jones said that MWDOC is still considering how they will participate, and will be holding meetings internally this month. He said that IRWD's MWDOC/OCWD Ad Hoc Committee will be meeting on May 17<sup>th</sup> to review and approve policy principles on this matter.

Mr. Jones said that he attended a Special SOCWA Engineering Committee meeting on May 5 to review the joint biosolids agreement. At the meeting, he said that that all SOCWA member agencies must buy-in/participate with individual agreements, and to date, have received uncertainty from SMWD. He said staff will continue to work with SOCWA on minor changes to the agreement with it going before its Board on May 17<sup>th</sup>. He said that each member agency will need to approve the concept by June 7<sup>th</sup>. He said that if IRWD does not receive a buy-in with SOCWA, staff will need to revisit the dryer size we are planning to purchase. Mr. Jones further said that OCSD may be interested in transporting 10% of its biosolids to the District and he will report back to the Board this week.

## DIRECTORS' COMMENTS

Director Reinhart said that he also attended the SOCWA meeting and that IRWD needs to receive a firm drop-dead date from this agency. He said that he is still in favor of keeping the transfer station in the design phase; however, IRWD shouldn't oversize the station if SOCWA is not interested after all.

Director Swan reported on his attendance at the CASA conference; an OCWD Board meeting along with General Manager Jones and Director LaMar; a Newport Chamber of Commerce meeting; a WACO meeting; and an IRWD resident tour. He said that he will be attending an ACWA conference beginning tomorrow in Sacramento. In response to Mr. Swan's inquiry, Mr. Jones said that staff has provided OCSD with a proposal on a temporary diversion to its agency during a portion of the MWRP expansion project and will also be meeting with staff next week. In response to Mr. Swan's inquiry relative to a builders' all risk policy for the biosolids handling, staff said that they were considering an owner controlled insurance policy and this matter is being monitored closely.

Director LaMar reported on his attendance at MWDOC meetings and an Assembly Local Government Committee meeting in Sacramento with Mr. Jones and staff. He said that he will be attending an ACWA conference beginning tomorrow.

## CLOSED SESSION

President LaMar said that a Closed Session would be held with evening with legal counsel relative to existing litigation - Government Code Section 54956.9(a) – SEMA Construction vs. the City of Tustin and City of Tustin vs. IRWD; and United States, States of California, et al., ex rel. Hendrix v. J-M Manufacturing Company, Inc. et al.

## OPEN SESSION

Following the Closed Session, the meeting was reconvened with Directors Swan, Reinhart, Withers and LaMar present. No action was reported.

## ADJOURNMENT

There being no further business, Director LaMar adjourned the Board meeting.

APPROVED and SIGNED this 23rd day of May, 2011.

\_\_\_\_\_  
President, IRVINE RANCH WATER DISTRICT

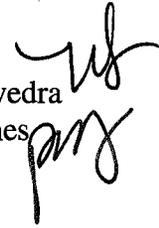
\_\_\_\_\_  
Secretary, IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

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Legal Counsel - Bowie, Arneson, Wiles & Giannone

May 23, 2011  
Prepared and  
Submitted by: N. Savedra  
Approved by: P. Jones



CONSENT CALENDAR

RATIFY/APPROVE BOARD OF DIRECTORS'  
ATTENDANCE AT MEETINGS AND EVENTS

SUMMARY:

Pursuant to Resolution 2006-29 adopted on August 28, 2006, approval of attendance of the following events and meetings are required by the Board of Directors.

Events/Meetings

Steven LaMar

6/10/11 Meeting with OCWD Board Director Stephen Sheldon

Doug Reinhart

5/14-16/11 WateReuse Board Meeting & WateReuse Desalination Conference

Peer Swan

5/16/11 Meeting with Paul Jones regarding Water Banking issues  
5/25/11 Southern California Water Dialogue Meeting

RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LaMAR, DOUG REINHART, AND PEER SWAN AS DELINEATED ABOVE.

LIST OF EXHIBITS:

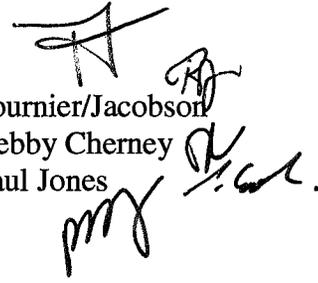
None

May 23, 2011

Prepared by: Fournier/Jacobson

Submitted by: Debby Cherney

Approved by: Paul Jones

Handwritten signatures and initials in black ink, including a large signature at the top right and several smaller initials below it.

CONSENT CALENDAR

APRIL 2011 FINANCIAL REPORTS

SUMMARY:

The following is submitted for the Board's information and approval:

- A. The Investment Summary Report for April 2011. This Investment Summary Report is in conformity with the 2011 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Monthly Interest Rate Swap Summary as of April 30, 2011, as outlined in Exhibit "B".
- C. The April 30, 2011 Summary of Wire Transfers and ACH payments in the total amount of \$11,380,142.82, as outlined in Exhibit "C".
- D. The April 2011 tabulation of Warrant Nos. 319297 through 319955, Workers' Compensation distributions, and voided checks in the total amount of \$10,067,674.50, as outlined in Exhibit "D".

FISCAL IMPACTS:

As of April 30, 2011, the book value of the investment portfolio was \$422,241,254 with a 0.53% rate of return and a market value of \$422,531,306. Based on the District's April 30, 2011 real estate investment rate of return of 10.75%, the District's weighted average return for the fixed income and real estate investments was 1.88%.

As of April 30, 2011, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash flow in April from all swaps was a negative \$555,606 and a negative \$6,105,150 fiscal year to date. The mark-to-market value of all swaps was approximately \$98.1 million at month-end.

Wire transfers, ACH payments, and checks issued for debt service, accounts payable, payroll and water purchases for March totaled \$21,447,817.32.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3 Section 15378.

**COMMITTEE STATUS:**

This item was not submitted to a Committee; however, the investment and interest rate swap reports are submitted to the Finance and Personnel Committee on a monthly basis.

**RECOMMENDATION:**

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT AND THE MONTHLY INTEREST RATE SWAP SUMMARY FOR APRIL 2011; APPROVE THE APRIL 2011 SUMMARY OF WIRE TRANSFERS AND ACH PAYMENTS IN THE TOTAL AMOUNT OF \$11,380,142.82; AND APPROVE THE APRIL 2011 WARRANTS NOS. 319297 THROUGH 319955, WORKERS' COMPENSATION DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$10,067,674.50.

**LIST OF EXHIBITS:**

Exhibit "A" - Investment Summary Report

Exhibit "B" - Monthly Interest Rate Swap Summary

Exhibit "C" - Monthly Summary of Wire and ACH Transfers

Exhibit "D" - Tabulation of Warrants

IRVINE RANCH WATER DISTRICT  
INVESTMENT SUMMARY REPORT

Exhibit "A"

04/29/11

INTEREST PERIOD	NEXT PERIOD	THROUGH	RESET	Call Date	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAF Amount	CUSIP#	YIELD	YTC	ORIGINAL COST	CARRY VALUE 4/29/2011	MARKET VALUE 4/29/2011	UNREALIZED GAIN/(LOSS)	
04/25/11	04/01/11	04/30/11			05/29/11		LAIF	State of California Tsy.	\$41,700,000		0.494%		\$41,700,000.00	\$41,700,937.17	41,760,937.17	60,937.17	
04/15/11	04/01/11	04/30/11			05/29/11		LAIF-JPA	State of California Tsy.	50,000,000		0.494%		\$50,000,000.00	\$50,000,000.00	50,073,066.15	73,066.15	
04/15/11	04/01/11	04/30/11			05/08/11		LAIF-2009A	State of California Tsy.	2,760,441		0.494%		\$2,760,441.09	\$2,760,441.09	2,764,474.99	4,033.90	
04/15/11	04/01/11	04/30/11			05/08/11		LAIF-2009B	State of California Tsy.	2,760,441		0.494%		\$2,760,441.09	\$2,760,441.09	2,764,474.99	4,033.90	
04/15/11	04/01/11	04/30/11			05/20/11		LAIF BABS	State of California Tsy.	138,923,751		0.494%		\$138,923,751.45	\$138,923,751.45	139,126,763.92	203,012.47	
04/29/11	04/01/11	04/30/11			04/30/11		B of A Tsy. Reserves	Bank of America	4,067,330.09		0.009%		4,067,330.09	4,067,330.09	4,067,330.09		
04/21/10	11/23/11					Aaa/AAA/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.000%	0.841%		5,012,550.00	5,005,767.38	5,023,300.00	17,532.62	
12/16/10	05/23/11	08/23/12				Aaa/AAA/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	0.500%	0.745%	2.710%	4,979,500.00	4,981,995.94	4,994,050.00	12,054.06	
10/25/10	06/25/11	10/25/12				Aaa/AAA/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	0.500%	0.575%	0.750%	4,997,500.00	4,997,934.34	4,982,812.50	(15,121.84)	
11/04/10	05/10/11	10/26/12				Aaa/AAA/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.490%	0.515%	0.590%	4,997,500.00	4,997,811.63	4,985,750.00	(12,061.63)	
11/09/10	05/18/11	11/09/12				Aaa/AAA/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.500%	0.500%	0.500%	5,000,000.00	5,000,000.00	4,976,950.00	(23,050.00)	
01/19/11	05/23/11	11/23/12				Aaa/AAA/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	0.625%	0.669%	1.472%	5,495,600.00	5,495,867.66	5,469,420.00	(26,447.66)	
12/28/10	06/28/11	12/28/12				Aaa/AAA/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	0.880%	0.880%		4,999,500.00	5,000,000.00	4,985,900.00	(14,100.00)	
01/11/11	01/11/12	01/11/13				Aaa/AAA/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	0.750%	0.826%	0.901%	4,992,500.00	4,993,002.74	4,988,950.00	(4,052.74)	
02/08/11	07/28/11	01/28/13				Aaa/AAA/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.000%	1.000%	1.000%	5,000,000.00	5,005,900.00	5,005,900.00	5,900.00	
02/15/11	08/04/11	02/04/13				Aaa/AAA/AAA	FHLMC - Note	Fed Home Loan Mortgage Bank	5,000,000	0.800%	1.010%	1.680%	4,979,550.00	4,979,947.64	4,988,400.00	8,452.36	
02/10/11	02/08/12	02/08/13				Aaa/AAA/AAA	FHLMC - Note	Fed Home Loan Mortgage Bank	5,000,000	0.850%	0.997%	1.144%	4,985,500.00	4,985,877.91	4,987,900.00	2,022.09	
04/04/11	03/14/12	03/14/13				Aaa/AAA/AAA	FHLMC - Note	Fed Home Loan Mortgage Bank	5,000,000	0.500%	1.015%	0.500%	5,000,000.00	5,000,000.00	5,000,000.00		
03/25/11	05/25/11	03/25/13				Aaa/AAA/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	1.000%	1.000%	1.000%	5,000,000.00	5,000,000.00	4,987,190.00	(12,100.00)	
04/07/11	05/04/11	04/25/13				Aaa/AAA/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	0.750%	0.750%		4,974,190.00	4,974,190.00	4,974,190.00		
04/25/12	04/25/13					N/A/AAA/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	0.750%	0.750%		5,000,000.00	5,000,000.00	5,000,000.00		
03/29/11	05/23/11	05/23/13				Aaa/AAA/AAA	FHLMC - Note	Fed Home Loan Mortgage Bank	5,000,000	0.625%	1.040%	0.654%	4,955,985.00	4,956,153.00	4,967,300.00	11,147.00	
03/29/11	08/24/11	05/24/13				Aaa/AAA/AAA	FHLMC - Note	Fed Home Loan Mortgage Bank	5,000,000	1.000%	1.000%	1.000%	5,000,000.00	5,000,000.00	4,987,800.00	(12,200.00)	
11/23/10	N/A	06/28/11				MIG1/SP-1/2	CA ST-RANS-A2	State of California	10,000,000	3.000%	1.751%		10,073,500.00	10,050,806.45	10,057,800.00	6,993.55	
12/01/10	04/27/11	05/03/11	05/04/11			(4) Aaa/AAA/NR	VRDO	Chino Basin Fin	11,620,000		0.200%		11,620,000.00	11,620,000.00	11,620,000.00		
10/09/08	04/28/11	05/04/11	05/05/11			(4) Aa3/AAA/WD	VRDO	Ca Water Series C	2,000,000		0.310%		2,000,000.00	2,000,000.00	2,000,000.00		
09/01/10	04/27/11	05/03/11	05/04/11			(4) Aa3/ANR	VRDO	Rancho California WrD	6,700,000		0.230%		6,700,000.00	6,700,000.00	6,700,000.00		
07/20/10	04/28/11	05/04/11	05/05/11			(4) Aa1/AAA/AAA	VRDO	Metropolitan Water	10,000,000		0.220%		10,000,000.00	10,000,000.00	10,000,000.00		
08/16/10	04/27/11	05/03/11	05/04/11			(4) Aaa/AAA/NR	VRDO	Sacramento WTR	10,000,000		0.240%		10,000,000.00	10,000,000.00	10,000,000.00		
10/27/10	04/27/11	05/03/11	05/04/11			(4) Aa1/AAA/AAA	VRDO	Orange Cnty Wtr	5,000,000		0.200%		5,000,000.00	5,000,000.00	5,000,000.00		
11/18/10	04/28/11	05/04/11	05/05/11			(4) Aa1/AAA/AAA	VRDO	LA Waste Wtr	5,000,000		0.170%		5,000,000.00	5,000,000.00	5,000,000.00		
12/22/10	04/27/11	05/03/11	05/04/11			(4) Aa2/AAA/AA+	VRDO	Eastern Mun Wtr Dist CA	8,000,000		0.230%		8,000,000.00	8,000,000.00	8,000,000.00		
02/07/11	04/27/11	05/03/11	05/04/11	05/04/11		(4) Aa2/AAA/AA+	VRDO	West Basin Wtr	10,000,000		0.320%		10,000,000.00	10,000,000.00	10,000,000.00		
03/28/11	04/28/11	05/04/11	05/05/11			(4) Aa3/AA-NR	VRDO	Modesto Wtr	5,000,000		0.260%		5,000,000.00	5,000,000.00	5,000,000.00		
04/27/11	04/28/11	05/04/11	05/05/11			(4) Aa2/AAAe/NR	VRDO	East Bay MUD	10,000,000		0.210%		10,000,000.00	10,000,000.00	10,000,000.00		
SUB-TOTAL										\$418,973,338.72	\$418,951,318.41	\$419,241,369.80	\$422,531,305.80	\$290,051.39			
RESTRICTED CASH (Swap Collateral Deposits)																	
04/01/11	04/01/10	04/30/11					Collateral Deposit	Citi-Group	\$3,289,936		0.194%		\$3,289,936.00	\$3,289,936.00	3,289,936.00		
SUB-TOTAL										\$3,289,936			\$3,289,936.00	\$3,289,936.00			
TOTAL INVESTMENTS										\$422,263,274.72	\$422,241,254.41	\$422,531,305.80					
Perty Cash										3,300.00							
Bank Bal. (unrec.)										6,000,145.23							
										\$416,168,429.49							

Outstanding Variable Rate Debt	\$390,515,000
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps)	\$260,515,000
Investment Balance:	\$416,168,429
Investment to Variable Rate Debt Ratio:	160%
Portfolio - Average Number of Days To Maturity	143
Investment Portfolio	Investment Portfolio
Real Estate Portfolio (3)	Real Estate Portfolio
Weighted Avg. Return	Weighted Avg. Return
10.75%	1.88%
10.75%	1.88%
0.53%	0.54%
0.54%	-0.01%
March	Change
April	

This Investment Summary Report is in conformity with the 2011 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

(1) LAIF market value is as of the most recent quarter-end as reported by LAIF.  
Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing.  
(2) Gain (loss) calculated against carry value using the trading value provided by Bank of New York/Brokers  
(3) Real estate rate of return is based on most recent quarter end return  
(4) No call Notice

IRVINE RANCH WATER DISTRICT

SUMMARY OF MATURITIES  
04/29/11

PORTFOLIO \$422,321,900

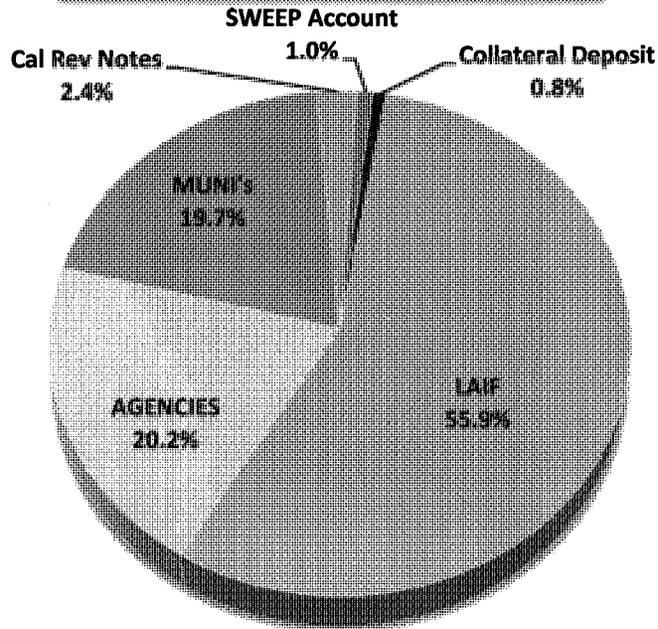
DATE	TOTAL	%	LAIF	AGENCIES	MUNI	CURRENT NOTES	MONEY MARKET SAVINGS & SWEEP	COLLATERAL * FINANCIAL
5/11	\$326,821,900	77.39%	\$236,144,634		83,320,000		4,067,330	\$3,289,936
6/11	\$10,000,000	2.37%			10,000,000			
7/11								
8/11								
9/11								
10/11								
11/11	\$5,000,000	1.18%		5,000,000				
12/11								
1/12								
2/12								
3/12								
4/12								
<b>SUB-TOTAL</b>	<b>\$341,821,900</b>	<b>80.94%</b>	<b>\$236,144,634</b>	<b>5,000,000</b>	<b>83,320,000</b>	<b>10,000,000</b>	<b>4,067,330</b>	<b>\$3,289,936</b>
<b>13 Months - 2 YEARS</b>								
5/1/2012 - 6/30/2012								
7/1/2012 - 9/30/2012	\$5,000,000	1.18%		5,000,000				
10/1/2012 - 12/31/2012	\$25,500,000	6.04%		25,500,000				
1/1/2013 - 3/31/2013	\$30,000,000	7.10%		30,000,000				
4/1/2013 - 6/30/2013	\$20,000,000	4.74%		20,000,000				
<b>TOTALS</b>	<b>\$422,321,900</b>	<b>100.00%</b>	<b>\$236,144,634</b>	<b>85,500,000</b>	<b>83,320,000</b>	<b>10,000,000</b>	<b>4,067,330</b>	<b>\$3,289,936</b>
<b>% OF PORTFOLIO</b>			<b>55.92%</b>	<b>20.25%</b>	<b>19.73%</b>	<b>2.37%</b>	<b>0.96%</b>	<b>0.78%</b>

\* Return of posted collateral is dependant on interest rates.

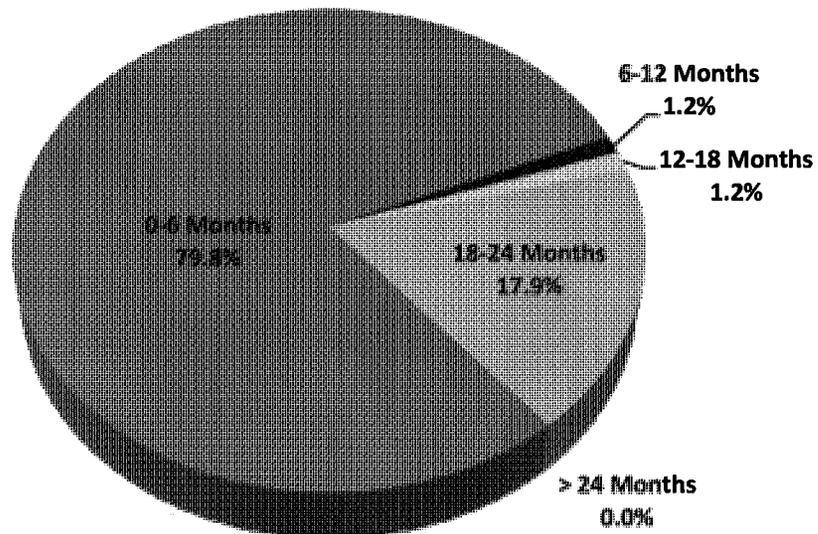
# APRIL 2011 INVESTMENT PORTFOLIO

As of April 30, 2011

## Portfolio by Investment Type



## Portfolio by Maturities



**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT**  
**INVESTMENT ACTIVITY**  
 Apr-11

**MATURITIES/SALES**

**PURCHASES**

DATE	SECURITY TYPE	PAR	YIELD	DATE	SECURITY TYPE	PAR	YIELD
4/1/2011	FFCB Note Due 4/1/2011	\$8,000,000	0.07%	4/4/2011	FHLMC Note Due 3/14/2013	\$5,000,000	0.50%
4/7/2011	FHLMC Note Due 1/7/2013	\$5,000,000	0.97%	4/7/2011	FHLB Note Due 4/25/2013	\$5,000,000	1.01%
4/27/2011	FFCB Note Due 4/27/2011	\$5,000,000	0.55%	4/25/2011	FHLB Note Due 4/25/2013	\$5,000,000	0.75%
				4/27/2011	VRDO - East Bay MUD 6/1/2027	\$10,000,000	0.21%

**LAIF ACTIVITY**

04/01/11	LAIF	\$1,800,000
04/15/11	LAIF	(\$56,914)
04/15/11	LAIF - JPA	(\$62,563)
04/15/11	LAIF - 2009A	\$10,192
04/15/11	LAIF - 2009B	\$10,192
04/15/11	LAIF - 2010 BABS	\$192,583
04/19/11	LAIF	(\$1,000,000)
04/21/11	LAIF	(\$2,800,000)
04/25/11	LAIF	(\$4,500,000)
	Increase/(Decrease)	<u>(\$6,406,509)</u>

**COLLATERALIZED DEPOSIT ACTIVITY**

Balance Forward	\$4,052,711
CITIGROUP	<u>(\$762,775)</u>
Balance at 4/30	<u>\$3,289,936</u>

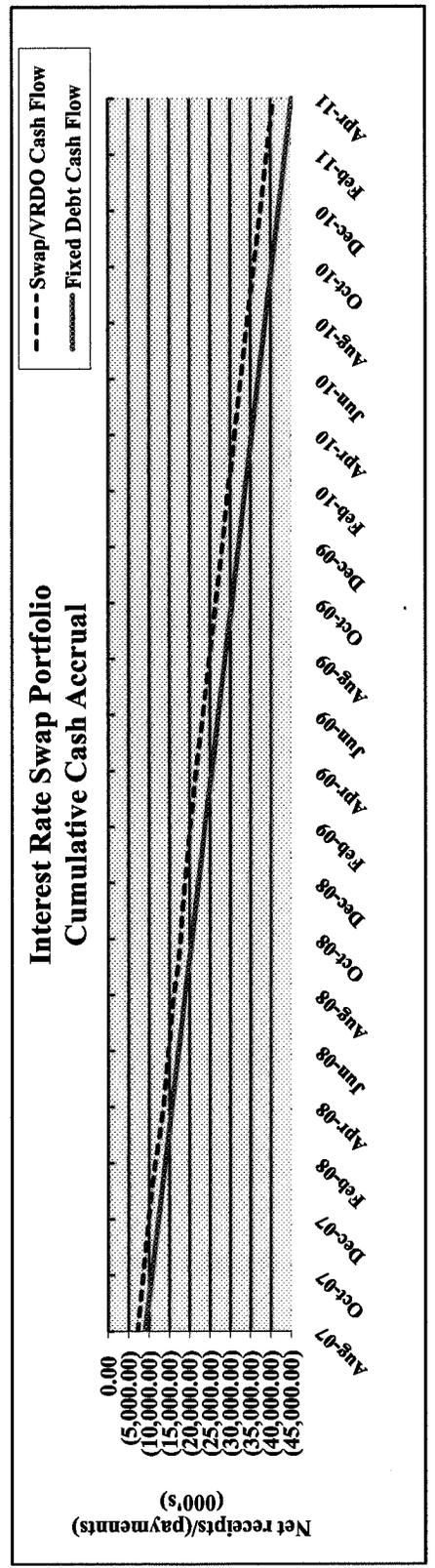
**IRVINE RANCH WATER DISTRICT  
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL  
April 30, 2011**

Exhibit "B"

Effective Date	Maturity Date	Years to Maturity	Current Fiscal Year Active Swaps			Notional Amt	Type	Base Index	Fixed Rate	LIBOR Avg %			Cumulative Cash Flow (Since 6/06)	Mark to Market		To Rtn to Dt	
			Counter Party	Counter Party	Counter Party					Prior Mo.	Current Mo.	12-Mo. Avg.		Current Mark to Market	Unrealized Gain/(Loss)		Net Gain/(Loss)
<b>Fixed Payer Swaps - By Effective Date</b>																	
6/4/2006	6/4/2019	8.1	ML	\$ 20,000,000		FXP	LIBOR	6.200%	0.25%	0.22%	0.28%	\$ (109,182)	\$ (89,176)	\$ (980,646)	\$ 15,283,960	\$ (4,716,040)	\$ (9,361,258)
6/4/2006	6/4/2019	8.1	CG	\$ 20,000,000		FXP	LIBOR	6.200%				\$ (109,182)	\$ (89,176)	\$ (980,646)	\$ 14,777,374	\$ (5,222,626)	\$ (8,867,844)
6/17/2006	6/17/2019	8.1	CG	\$ 30,000,000		FXP	LIBOR	6.140%				\$ (162,153)	\$ (132,580)	\$ (1,456,434)	\$ 22,357,679	\$ (7,642,321)	\$ (13,033,790)
3/10/2007	3/10/2029	17.9	ML	\$ 30,000,000		FXP	LIBOR	5.687%				\$ (149,678)	\$ (122,337)	\$ (1,343,712)	\$ 22,970,767	\$ (7,029,233)	\$ (11,666,641)
3/10/2007	3/10/2029	17.9	CG	\$ 30,000,000		FXP	LIBOR	5.687%				\$ (149,678)	\$ (122,337)	\$ (1,343,712)	\$ 22,705,134	\$ (7,294,866)	\$ (11,932,274)
<b>Totals/Weighted Aves</b>																	
\$ 130,000,000																	
<b>Total Current Year Active Swaps</b>																	
\$ 130,000,000																	
<b>Total Current Year Active &amp; Terminated Swaps</b>																	
\$ 130,000,000																	

Effective Date	Maturity Date	Current Fiscal Year Terminated Swaps			Notional Amt	Type	Base Index	Fixed Rate	Cash Flow			Mark to Market		To Rtn to Dt
		Counter Party	Counter Party	Counter Party					Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	
<b>Total Current Year Terminated Swaps</b>														
\$ -														
<b>Total Current Year Active &amp; Terminated Swaps</b>														
\$ -														

Effective Date	Maturity Date	Current Fiscal Year Terminated Swaps			Notional Amt	Type	Base Index	Fixed Rate	Cash Flow			Mark to Market		To Rtn to Dt
		Counter Party	Counter Party	Counter Party					Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	
<b>Total Current Year Terminated Swaps</b>														
\$ -														
<b>Total Current Year Active &amp; Terminated Swaps</b>														
\$ -														



Cash Flow Comparison	
Synthetic Fixed vs. Fixed Rate Debt	Cash Flow to Date
Synthetic Fixed =	\$40,719,606
Fixed Rate =	\$45,193,433
<b>Assumptions:</b>	
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

**EXHIBIT "C"**

**MONTHLY SUMMARY OF WIRE TRANSFERS/ACH PAYMENTS**

**APRIL  
2011**

<b>DATE</b>	<b>AMOUNT</b>	<b>VENDOR</b>	<b>PURPOSE</b>
4/1/2011	3,814.22	HELABA	LOC FEES
4/1/2011	69,771.17	STATE STREET	LOC FEES
4/1/2011	151,524.49	LBBW	LOC FEES
4/1/2011	11,095.91	BANK OF AMERICA	DEBT SERVICE
4/1/2011	11,938.36	US BANK	DEBT SERVICE
4/4/2011	392,307.16	BANK OF AMERICA	LOC FEES
4/6/2011	236,994.87	US BANK	LOC FEES
4/7/2011	504.78	HELABA	DEBT SERVICE
4/7/2011	2,330.52	STATE STREET	DEBT SERVICE
4/7/2011	9,352.54	BANK OF AMERICA	DEBT SERVICE
4/7/2011	32,656.92	LBBW	DEBT SERVICE
4/7/2011	700,447.42	BANK OF AMERICA	PAYROLL 4/8/11
4/7/2011	190,949.34	BANK OF AMERICA	FEDERAL TAX LIABILITY
4/7/2011	107,879.93	BANK OF AMERICA	STATE TAX LIABILITY
4/7/2011	14,095.16	EBS	FLEX HEALTH PLAN
4/7/2011	27,784.27	OCFTCU	PAYROLL DEDUCTION
4/7/2011	990.00	OCCU	PAYROLL DEDUCTION
4/7/2011	324,429.58	CalPERS	HEALTH INSURANCE PREMIUM
4/8/2011	2,815.00	BANK OF AMERICA	DRAW FEES
4/8/2011	250.00	US BANK	DRAW FEES
4/11/2011	123,397.76	GREAT WEST	DEFERRED COMP A/O 4/8/11
4/12/2011	26,572.36	LBBW	EXPIRATION OF LOC'S
4/12/2011	39,470.33	STATE STREET	LOC TERMINATION FEE
4/15/2011	722,522.33	MWDOC	WATER PURCHASE
4/15/2011	216,335.48	CalPERS	RETIREMENT
4/15/2011	8,688.27	BANK OF NEW YORK MELLON	INTEREST DUE ON REFUNDED BONDS
4/21/2011	2,269,767.77	JR FILANC CONSTRUCTION	PROGRESS PAYMENT
4/21/2011	705,383.86	BANK OF AMERICA	PAYROLL 4/23/11
4/21/2011	180,614.30	BANK OF AMERICA	FEDERAL TAX LIABILITY
4/21/2011	65,647.64	BANK OF AMERICA	STATE TAX LIABILITY
4/21/2011	13,953.50	EBS	FLEX HEALTH PLAN
4/21/2011	27,784.27	OCFTCU	PAYROLL DEDUCTION
4/21/2011	990.00	OCCU	PAYROLL DEDUCTION
4/22/2011	118,287.17	GREAT WEST	DEFERRED COMP A/O 4/23/11
4/29/2011	208,980.54	CalPERS	RETIREMENT
4/29/2011	4,345,687.50	US BANK	DEBT SERVICE
4/29/2011	14,128.10	BANK OF NEW YORK MELLON	DEBT SERVICE
	<b><u>\$11,380,142.82</u></b>		

## Exhibit "D"

4/21/2011  
16:47:39

## IRVINE RANCH WATER DISTRICT

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011Page 1  
AP238R

Vendor Name	Issued	Voided	Check#	Check Amount
AMERICAN CONSTRUCTION & SUPPLY	4/07/11		319297	833.98
BEDFORD PROPERTIES INVEST, INC	4/07/11		319298	520.95
CEDAR CREEK APTS	4/07/11		319299	28.89
CORPORATE PARK PLAZA	4/07/11		319300	1,072.80
CVC REAL ESTATE GROUP	4/07/11		319301	24.65
ERTMANN BRUCE C	4/07/11		319302	32.39
EXODUS WIRELESS CORPORATION	4/07/11		319303	60.20
FETTA STEPHANIE	4/07/11		319304	326.01
FYDAQ COMPANY INC	4/07/11		319305	393.13
GENTES PETER	4/07/11		319306	36.76
JIM JULIA	4/07/11		319307	71.45
KETADCHI MAHSHID	4/07/11		319308	30.57
LABWEST	4/07/11		319309	62.82
LOFTUS JOHN J	4/07/11		319310	31.92
LU GRACE	4/07/11		319311	15.44
MAKAMISHI RUMIKO	4/07/11		319312	642.36
MATHIS TRACY	4/07/11		319313	98.25
NORTHWOOD PLACE APTS	4/07/11		319314	3,093.08
PARK SAMUEL	4/07/11		319315	31.48
PEREZ COLBY	4/07/11		319316	45.19
RBCI, INC	4/07/11		319317	1,130.80
RBCI, INC	4/07/11		319318	833.98
SUNG SI YONG	4/07/11		319319	28.15
TANNER BARBARA	4/07/11		319320	17.47
TIC-OFFICE PROPERTIES	4/07/11		319321	385.67
TRI POINT HOMES, INC.	4/07/11		319322	15.00
VAN DAELE HOMES	4/07/11		319323	15.00
WALGREENS	4/07/11		319324	100.00
WATEREUSE FOUNDATION	4/07/11		319325	10,000.00
WOOD JOHN	4/07/11		319326	24.46
A & Y ASPHALT CONTRACTORS INC	4/07/11		319327	1,923.00
AARP HEALTH CARE OPTIONS	4/07/11		319328	210.92
ACWA HEALTH BENEFITS AUTHORITY	4/07/11		319329	30,662.57
ADS LLC	4/07/11		319330	12,889.50
ADVANCED INDUSTRIAL SERVICES,	4/07/11		319331	19,260.00
AIRGAS-WEST, INC.	4/07/11		319332	223.94
AMERICAN MESSAGING SERVICES	4/07/11		319333	301.48
ANTHEM BLUE CROSS	4/07/11		319334	1,445.60
APPLIED DIVING SERVICES, INC.	4/07/11		319335	96,718.00
APPLIED INDUSTRIAL	4/07/11		319336	45.29
ASSIFI, ABDUL TAWAB	4/07/11		319337	1,560.00
AT&T	4/07/11		319338	8,828.89
BALLARD, CARL	4/07/11		319339	1,800.00
BAMSHADFARD, QUMARS	4/07/11		319340	37.46
BATTERY SYSTEMS INC	4/07/11		319341	1,800.47
BILL'S SWEEPING SERVICE INC	4/07/11		319342	1,210.00
BORKMAN, CHARLES E	4/07/11		319343	1,500.00
BRENNTAG PACIFIC INC	4/07/11		319344	6,470.63
BUSH & ASSOCIATES INC	4/07/11		319345	6,864.00
C WELLS PIPELINE MATERIALS INC	4/07/11		319346	11,487.26
CALIFORNIA BARRICADE INC	4/07/11		319347	2,094.00
CALIFORNIA DEPT OF PUBLIC	4/07/11		319348	20,112.80
CALPROTECTION (DBA)	4/07/11		319349	1,175.00
CAMPBELL, THOMAS	4/07/11		319350	30.00
CANON BUSINESS SOLUTIONS INC	4/07/11		319351	1,274.66
CANON FINANCIAL SERVICES INC	4/07/11		319352	8,556.03
CAPTIVE AUDIENCE MARKETING	4/07/11		319353	85.91

**IRVINE RANCH WATER DISTRICT**

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
CASA	4/07/11		319354	18,000.00
CELAYA, MARY	4/07/11		319355	1,800.00
CHAMPION FENCE & IRON	4/07/11		319356	455.00
CHEESMAN, ENRIQUE	4/07/11		319357	1,680.00
COASTAL TRAFFIC SYSTEMS, INC	4/07/11		319358	1,550.00
COMILLAS, TEOFY E	4/07/11		319359	1,800.00
CONDITION MONITORING SERVICES	4/07/11		319360	10,727.50
CPI-INTERNATIONAL, INC	4/07/11		319361	235.00
CRAWFORD, JOHN P	4/07/11		319362	1,320.00
CREDENTIAL CHECK CORPORATION	4/07/11		319363	42.50
DE VAUL PAINT COMPANY	4/07/11		319364	2,674.26
DEAKYNE WALTER S	4/07/11		319365	750.00
DENGER, LOUIS	4/07/11		319366	1,800.00
DEVISE ENGINEERING INC	4/07/11		319367	4,486.58
DICKSON UNIGAGE, INC	4/07/11		319368	938.00
DOUG WILHELMI	4/07/11		319369	1,800.00
EAST ORANGE COUNTY WATER	4/07/11		319370	25.00
EHS INTERNATIONAL,INC	4/07/11		319371	2,215.00
EHS INTERNATIONAL,INC	4/07/11		319372	2,705.00
ENVIRONMENTAL EXPRESS INC	4/07/11		319373	878.80
ERVIN, CRAIG J	4/07/11		319374	1,800.00
ESA PWA	4/07/11		319375	18,293.76
EXPRESSAIR	4/07/11		319376	438.00
EXTERRAN ENERGY SOLUTIONS LP	4/07/11		319377	2,246.66
FEDEX	4/07/11		319378	934.24
FERGUSON WATERWORKS	4/07/11		319379	40,894.52
FIDELITY INVESTMENTS	4/07/11		319380	440.00
FIDELITY SECURITY LIFE	4/07/11		319381	5,808.92
FIRST HEALTH LIFE	4/07/11		319382	42.60
FISERV	4/07/11		319383	9,175.04
FISHER SCIENTIFIC COMPANY LLC	4/07/11		319384	496.48
FLEET SOLUTIONS, LLC.	4/07/11		319385	4,116.75
GANAHL LUMBER CO.	4/07/11		319386	80.44
GEI CONSULTANTS, INC.	4/07/11		319387	34,448.37
GEISER, DON	4/07/11		319388	1,800.00
GENERAL CHEMICAL PERFORMANCE	4/07/11		319389	225.00
GEOSCIENCE SUPPORT SERVICES	4/07/11		319390	79,560.00
GLENNA R ANDERSEN	4/07/11		319391	1,320.00
GLOBALSTAR INC	4/07/11		319392	169.01
GRAINGER	4/07/11		319393	319.96
HABIGER, STEVE	4/07/11		319394	1,800.00
HACH COMPANY	4/07/11		319395	160.59
HARDY & HARPER INC	4/07/11		319396	9,971.00
HARMSWORTH ASSOCIATES	4/07/11		319397	11,148.63
HARPER & ASSOCIATES	4/07/11		319398	186.00
HDR ENGINEERING INC.	4/07/11		319399	79,086.82
HEANEY, DAVID	4/07/11		319400	1,800.00
HILL BROTHERS CHEMICAL COMPANY	4/07/11		319401	5,902.34
HILLEBRECHT, WARREN K	4/07/11		319402	414.89
HOLLIDAY, MARY E	4/07/11		319403	1,200.00
HOME DEPOT USA INC	4/07/11		319404	585.07
HOME DEPOT USA INC	4/07/11		319405	14.37
HUMANA INSURANCE COMPANY	4/07/11		319406	25.20
HYDE, JAMES	4/07/11		319407	1,800.00
HYDRO-SCAPE PRODUCTS INC	4/07/11		319408	53.29
II FUELS INC	4/07/11		319409	16,731.77
INDUSTRIAL METAL SUPPLY CO	4/07/11		319410	485.02

**IRVINE RANCH WATER DISTRICT**

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
IRVINE PIPE & SUPPLY INC	4/07/11		319411	1,790.05
JOHN MICHAEL COVAS	4/07/11		319412	96.50
KELLY SERVICES INC	4/07/11		319413	1,056.00
KILL-N-BUGS TERMITE AND PEST	4/07/11		319414	425.00
KIM, SOON TAE	4/07/11		319415	1,800.00
KLOER, LUPE	4/07/11		319416	1,800.00
KNUTH, MICHAEL C	4/07/11		319417	900.00
KONVES, JIM	4/07/11		319418	1,560.00
LAB SAFETY SUPPLY, INC.	4/07/11		319419	235.05
LIGHTING RESOURCES LLC	4/07/11		319420	2,014.65
LOOMIS, TERRELL	4/07/11		319421	1,560.00
LUTZ-JESCO AMERICA CORPORATION	4/07/11		319422	321.99
LYNCH, JAN	4/07/11		319423	1,400.00
MALCOLM PIRNIE INC	4/07/11		319424	21,074.00
MARVIN GARDENS LLC	4/07/11		319425	2,593.70
MBC APPLIED ENVIRONMENTAL	4/07/11		319426	4,000.00
MC MASTER CARR SUPPLY CO	4/07/11		319427	1,513.09
MCCORMICK, LESTER	4/07/11		319428	1,800.00
MERCHANTS LANDSCAPE SERVICES	4/07/11		319429	45,308.00
MUMENTHALER SYLVIA	4/07/11		319430	1,680.00
MUNICIPAL MAINTENANCE	4/07/11		319431	4,140.11
NATIONAL READY MIXED CONCRETE	4/07/11		319432	439.02
NEW RESOURCES GROUP INC	4/07/11		319433	2,016.00
NEWPORT BEACH, CITY OF	4/07/11		319434	506.64
OLIN CORPORATION	4/07/11		319435	15,473.06
ON ASSIGNMENT LAB SUPPORT	4/07/11		319436	3,819.72
ONESOURCE DISTRIBUTORS LLC	4/07/11		319437	1,727.80
ORANGE, COUNTY OF	4/07/11		319438	396.00
ORDONEZ, CYNTHIA MARIE	4/07/11		319439	638.50
PABIS, SHARON	4/07/11		319440	840.00
PACIFIC COAST BOLT CORP	4/07/11		319441	67.06
PACIFIC GAS AND ELECTRIC	4/07/11		319442	75,698.88
PACIFIC PARTS & CONTROLS INC	4/07/11		319443	5,370.53
PAUL E BRADLEY INC	4/07/11		319444	6,592.50
PENHALL COMPANY	4/07/11		319445	735.00
PHAM, BINH T	4/07/11		319446	1,740.00
PRAXAIR DISTRIBUTION INC	4/07/11		319447	2,367.58
PRINCIPAL LIFE INSURANCE	4/07/11		319448	13,582.12
PRUDENTIAL OVERALL SUPPLY	4/07/11		319449	739.09
PSOMAS	4/07/11		319450	2,252.00
PTI SAND & GRAVEL INC	4/07/11		319451	870.51
PYRO-COMM SYSTEMS INC	4/07/11		319452	413.00
QUALITY ENVIRONMENTAL	4/07/11		319453	484.87
RAM AIR ENGINEERING INC	4/07/11		319454	690.89
RBF CONSULTING	4/07/11		319455	120,149.46
REACH EMPLOYEE ASSISTANCE INC	4/07/11		319456	803.40
REED, JAMES D	4/07/11		319457	1,952.14
RIVERSIDE COUNTY SUPERIOR	4/07/11		319458	472.17
RJS SOFTWARE SYSTEMS INC	4/07/11		319459	665.00
ROCK STRUCTURES CONSTRUCTION	4/07/11		319460	44,975.00
RRM DESIGN GROUP	4/07/11		319461	1,590.00
S & J SUPPLY CO INC	4/07/11		319462	8,689.90
SANCHEZ, AL	4/07/11		319463	1,620.00
SANTA ANA BLUE PRINT	4/07/11		319464	2.72
SANTA ANA CITY OF	4/07/11		319465	26.57
SCHEAFER, TOM	4/07/11		319466	1,740.00
SCHOLLE WILLIAM	4/07/11		319467	300.00

**IRVINE RANCH WATER DISTRICT**

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
SEAL ANALYTICAL INC	4/07/11		319468	51.90
SHAMROCK SUPPLY CO INC	4/07/11		319469	300.80
SIRIUS COMPUTER SOLUTIONS, INC	4/07/11		319470	8,515.36
SMITH, SEAN	4/07/11		319471	14.32
SOUTHERN CALIFORNIA EDISON	4/07/11		319472	363,517.02
SOUTHERN CALIFORNIA SECURITY	4/07/11		319473	87.00
STEVEN ENTERPRISES INC	4/07/11		319474	199.00
SUPPORT PRODUCTS SERVICES	4/07/11		319475	304.07
TAIT ENVIRONMENTAL SERVICES	4/07/11		319476	3,360.68
TAYLOR MORRISON OF CA LLC	4/07/11		319477	3,120.00
TESTAMERICA LABORATORIES, INC	4/07/11		319478	2,900.85
THE PRINTERY INC	4/07/11		319479	742.76
THYSSENKRUPP ELEVATOR	4/07/11		319480	70.00
TREE OF LIFE NURSERY	4/07/11		319481	132.68
TROPICAL PLAZA NURSERY INC	4/07/11		319482	2,121.00
US PEROXIDE, LLC	4/07/11		319483	14,090.45
VELAZQUEZ, LORETTA	4/07/11		319484	1,800.00
VERIZON CALIFORNIA INC	4/07/11		319485	149.84
VILLEGAS, LINDA L	4/07/11		319486	1,140.00
VWR INTERNATIONAL, LLC	4/07/11		319487	44.76
WALKER, JOHN	4/07/11		319488	1,800.00
WALTERS WHOLESALE ELECTRIC	4/07/11		319489	94.34
WASTE MGMT OF ORANGE COUNTY	4/07/11		319490	170.43
WATERBORNE, INC	4/07/11		319491	415.00
WATERLINE TECHNOLOGIES INC	4/07/11		319492	624.00
WATSON HYDRAULICS, INC	4/07/11		319493	1,360.36
WESTERN EXTERMINATOR COMPANY	4/07/11		319494	6,694.50
WESTERN HYDRO CORPORATION	4/07/11		319495	3,642.07
WILLIAMS, TWYLA	4/07/11		319496	788.50
YSI INCORPORATED	4/07/11		319497	275.69
ZEE MEDICAL SERVICE CO	4/07/11		319498	55.97
BRADLEY, CAROL	4/07/11		319499	1,800.00
FRANCHISE TAX BOARD	4/07/11		319500	1,833.49
PERS LONG TERM CARE	4/07/11		319501	1,826.79
BACCHUS SIGNATURE SERIES	4/14/11		319502	54.40
BRIGHT PHILIP	4/14/11		319503	35.54
CC&R ASSOC MGMT	4/14/11		319504	18.70
COHEN LORI	4/14/11		319505	142.24
CREAN LUTHERAN S HIGH SCHOOL	4/14/11		319506	9,722.86
DOCTOR DIRECT SALES	4/14/11		319507	34.85
DODSON TIM	4/14/11		319508	24.65
GHANE AL	4/14/11		319509	42.96
LAKE FOREST, CITY OF	4/14/11		319510	1,500.00
LE HUNG	4/14/11		319511	154.90
LEE YUEH HUEI	4/14/11		319512	35.78
MINKS DENNIS	4/14/11		319513	26.79
NAIK AMISH	4/14/11		319514	23.53
TABACK FAMILY TRUST	4/14/11		319515	18.92
WINDWOOD GLEN APTS	4/14/11		319516	39.30
A&G INSTRUMENT SERVICE AND	4/14/11		319517	1,636.00
AAF INTERNATIONAL	4/14/11		319518	1,580.44
ACCURATE AIR ENGINEERING INC	4/14/11		319519	2,583.20
ACE STAINLESS SUPPLY	4/14/11		319520	114.19
ACTION ELECTRIC CORP	4/14/11		319521	756.58
AMERIPRISE AUTO&HOME INSURANCE	4/14/11		319522	1,846.19
ARMORCAST PRODUCTS COMPANY	4/14/11		319523	6,817.55
ASSOCIATED POWER INC	4/14/11		319524	1,305.00

**IRVINE RANCH WATER DISTRICT**

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
AT&T	4/14/11		319525	1,739.02
AYRES HOTEL AND SUITES (DBA)	4/14/11		319526	6,353.85
BANK OF NEW YORK MELLON TRUST	4/14/11		319527	530.00
BDC SPECIAL WASTE	4/14/11		319528	300.00
BELL PIPE & SUPPLY CO	4/14/11		319529	4,097.66
BIOMAGIC INC	4/14/11		319530	10,147.20
BLACK & VEATCH CORPORATION	4/14/11		319531	534,507.02
BUTIER ENGINEERING INC	4/14/11		319532	41,300.00
C WELLS PIPELINE MATERIALS INC	4/14/11		319533	6,857.35
CALIFORNIA BARRICADE INC	4/14/11		319534	2,065.00
CAMFIL FARR INC	4/14/11		319535	526.47
CITIGROUP GLOBAL MARKETS INC.	4/14/11		319536	869.18
CORTECH ENGINEERING, INC	4/14/11		319537	846.75
CPWH	4/14/11		319538	184.12
DATA CLEAN CORPORATION	4/14/11		319539	500.00
DCSE INC	4/14/11		319540	1,445.00
DLT&V SYSTEMS ENGINEERING INC	4/14/11		319541	52,844.57
DUDEK	4/14/11		319542	89,961.20
EAST ORANGE COUNTY WATER	4/14/11		319543	25,119.82
EMPLOYEE BENEFIT SPECIALIST,	4/14/11		319544	735.00
ENVIRON INTERNATIONAL CORP.	4/14/11		319545	3,652.23
ENVIRONMENTAL RESOURCE	4/14/11		319546	118.99
EQUIPCO SALES & SERVICE	4/14/11		319547	503.56
EXTERRAN ENERGY SOLUTIONS LP	4/14/11		319548	252.85
FEDEX	4/14/11		319549	484.22
FERGUSON WATERWORKS	4/14/11		319550	2,631.34
FISHER SCIENTIFIC COMPANY LLC	4/14/11		319551	9,531.50
FLW SERVICE	4/14/11		319552	1,159.23
FRANK LA PLACA EXTERMINATING	4/14/11		319553	175.00
GANAHL LUMBER CO.	4/14/11		319554	1,678.67
GEORGE L. MILLER	4/14/11		319555	1,100,000.00
GODWIN PUMPS OF AMERICA, INC.	4/14/11		319556	2,388.15
GRAINGER	4/14/11		319557	2,575.05
HACH COMPANY	4/14/11		319558	1,341.11
HALCYON ELECTRIC INC	4/14/11		319559	267,030.00
HAYDEN, JAMES	4/14/11		319560	34.04
HDR ENGINEERING INC.	4/14/11		319561	185,940.92
HILL BROTHERS CHEMICAL COMPANY	4/14/11		319562	8,710.88
HUB CONSTRUCTION SPECIALTIES	4/14/11		319563	268.57
IBM CORPORATION	4/14/11		319564	18,259.78
INDUSTRIAL ELECTRIC MACHINERY	4/14/11		319565	5,156.62
IRVINE PIPE & SUPPLY INC	4/14/11		319566	546.41
IRWD-PETTY CASH CUSTODIAN	4/14/11		319567	781.71
ISENBERG/O'HAREN	4/14/11		319568	6,501.79
JARVIS, DAWN	4/14/11		319569	31.92
JOHN G. ALEVIZOS D.O. INC.	4/14/11		319570	255.00
JOHNSTONE SUPPLY	4/14/11		319571	998.29
KELLY SERVICES INC	4/14/11		319572	1,056.00
KEY EQUIPMENT FINANCE	4/14/11		319573	4,076.72
KOCH MEMBRANE SYSTEMS	4/14/11		319574	19,571.54
KONECRANES INC	4/14/11		319575	320.00
LAER PEARCE & ASSOCIATES	4/14/11		319576	7,875.00
LAKE FOREST, CITY OF	4/14/11	4/18/11	319577	174,030.80
LAMAR, STEVEN	4/14/11		319578	1,299.16
LEATHERWOOD CONSTRUCTION INC	4/14/11		319579	223,046.10
LEATHERWOOD CONSTRUCTION INC	4/14/11		319580	24,782.90
LOO, CHRIS	4/14/11		319581	21.41

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LUBRICATION ENGINEERS, INC.	4/14/11		319582	5,204.94
MC MASTER CARR SUPPLY CO	4/14/11		319583	552.38
MILLER, LORI	4/14/11		319584	19.25
MOBILE MODULAR MANAGEMENT	4/14/11		319585	1,119.04
MOUSE GRAPHICS	4/14/11		319586	60.36
NALCO COMPANY	4/14/11		319587	1,434.30
NATIONAL READY MIXED CONCRETE	4/14/11		319588	645.76
NINYO & MOORE	4/14/11		319589	2,171.50
NMG GEOTECHNICAL INC	4/14/11		319590	6,082.80
OLIN CORPORATION	4/14/11		319591	15,327.13
ON ASSIGNMENT LAB SUPPORT	4/14/11		319592	3,577.88
ORANGE COUNTY HOSE CO.	4/14/11		319593	301.42
PACIFIC COAST AIR TOOL &	4/14/11		319594	1,167.61
PACIFIC HYDROTECH CORPORATION	4/14/11		319595	17,640.96
PACIFIC PARTS & CONTROLS INC	4/14/11		319596	1,270.76
PASCAL & LUDWIG CONSTRUCTORS	4/14/11		319597	211,518.00
PASCAL & LUDWIG CONSTRUCTORS	4/14/11		319598	23,502.00
PAULUS ENGINEERING INC	4/14/11		319599	46,470.82
PERKINELMER HEALTH SCIENCES	4/14/11		319600	3,042.37
PHILCO CONSTRUCTION INC	4/14/11		319601	62,145.90
PINNACLE LANDSCAPE COMPANY	4/14/11		319602	5,936.76
POWER PLUS	4/14/11		319603	75.00
PRO GROWERS INC	4/14/11		319604	3,751.15
PRUDENTIAL OVERALL SUPPLY	4/14/11		319605	1,830.90
PSOMAS	4/14/11		319606	6,614.91
PTI SAND & GRAVEL INC	4/14/11		319607	3,074.55
R & S SOIL PRODUCTS INC	4/14/11		319608	848.25
RBF CONSULTING	4/14/11		319609	491,415.33
RICHARD C SLADE & ASSOCIATES	4/14/11		319610	1,954.05
RINGCLEAR LLC	4/14/11		319611	50.76
RMC WATER AND ENVIRONMENT	4/14/11		319612	987.50
ROBERTS ROOFING INC	4/14/11		319613	950.00
RRM DESIGN GROUP	4/14/11		319614	3,030.00
SANTA ANA BLUE PRINT	4/14/11		319615	21.30
SANTA ANA, CITY OF	4/14/11		319616	18,285.05
SANTA MARGARITA WATER DISTRICT	4/14/11		319617	6,000.00
SANTIAGO AQUEDUCT COMMISSION	4/14/11		319618	8,249.80
SCHWARTZ ROSALYN	4/14/11		319619	195.00
SEQUEL CONTRACTORS, INC.	4/14/11		319620	32,175.36
SHAIBANI, BANAFSHEH	4/14/11		319621	4.28
SOUTH COAST WATER DISTRICT	4/14/11		319622	2,501.68
SOUTHERN CALIFORNIA EDISON	4/14/11		319623	21,593.91
SPARKLETT'S	4/14/11		319624	125.66
SPECTER INSTRUMENTS	4/14/11		319625	1,020.09
STANTEC CONSULTING SERVICES	4/14/11		319626	546.00
STATE BOARD OF EQUALIZATION	4/14/11		319627	683.92
STEVEN ENTERPRISES INC	4/14/11		319628	247.69
SUPERMEDIA LLC	4/14/11		319629	68.25
SWAINS ELECTRIC MOTOR SERVICE	4/14/11		319630	9,865.50
SWAN, PEER A	4/14/11		319631	8,420.10
TETRA TECH, INC	4/14/11		319632	52,578.16
THE GAS COMPANY	4/14/11		319633	120.42
THE NEW HOME COMPANY	4/14/11		319634	25.14
TREE OF LIFE NURSERY	4/14/11		319635	309.94
TROPICAL PLAZA NURSERY INC	4/14/11		319636	16,887.00
TRUGREEN LANDCARE LLC	4/14/11		319637	41,520.09
TUSTIN, CITY OF	4/14/11		319638	345.03

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UNITED SITE SERVICES OF	4/14/11		319639	776.79
UNITED WAY OF ORANGE COUNTY	4/14/11		319640	1,420.02
UNIVAR USA INC	4/14/11		319641	3,434.08
US PEROXIDE, LLC	4/14/11		319642	3,875.00
USA MOBILITY WIRELESS INC	4/14/11		319643	8.70
VA CONSULTING, INC	4/14/11		319644	2,939.96
VORTEX INDUSTRIES INC	4/14/11		319645	149.95
WALTERS WHOLESALE ELECTRIC	4/14/11		319646	12.54
WASTE MGMT OF ORANGE COUNTY	4/14/11		319647	167.90
WAX DEPOT	4/14/11		319648	296.89
WAXIE SANITARY SUPPLY	4/14/11		319649	506.58
WECK LABORATORIES INC	4/14/11		319650	120.00
WESTERN EXTERMINATOR COMPANY	4/14/11		319651	2,217.00
WHITE CAP	4/14/11		319652	54.16
WIRELESS WATCHDOGS LLC	4/14/11		319653	1,376.67
YORK INSURANCE SERVICES GROUP	4/14/11		319654	6,585.00
YRC INC	4/14/11		319655	156.50
YSI INCORPORATED	4/14/11		319656	9,051.34
ZEE MEDICAL SERVICE CO	4/14/11		319657	1,460.30
LAKE FOREST, CITY OF	4/18/11		319658	47,000.00
LAKE FOREST, CITY OF	4/18/11		319659	127,030.80
JCI JONES CHEMICALS INC	4/19/11		319660	9,009.00
ACE TECHNOLOGE	4/21/11		319661	74.38
AGNES ENTERPRISES	4/21/11		319662	67.96
ALSKO MICHELLE	4/21/11		319663	32.63
BENON JEFFREY	4/21/11		319664	89.86
CALIFORNIA MUNICIPAL	4/21/11		319665	105.00
HAMPTON INN	4/21/11		319666	892.23
HSIAN JOANNE	4/21/11		319667	36.46
LAGUNA BEACH COUNTY WATER	4/21/11		319668	48,804.00
PERRY THOMAS	4/21/11		319669	29.97
ROSIER LESLEE	4/21/11		319670	46.47
SAN MARINO APTS	4/21/11		319671	15.13
SHOJAEDDINI SHARAREH	4/21/11		319672	35.10
SOUTH COAST WATER DISTRICT	4/21/11		319673	24,289.00
SPRAGINS GEORGE	4/21/11		319674	24.31
STEINMANN GABRIEL	4/21/11		319675	32.15
THE NEW HOME COMPANY	4/21/11		319676	40.56
THE NEW HOME COMPANY	4/21/11		319677	42.38
THE PARK @ SPECTRUM APARTMENTS	4/21/11		319678	823.59
THE PARK @ SPECTRUM APARTMENTS	4/21/11		319679	8,347.39
THE PARK @ SPECTRUM APARTMENTS	4/21/11		319680	8,876.83
TIC-IPG-COMMON	4/21/11		319681	131.89
TIC-IPG-COMMON	4/21/11		319682	588.50
TIC-IPG-COMMON	4/21/11		319683	43.42
TIC-IPG-COMMON	4/21/11		319684	32.28
TIC-IPG-COMMON	4/21/11		319685	131.05
TIC-IPG-COMMON	4/21/11		319686	22.70
TIC-IPG-COMMON	4/21/11		319687	168.52
TIC-OFFICE PROPERTIES	4/21/11		319688	205.97
TIC-RETAIL PROPERTIES	4/21/11		319689	548.25
TIC-RETAIL PROPERTIES	4/21/11		319690	263.22
TIC-SPECTRUM OFFICE	4/21/11		319691	276.29
U S DEMOLITION	4/21/11		319692	1,153.37
UNITED STATES POST OFFICE	4/21/11		319693	30,000.00
VAN DAELE HOMES	4/21/11		319694	15.00
WILLIAM LYON HOMES	4/21/11		319695	15.00

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WOODBIDGE WILLOWS APTS	4/21/11		319696	9.28
A&A WIPING CLOTH CO	4/21/11		319697	513.30
A&G INSTRUMENT SERVICE AND	4/21/11		319698	373.00
ACCURATE AIR ENGINEERING INC	4/21/11		319699	4,961.34
ACCURATE MEASUREMENT SYSTEMS	4/21/11		319700	1,513.56
ACTION ELECTRIC CORP	4/21/11		319701	93,693.07
ADT SECURITY SERVICES INC	4/21/11		319702	323.29
AFLAC	4/21/11		319703	6,214.30
AIRE INDUSTRIAL	4/21/11		319704	752.41
AIRGAS-WEST, INC.	4/21/11		319705	6.82
ALEXANDER CONTRACT SERVICES	4/21/11		319706	94,960.55
AQUA BEN CORPORATION	4/21/11		319707	4,288.56
AQUA-METRIC SALES COMPANY	4/21/11		319708	4,291.28
ASHFORD, WALT	4/21/11		319709	87.90
ASSOCIATED POWER INC	4/21/11		319710	5,471.63
AST CORPORATION	4/21/11		319711	30,216.00
AT&T	4/21/11		319712	5,891.40
AT&T	4/21/11		319713	15.28
AT&T INTERNET SERVICES	4/21/11		319714	825.00
AT&T LONG DISTANCE	4/21/11		319715	40.66
AT&T TELECONFERENCE SERVICES	4/21/11		319716	251.50
AYRES HOTEL AND SUITES (DBA)	4/21/11		319717	4,547.10
BANK OF AMERICA MERRILL LYNCH	4/21/11		319718	13,641.78
BANK OF NEW YORK MELLON TRUST	4/21/11		319719	5,531.00
BATTERY SPECIALTIES	4/21/11		319720	524.61
BELL PIPE & SUPPLY CO	4/21/11		319721	3,795.36
BILL'S SWEEPING SERVICE INC	4/21/11		319722	440.00
BIOMAGIC INC	4/21/11		319723	6,679.97
BIOMERIEUX INC	4/21/11		319724	452.97
BLACK BOX CORP OF PENNSYLVANIA	4/21/11		319725	104.24
BORCHARD SURVEYING & MAPPING	4/21/11		319726	11,242.50
BRENNTAG PACIFIC INC	4/21/11		319727	11,255.63
BRITHINEE ELECTRIC	4/21/11		319728	3,860.98
BUSH & ASSOCIATES INC	4/21/11		319729	9,872.00
BUTIER ENGINEERING INC	4/21/11		319730	20,374.00
C WELLS PIPELINE MATERIALS INC	4/21/11		319731	42,706.58
CAL WATER PURIFICATION	4/21/11		319732	80.00
CALIFORNIA BARRICADE INC	4/21/11		319733	1,476.79
CALIFORNIA MUNICIPAL	4/21/11		319734	3,000.00
CANON BUSINESS SOLUTIONS INC	4/21/11		319735	4,622.89
CARL WARREN & CO	4/21/11		319736	1,526.78
CARSONITE COMPOSITES	4/21/11		319737	835.27
CDW GOVERNMENT LLC	4/21/11		319738	1,306.81
CERTIFIED TRANSPORTATION	4/21/11		319739	1,296.74
CHEMTREC	4/21/11		319740	675.00
CHEN, SHUPING	4/21/11		319741	749.81
CHI, MARK	4/21/11		319742	31.62
CITIGROUP GLOBAL MARKETS INC.	4/21/11		319743	4,013.01
COAST PLUMBING HEATING	4/21/11		319744	310.00
COASTAL TRAFFIC SYSTEMS, INC	4/21/11		319745	11,867.50
COLONIAL LIFE & ACCIDENT	4/21/11		319746	2,549.25
COMMERCE ENERGY INC	4/21/11		319747	433.92
CONTROLLED KEY SYSTEMS INC	4/21/11		319748	244.19
CORELOGIC INC	4/21/11		319749	200.00
CR & R INCORPORATED	4/21/11		319750	49.51
CREDENTIAL CHECK CORPORATION	4/21/11		319751	14.00
CRISALLE, LUIS	4/21/11		319752	51.00

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CRUMP & CO, INC.	4/21/11		319753	391.61
CUSTOM LASER WORKS INC	4/21/11		319754	2,264.13
D & G SIGNS	4/21/11		319755	679.68
D & H WATER SYSTEMS INC.	4/21/11		319756	10,964.13
DATASITE INC	4/21/11		319757	32,785.00
DEE JASPAR & ASSOCIATES, INC.	4/21/11		319758	542.52
DELL MARKETING LP	4/21/11		319759	630.73
DESIGNWORX	4/21/11		319760	1,250.00
DEVISE ENGINEERING INC	4/21/11		319761	3,131.10
DEZURIK INC	4/21/11		319762	1,310.44
DIRECTV INC	4/21/11		319763	86.99
DISCOVERY SCIENCE CENTER	4/21/11		319764	19,600.20
DJ NELSON & SON POOL SERVICE	4/21/11		319765	2,251.89
DRUCK INC	4/21/11		319766	647.09
DUDEK	4/21/11		319767	11,017.98
DURANCEAU CONSULTING SERVICES,	4/21/11		319768	675.00
ELECTRABOND	4/21/11		319769	830.00
ELECTRICAL SYSTEMS ENGINEERING	4/21/11		319770	2,400.00
ENGINEERS SALES SERVICE CO INC	4/21/11		319771	1,995.55
ENVIRONMENTAL RESOURCE	4/21/11		319772	7,513.39
ESA PWA	4/21/11		319773	540.00
EVERGREEN OIL INC	4/21/11		319774	35.00
EVOLVE MEDIA	4/21/11		319775	25,700.00
EXPRESSAIR	4/21/11		319776	289.70
FARWEST CORROSION CONTROL CO	4/21/11		319777	9,975.00
FEDEX	4/21/11		319778	838.91
FERGUSON WATERWORKS	4/21/11		319779	1,889.54
FIDELITY INVESTMENTS	4/21/11		319780	440.00
FIRE EXTINGUISHING SAFETY	4/21/11		319781	503.82
FIRST CHOICE SERVICES	4/21/11		319782	218.40
FISERV	4/21/11		319783	369.00
FISHER SCIENTIFIC COMPANY LLC	4/21/11		319784	7,505.27
FLEET SOLUTIONS, LLC.	4/21/11		319785	4,141.80
FLOW SCIENCE INCORPORATED	4/21/11		319786	6,940.00
FLW SERVICE	4/21/11		319787	4,539.15
FRANCHISE TAX BOARD	4/21/11		319788	1,833.49
FT ZIEBARTH COMPANY	4/21/11		319789	39,588.03
GANAHL LUMBER CO.	4/21/11		319790	109.86
GEI CONSULTANTS, INC.	4/21/11		319791	67,619.18
GENTERRA CONSULTANTS INC	4/21/11		319792	10,694.95
GOLDEN STATE LABOR COMPLIANCE,	4/21/11		319793	4,123.13
GOOGLE INC.	4/21/11		319794	1,014.60
GRAINGER	4/21/11		319795	7,411.52
GRAPHIC CONTROLS LLC	4/21/11		319796	234.95
GRAYBAR ELECTRIC COMPANY	4/21/11		319797	4,957.64
HACH COMPANY	4/21/11		319798	5,395.69
HARPER & ASSOCIATES	4/21/11		319799	12,923.60
HARRINGTON INDUSTRIAL PLASTICS	4/21/11		319800	77.21
HARTFORD LIFE AND ACCIDENT	4/21/11		319801	201.20
HDR ENGINEERING INC.	4/21/11		319802	180,738.60
HILL BROTHERS CHEMICAL COMPANY	4/21/11		319803	19,617.10
HOME DEPOT USA INC	4/21/11		319804	553.24
HOME DEPOT USA INC	4/21/11		319805	55.43
II FUELS INC	4/21/11		319806	31,412.44
INDUSTRIAL METAL SUPPLY CO	4/21/11		319807	99.77
INSITUFORM TECHNOLOGIES INC	4/21/11		319808	882,264.00
IRON MOUNTAIN INFORMATION	4/21/11		319809	1,689.96

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IRVINE PIPE & SUPPLY INC	4/21/11		319810	11,290.99
IRVINE, CITY OF	4/21/11		319811	83,799.00
IRWD-PETTY CASH CUSTODIAN	4/21/11		319812	736.83
ITT INDUSTRIES	4/21/11		319813	4,285.05
J.P. MORGAN SECURITIES, INC.	4/21/11		319814	22,191.78
JONES & STOKES ASSOCIATES, INC	4/21/11		319815	2,592.50
KELLY SERVICES INC	4/21/11		319816	1,056.00
KENNEDY/JENKS CONSULTANTS, INC	4/21/11		319817	55,120.18
KILL-N-BUGS TERMITE AND PEST	4/21/11		319818	1,625.00
KS DIRECT LLC	4/21/11		319819	8,707.13
LAB SAFETY SUPPLY, INC.	4/21/11		319820	408.66
LAGUNA BEACH COUNTY WATER	4/21/11		319821	2,931.55
LAYNE CHRISTENSEN COMPANY	4/21/11		319822	395,287.56
LEWIS OPERATING CORP	4/21/11		319823	8,421.56
LISTA INTERNATIONAL CORP	4/21/11		319824	80,379.58
LSA ASSOCIATES INC	4/21/11		319825	4,201.53
LUBRICATION ENGINEERS, INC.	4/21/11		319826	325.00
MALCOLM PIRNIE INC	4/21/11		319827	69,638.65
MARKET-THINK, LLC	4/21/11		319828	3,675.00
MBC APPLIED ENVIRONMENTAL	4/21/11		319829	8,200.00
MBF CONSULTING, INC.	4/21/11		319830	6,971.36
MC MASTER CARR SUPPLY CO	4/21/11		319831	3,206.55
MECHANICAL SEAL REPAIR INC	4/21/11		319832	958.04
MERCHANTS LANDSCAPE SERVICES	4/21/11		319833	27,415.77
MICHAEL A BACA	4/21/11		319834	720.00
MICHAELS, ROSS & COLE LTD	4/21/11		319835	6,660.00
MOBILE MODULAR MANAGEMENT	4/21/11		319836	1,119.04
MOULTON NIGUEL WATER DISTRICT	4/21/11		319837	401,097.00
MOUSE GRAPHICS	4/21/11		319838	454.40
MUNICIPAL WATER DISTRICT	4/21/11		319839	1,500.00
MUTUAL LIQUID GAS & EQUIPMENT	4/21/11		319840	122.16
NATIONAL READY MIXED CONCRETE	4/21/11		319841	1,867.82
NCL OF WISCONSIN INC	4/21/11		319842	53.82
NEPTUNE TECHNOLOGY	4/21/11		319843	61,049.21
NEW DIMENSION GENERAL	4/21/11		319844	20,191.69
NEW RESOURCES GROUP INC	4/21/11		319845	733.78
NEWPORT BEACH, CITY OF	4/21/11		319846	698.19
NGUYEN, RICKEY	4/21/11		319847	29.06
NINYO & MOORE	4/21/11		319848	7,088.25
NMG GEOTECHNICAL INC	4/21/11		319849	18,677.93
NORMAN LAZERINE ASSOCIATES	4/21/11		319850	1,500.00
OLIN CORPORATION	4/21/11		319851	19,218.25
ON ASSIGNMENT LAB SUPPORT	4/21/11		319852	14,315.14
ONESOURCE DISTRIBUTORS LLC	4/21/11		319853	158,594.65
ORANGE COUNTY BUSINESS COUNCIL	4/21/11		319854	1,500.00
ORANGE COUNTY TREASURER	4/21/11		319856	3,200.00
ORANGE COUNTY VECTOR CONTROL	4/21/11		319857	676.13
ORANGE, COUNTY OF	4/21/11		319858	769.50
ORDONEZ, CYNTHIA MARIE	4/21/11		319859	638.50
PACIFIC BUILDING CARE INC	4/21/11		319860	10,903.42
PACIFIC PARTS & CONTROLS INC	4/21/11		319861	8,976.53
PACIFIC STRATEGIES	4/21/11		319862	2,500.00
PACIFIC TECHNOLOGIES INC	4/21/11		319863	5,092.33
PAI SYSTEMS INC	4/21/11		319864	1,200.00
PALMER PRODUCTS INC	4/21/11		319865	2,401.97
PAPER DEPOT DOCUMENT	4/21/11		319866	694.00
PAUL E BRADLEY INC	4/21/11		319867	13,725.00

**IRVINE RANCH WATER DISTRICT**

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
PAULUS ENGINEERING INC	4/21/11		319868	72,505.61
PEARPOINT	4/21/11		319869	1,894.91
PERS LONG TERM CARE	4/21/11		319870	1,826.79
PHADNIS, SHUBHADA	4/21/11		319871	28.29
PMK ASSOCIATES INC	4/21/11		319872	1,000.00
POWER DESIGN	4/21/11		319873	6,016.40
POWER PLUS	4/21/11		319874	975.00
PRAXAIR DISTRIBUTION INC	4/21/11		319875	897.29
PRE-PAID LEGAL SERVICES INC	4/21/11		319876	1,877.92
PRIORITY MAILING SYSTEMS LLC	4/21/11		319877	446.51
PRUDENTIAL OVERALL SUPPLY	4/21/11		319878	2,483.28
PSOMAS	4/21/11		319879	40,088.74
PTI SAND & GRAVEL INC	4/21/11		319880	2,752.99
PURE EFFECT INC	4/21/11		319881	11,340.00
QUALITY ENVIRONMENTAL	4/21/11		319882	1,760.72
QUICKEL PAVING INC	4/21/11		319883	26,525.00
R&B AUTOMATION INC	4/21/11		319884	4,920.00
RAINBOW DISPOSAL CO INC	4/21/11		319885	437.39
RAM AIR ENGINEERING INC	4/21/11		319886	4,158.55
RBF CONSULTING	4/21/11		319887	60,652.21
RESPONSE ENVELOPE, INC	4/21/11		319888	3,497.94
RICHARD C SLADE & ASSOCIATES	4/21/11		319889	786.10
RIVERSIDE COUNTY SUPERIOR	4/21/11		319890	472.17
RMC WATER AND ENVIRONMENT	4/21/11		319891	4,702.50
SAN CLEMENTE, CITY OF	4/21/11		319892	72,756.00
SAN DIEGO FLUID SYSTEM TECH	4/21/11		319893	178.14
SANTA ANA BLUE PRINT	4/21/11		319894	970.21
SANTA MARGARITA WATER DISTRICT	4/21/11		319895	182,602.00
SANTIAGO AQUEDUCT COMMISSION	4/21/11		319896	1,736.81
SECURTEC DISTRICT PATROL INC	4/21/11		319897	3,500.00
SEPARATION PROCESSES INC	4/21/11		319898	3,689.10
SHAMROCK SUPPLY CO INC	4/21/11		319899	2,387.66
SIGMA-ALDRICH INC	4/21/11		319900	2,013.22
SIRIUS COMPUTER SOLUTIONS, INC	4/21/11		319901	159,318.63
SOUTH COAST WATER	4/21/11		319902	191.74
SOUTHERN CALIFORNIA EDISON	4/21/11		319903	185,466.74
SOUTHERN CALIFORNIA SECURITY	4/21/11		319904	469.03
SPARKLETTTS	4/21/11		319905	93.26
SPARLING INSTRUMENTS LLC	4/21/11		319906	2,256.34
STANTEC CONSULTING SERVICES	4/21/11		319907	27,171.85
STATE BOARD OF EQUALIZATION	4/21/11		319908	1,882.00
STEELRIVER OPERATIONS LP	4/21/11		319909	200.00
STERILIZER TECHNICAL	4/21/11		319910	816.42
STERIS CORPORATION	4/21/11		319911	3,995.41
STEVEN ENTERPRISES INC	4/21/11		319912	1,083.28
STORK MATERIALS TESTING AND	4/21/11		319913	500.00
SULZER PUMPS US, INC.	4/21/11		319914	87,750.38
SUNSET INDUSTRIAL PARTS	4/21/11		319915	2,653.11
SUPERIOR WATER TECHNOLOGIES	4/21/11		319916	4,553.12
SWRCB	4/21/11		319917	1,008.00
SYNAGRO SOUTH, LLC	4/21/11		319918	20,956.38
TANTAMENG, PEERAPONG	4/21/11		319919	29.20
TEKDRAULICS	4/21/11		319920	8,313.94
TETRA TECH, INC	4/21/11		319921	2,332.00
THE FURMAN GROUP INC	4/21/11		319922	10,181.00
THE GAS COMPANY	4/21/11		319923	4,291.54
THE GAS COMPANY	4/21/11		319924	368.65

**IRVINE RANCH WATER DISTRICT**

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
THE IRVINE COMPANY LLC	4/21/11		319925	1,531.12
TOXGUARD FLUID TECHNOLOGIES	4/21/11		319926	257.72
TRENCH SHORING COMPANY	4/21/11		319927	1,590.00
TRIPAC MARKETING INC	4/21/11		319928	543.50
TROPICAL PLAZA NURSERY INC	4/21/11		319929	61,197.70
TRUCPARCO	4/21/11		319930	195.92
TRUGREEN LANDCARE LLC	4/21/11		319931	2,285.16
ULTRA SCIENTIFIC	4/21/11		319932	3,025.76
UNDERGROUND SERVICE ALERT OF	4/21/11		319933	738.00
UNITED STATES POST OFFICE	4/21/11		319934	73.32
UNIVAR USA INC	4/21/11		319935	9,589.14
US BANK NAT'L ASSOC N.DAKOTA	4/21/11		319936	83,939.91
US PEROXIDE, LLC	4/21/11		319937	28,543.95
VCI TELCOM INC	4/21/11		319938	3,494.00
VERIZON CALIFORNIA INC	4/21/11		319939	295.48
VPSI INC	4/21/11		319940	7,288.00
VULCAN MATERIALS COMPANY	4/21/11		319941	1,221.23
VWR INTERNATIONAL, LLC	4/21/11		319942	479.46
WASTE MGMT OF ORANGE COUNTY	4/21/11		319943	2,249.65
WATER ENVIRONMENT FEDERATION	4/21/11		319944	220.00
WATEREUSE FOUNDATION	4/21/11		319945	12,000.00
WAXIE SANITARY SUPPLY	4/21/11		319946	1,799.02
WECK LABORATORIES INC	4/21/11		319947	960.00
WEST COAST SAFETY SUPPLY INC	4/21/11		319948	4,258.19
WILLIAMS, TWYLA	4/21/11		319949	788.50
WIRELESS WATCHDOGS LLC	4/21/11		319950	56.48
WORKFLOWONE	4/21/11		319951	2,319.32
WORKPLACE RESOURCE	4/21/11		319952	61.77
WORKPLACE SOLUTIONS, LLC	4/21/11		319953	312.75
ZEBRON CONTRACTING INC	4/21/11		319954	5,300.00
ZENON ENVIRONMENTAL CORP.	4/21/11		319955	43,500.00
A/P Check Total				10,627,872.64
YORK INSURANCE SERVICES GROUP	4/04/11		9040411	4,218.17
YORK INSURANCE SERVICES GROUP	4/11/11		9041111	8,273.27
Workers Compensation Total				12,491.44
OCCAPA	6/17/10	4/21/11	311997	35.00-
SARRAF, MAJID	10/21/10	4/21/11	315347	109.20-
FU YUMAY	11/11/10	4/21/11	315711	32.60-
HASSANEIN ROUKAYA	11/11/10	4/21/11	315712	37.10-
ARNETT, TRACEY	11/11/10	4/21/11	315734	40.00-
TIC-IPG-COMMON	11/18/10	4/21/11	315892	148.83-
TIC-RETAIL PROPERTIES	11/18/10	4/21/11	315893	1,514.03-
TIC-SPECTRUM OFFICE	11/18/10	4/21/11	315894	59.80-
SHI, CHARLES	11/18/10	4/21/11	316034	24.65-
LIN WENDY	12/02/10	4/21/11	316219	45.70-
MILAN REI IV, LLC	12/02/10	4/04/11	316222	132.85-
PAREKH, KATEN	12/02/10	4/21/11	316322	39.07-
DEERFIELD APTS	12/09/10	4/21/11	316382	1,636.59-
SMITH TONY	12/09/10	4/21/11	316399	14.00-
TIC-OFFICE PROPERTIES	12/09/10	4/21/11	316400	340.22-
TIC-RETAIL PROPERTIES	12/09/10	4/21/11	316401	3,615.99-

### IRVINE RANCH WATER DISTRICT

Accounts Payable Report to Treasury  
Acct'g Period 2011/10 Ended 4/30/2011

Vendor Name	Issued	Voided	Check#	Check Amount
VILLA SIENNA APTS	12/09/10	4/21/11	316406	160.88-
PHAM LYNDA	12/16/10	4/21/11	316571	15.94-
SARNA, RAMAN	12/16/10	4/21/11	316734	30.00-
HARVARD COURT APTS	12/30/10	4/21/11	316851	1,626.04-
RAO SHAILA	12/30/10	4/21/11	316872	33.76-
TIC-IPG-COMMON	12/30/10	4/21/11	316884	102.51-
TIC-IPG-COMMON	12/30/10	4/21/11	316885	54.67-
VESTAR	12/30/10	4/21/11	317031	21.45-
NOWE DAVID	1/13/11	4/21/11	317219	47.67-
MORRISON BAIRD, RANDY	1/13/11	4/21/11	317314	19.76-
SS MECHANICAL CORPORATION	3/24/11	4/01/11	318935	3,966.44-
RBF CONSULTING	3/24/11	4/01/11	319068	384,341.84-
JOSEPH JUDY	3/31/11	4/13/11	319131	182.87-
SOUTH COAST AIR QUALITY	3/31/11	4/20/11	319149	229.32-
LAKE FOREST, CITY OF	4/14/11	4/18/11	319577	174,030.80-
Total Voids				572,689.58-
ORANGE COUNTY SANITATION	4/21/11		319855	
A/P Corrections/Adjustments				
Report Total				<u><u>10,067,674.50</u></u>

Report Includes Checks numbers from 319297 to 319955

*Reviewed by*  
*[Signature]*  
*May - 01 2011*

May 23, 2011

Prepared and Submitted by: Various

Approved by: Paul Jones



CONSENT CALENDAR

STRATEGIC MEASURES DASHBOARDS

SUMMARY:

Provided as Exhibits "A", "B", "and C" are the Strategic Measures Dashboards and informational items for Board review.

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE STRATEGIC MEASURES DASHBOARDS AND INFORMATION ITEMS.

EXHIBITS:

Exhibit "A" – Strategic Measures Dashboards

Exhibit "B" – Dyer Road Wellfield Status

Exhibit "C" – Reservoir Data

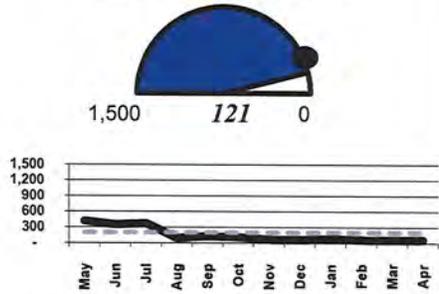
**IRVINE RANCH WATER DISTRICT**  
**STRATEGIC MEASURES DASHBOARD**

Exhibit "A"

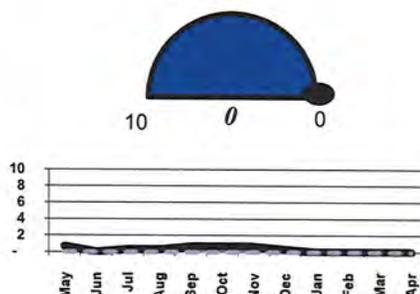
April 2011

**Note: The more blue area displayed on the dial, the more favorable the measure.**

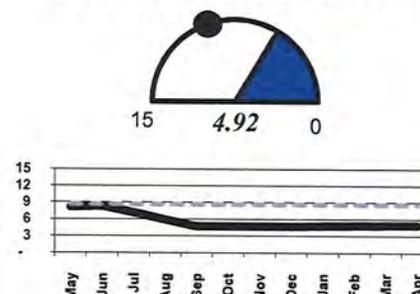
**Reliability-Potable/Nonpotable**  
 Target = 200 customer hours out of service this month



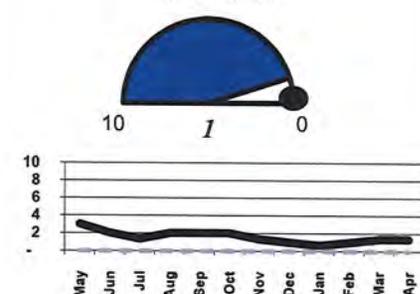
**Sewer Spills**  
 Target = 0 Spills this month



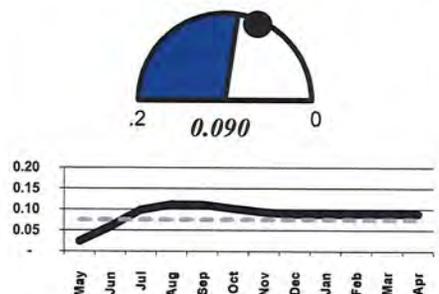
**OCSD CORF Flows**  
 Target = 8.80 MGD  
 CORF flow to OCSD this month



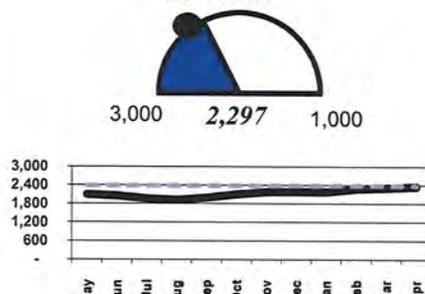
**OSHA Recordables**  
 Target = 0 reportable accidents this month



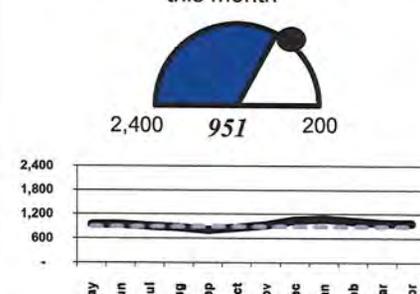
**MWRP Energy Cost per kWh**  
 Target = .0792 cost per kWh this month



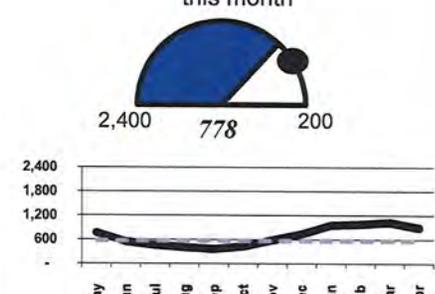
**Wastewater Cost**  
 Target = \$2,014/MG processed this month



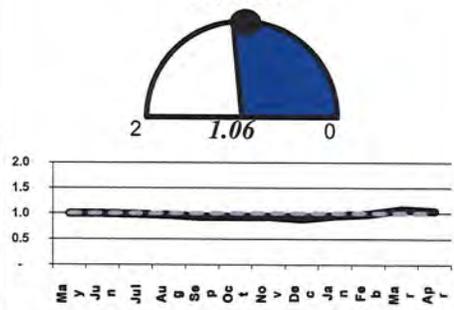
**Water System Cost--Potable**  
 Target = \$898/ac-ft delivered this month



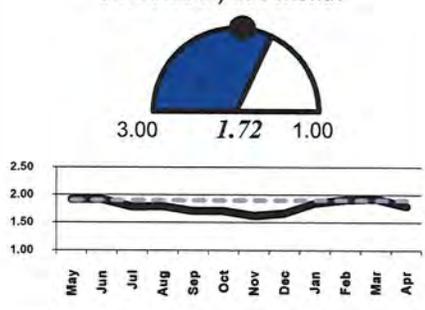
**Water System Cost--Nonpotable**  
 Target = \$565/ac-ft delivered this month



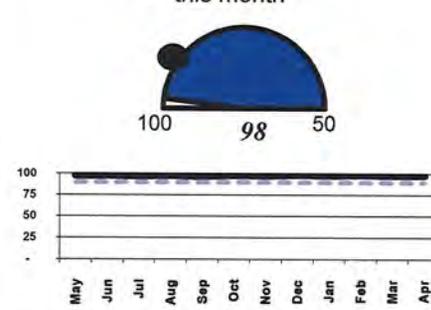
**Enterprise Return**  
 Target = 1.0 (net income/goal) last month



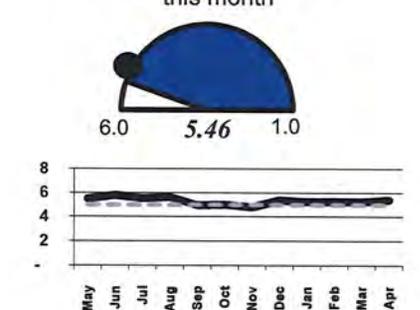
**Overhead Ratio**  
 Target = 1.95 (G&A expenses/direct labor) this month



**Customer Satisfaction**  
 Target = 90% satisfaction this month



**Employee Satisfaction**  
 Target = 5.0 score this month



● Target shown on gauge  
 00.00 Figure for Current Month

----- Target shown on trend graph  
 \_\_\_\_\_ 3-month rolling average

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Reliability-Potable/Nonpotable***

**MONTHLY STATUS REPORT**

Metric Owner: Water Ops

Definition of Measure:

The relative magnitude of system outages due to failures or scheduled maintenance for Potable and Non Potable Water.

Method:

Summation of the time any part of the system was out of service times the number of customers affected by the given outage during the month.

Data Collection

Data was derived from the CSR database for customer based reports of "no water" and from the work order database for scheduled maintenance requiring the shut down of water service during repairs.

Current Issues

1. None

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	1,026.25		<i>Thru:</i> April 2011
June 2010	0		<i>Goal:</i> 200.00
July 2010	106.10		
August 2010	184.00		
September 2010	95.80		
October 2010	57.80		
November 2010	65.83		
December 2010	69.17		
January 2011	103.20		
February 2011	20.33		
March 2011	59.22		
April 2011	120.60		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Sewer Spills***

**MONTHLY STATUS REPORT**

Metric Owner: Gregory Springman

Collection System Manager

Definition of Measure:

Number of sewer overflows of any quantity, regardless of cause, in IRWD's sanitary sewer collection system. This does not include spills from private sewers within IRWD's service area. IRWD has no control over private spills and is not responsible for them. However, it should be noted that IRWD will assist the County Health Care Agency in responding to and cleaning up private spills in the interest of the community.

Method:

Total number of IRWD sewer spills

Data Collection

Data is obtained from the California State Water Boards CIWQS data base for reporting SSO's.

Current Issues

1. July 2010 - Newport Coast Lift Station, 12" PVC forcemain failure. 26,725 gals SSO with 5850 gals of wastewater contained and recovered. Caused by pipe structural failure.
2. September 2010 - Irvine, 8" VCP. 100 gals SSO with 100% gals of wastewater contained and recovered. Caused by root intrusion.
3. October 2010 - Irvine, 8" VCP. 200 gals SSO with 100% of wastewater contained and recovered. Caused by root intrusion.

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	0		<i>Thru:</i> April 2011
June 2010	0		<i>Goal:</i> 0
July 2010	1.00		
August 2010	0		
September 2010	1.00		
October 2010	1.00		
November 2010	0		
December 2010	0		
January 2011	0		
February 2011	0		
March 2011	0		
April 2011	0		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***OCSD CORF Flows***

**MONTHLY STATUS REPORT**

Metric Owner: Wayne Posey

Director of Wastewater Operations

Definition of Measure:

Estimated CORF flow for current FY. CORF flow ownership as of the end of FY 2009/2010 was 8.62 MGD.

Method:

IRWD's CORF flow is derived by using the actual Main Street Flume Meter flow and subtracting the MWRP biosolid discharge flow and all non Revenue Area 14 (IRWD) flows tributary to the Main Street Flume meter/MWRP and adding in the San Joaquin Hills Planned Community flow and flow discharges from the Gas Recovery System (Formerly Laidlaw) for the FY four calendar months with the highest flow totals multiplied by three, averaging the result thereof with the same result of the same calculation for the preceding two fiscal years and adding in the current IBC transfer flow.

Note: All of the Newport Coast flows with the exception of the San Joaquin Hills Planned Community and Gas Recovery System flow are excluded from IRWD's CORF flow calculation. The OCSD's 1988 Downcoast Area Agreement only requires for IRWD to provide local wastewater collection service and requires OCSD to provide wastewater regional collection, transmission, treatment and disposal for that area.

Data Collection

The OCSD's Monthly Gallonage Flow Summary Report provides the actual flows used in calculating IRWD's CORF flow. This includes the Main Street Flume Meter actual monthly flow. All non Revenue Area 14 (IRWD) flows that are tributary to the Main Street Flume Meter is adjusted every year based on the results of OCSD's Flow Verification Study. The San Joaquin Hills Planned Community flow is adjusted every year based on the results of IRWD's Flow Verification Study. The Gas Recovery System flow is the actual monthly meter flow. The IBC transfer flow is adjusted every five years based on the results of OCSD's Flow Verification Study.

Current Issues

1. None

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	8.43		<i>Thru:</i> April 2011
June 2010	8.43		<i>Goal:</i> 8.62
July 2010	4.68		
August 2010	4.68		
September 2010	4.69		
October 2010	4.68		
November 2010	4.70		
December 2010	4.78		
January 2011	4.91		
February 2011	4.92		
March 2011	4.92		
April 2011	4.92		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***OSHA Recordables***

**MONTHLY STATUS REPORT**

Metric Owner: Ken Erwin

District Safety & Security Manager

Definition of Measure:

OSHA Recordables are a monthly measure of injuries and illnesses that occurred and must be entered on the OSHA 300 (Log of Work Related Injuries and Illnesses), in conformance with OSHA requirements. This measure is standardized not only in the water/wastewater industry, but throughout industries nationwide.

Method:

OSHA Recordables = Number of OSHA Recordable cases occurring during the subject month.

Data Collection

All injuries/illnesses and near-misses are reported to the District Safety & Security Manager immediately when they occur. All are investigated and cases meeting the recordable definition are logged. This measure simply reports the number of accidents whose occurrence date is within the calendar month.

Current Issues

1. Executive Assistant GM office, bilateral wrist/forearm tendinitis, bilateral strain.

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	0		<i>Thru:</i> April 2011
June 2010	2.00		<i>Goal:</i> 0
July 2010	2.00		
August 2010	2.00		
September 2010	2.00		
October 2010	2.00		
November 2010	0		
December 2010	1.00		
January 2011	1.00		
February 2011	1.00		
March 2011	2.00		
April 2011	1.00		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***MWRP Energy Cost per kWh***

**MONTHLY STATUS REPORT**

Metric Owner: Wayne Posey

Director of Wastewater Operations

Definition of Measure:

Actual MWRP Cost per kWh used at MWRP with new generating facility.

Method:

MWRP cost per kWh is calculated by the monthly total energy purchased from imported SCE electricity, purchased natural gas for the generators from Coral Energy, and SCG natural gas transportation charge divided by the total monthly kWh generated and imported from SCE. We then add in actual maintenance costs, including g/a.

Data Collection

Data collected from actual monthly SCE, Coral Energy and SCG Invoices. Total kWh is collected from the two generator kWh meters and SCE main electric meter.

Current Issues

1. Information not available.

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	.07		<i>Thru:</i> April 2011
June 2010	.11		<i>Goal:</i> .08
July 2010	.12		
August 2010	.11		
September 2010	.10		
October 2010	.09		
November 2010	.09		
December 2010	.09		
January 2011	.09		
February 2011	.09		
March 2011	.09		
April 2011	Not available		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Wastewater Cost***

**MONTHLY STATUS REPORT**

Metric Owner: Wayne Posey

Director of Wastewater Operations

Definition of Measure:

Total cost of collection and treatment (primary, secondary, and solids disposal) of wastewater, on a unit basis (\$/million gallons) for this month.

Method:

( MWRP cost of collections(G/L #530) + MWRP cost of treatment(G/L #551,552,565) + OCSD cost(G/L #535,555) + SMWD cost(G/L #531,556) ) divided by the total sewage flows emanating from OCSD District #14 (Includes MWRP flow + OCSD flow + SMWD flow)

Data Collection

Data used for this measure are collected from the general ledger and from Orange County Sanitation District (OCSD) and Santa Margarita Water District (SMWD) staff. Costs and flows from OCSD District #7 are not included in the calculation.

Current Issues

1. None

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	2,096.00	2,014.00	<i>Thru:</i> April 2011
June 2010	1,962.00	2,017.00	<i>Goal:</i> 2,014.00
July 2010	1,821.00	2,340.00	
August 2010	1,982.00	2,339.00	
September 2010	2,169.00	2,362.00	
October 2010	2,167.00	2,356.00	
November 2010	2,206.00	2,363.00	
December 2010	2,183.00	2,358.00	
January 2011	2,155.00	2,355.00	
February 2011	2,492.00	2,380.00	
March 2011	2,277.00	2,375.00	
April 2011	2,297.00	2,378.00	

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Water System Cost--Potable***

**MONTHLY STATUS REPORT**

Metric Owner: Denise To-Nguyen

Accountant

Definition of Measure:

Total cost of potable water delivered to IRWD's customers this month, on a unit basis (\$/acre-foot). These monthly costs can vary greatly due to variation in water sales and power cost billing cycles. Thus, monthly expenses do not match up with their corresponding water sales.

Method:

Sum of all potable water costs accrued this month divided by the quantity of potable water sold this month.

Data Collection

Potable water costs collected from current month general ledger. This cost includes labor, power, distribution, and other costs. The quantity of water sold is collected from the Water Usage Variance Report, which summarizes metered water sales. Wide fluctuations in this measure may occur due to the billing delays for such expenses as electrical power (ie, bills are not paid in the same month as the water is sold).

Current Issues

1. None

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	988.17	839.59	<i>Thru:</i> April 2011
June 2010	1,018.23	870.57	<i>Goal:</i> 898.00
July 2010	701.23	880.40	
August 2010	906.37	814.86	
September 2010	834.75	837.90	
October 2010	857.34	868.51	
November 2010	1,109.19	862.36	
December 2010	1,172.08	878.12	
January 2011	957.53	902.95	
February 2011	937.62	903.89	
March 2011	1,031.46	897.43	
April 2011	951.24	873.74	

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Water System Cost--Nonpotable***

**MONTHLY STATUS REPORT**

Metric Owner: Denise To-Nguyen

Accountant

Definition of Measure:

Total cost of nonpotable water delivered to IRWD's customer this month, on a unit basis (\$/acre-foot). These monthly costs can vary greatly due to variation in water sales and power cost billing cycles. Thus, monthly expenses do not match up with their corresponding water sales.

Method:

Sum of all nonpotable water costs accrued this month divided by the quantity of nonpotable water sold this month.

Data Collection

Nonpotable water costs collected from current month general ledger. This cost includes labor, power, distribution, and other costs related to tertiary treatment and reclaimed water distribution. The quantity of water sold is collected from the Water Usage Variance Report, which summarizes metered water sales. Wide fluctuations in this measure may occur due to the billing delays for such expenses as electrical power (ie, bills are not paid in the same month as the water is sold).

Current Issues

1. None

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	535.78	546.32	<i>Thru:</i> April 2011
June 2010	510.12	604.98	<i>Goal:</i> 707.00
July 2010	326.47	383.34	
August 2010	376.24	397.83	
September 2010	393.78	405.18	
October 2010	508.51	473.71	
November 2010	840.22	547.10	
December 2010	854.69	597.27	
January 2011	1,186.35	722.95	
February 2011	905.02	607.02	
March 2011	1,000.90	707.32	
April 2011	777.61	563.92	

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Enterprise Return***

**MONTHLY STATUS REPORT**

Metric Owner: Jayne George

Debt and Investment Analyst

Definition of Measure:

This is a monthly measure of performance by IRWD's various enterprise activities, including residential and commercial real estate, Strawberry Farms Golf Course, and wireless communications leases.

Method:

Enterprise Return = Actual Net Income/Budgeted Net Income x 100

Data Collection

The various enterprise activities generate revenues and expenses at different frequencies through the year. Except for the real estate projects, the enterprise projects are primarily revenue generating activities with relatively little associated expenses. The measure reflects a comparison between the actual and budgeted net income of the various projects on a monthly basis.

Current Issues

1. The April measure is above budget at 1.06. The two apartment complexes posted very good returns; however, Waterworks Way & 230 Commerce are under budget & the return for the Wireless Communications was under budget this month.

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	.99		<i>Thru:</i> April 2011
June 2010	1.01		<i>Goal:</i> 1.00
July 2010	.97		
August 2010	.93		
September 2010	.89		
October 2010	.98		
November 2010	.94		
December 2010	.76		
January 2011	1.17		
February 2011	1.04		
March 2011	1.02		
April 2011	1.06		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Overhead Ratio***

**MONTHLY STATUS REPORT**

Metric Owner: Jessica Craig

Accountant

Definition of Measure:

Overhead Ratio is a measure of general and administrative (G&A) overhead expenses compared to direct labor expenses.

Method:

Ratio of total G&A expenses to total direct labor (including regular and overtime wages).

Data Collection

G&A expenses are summarized from the general ledger and include all costs incurred that are not directly accounted to mission-critical work (charged to g/l #792). Direct labor expenses are the hourly staff charges accounted to mission-critical work (generally charged to expense codes #110 and #120). Benefits are considered G&A, not direct labor expenses.

Current Issues

1. The current month actual G&A rate is 1.72 which is lower than the projected rate of 1.95. The YTD G&A rate is 1.75, which brings the over applied G&A to \$2,574,635.46

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	1.75		<i>Thru:</i> April 2011
June 2010	1.99		<i>Goal:</i> 1.90
July 2010	1.59		
August 2010	1.79		
September 2010	1.73		
October 2010	1.58		
November 2010	1.54		
December 2010	1.87		
January 2011	2.13		
February 2011	1.72		
March 2011	1.92		
April 2011	1.72		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

*Customer Satisfaction*

**MONTHLY STATUS REPORT**

Metric Owner: Gina Jackson

Customer Service Manager

Definition of Measure:

Customer Satisfaction is measured by IRWD's Customer Satisfaction Index. The index is measured by sending surveys to a statistically-significant, random selection of customers that have called IRWD for some type of service. Services range from answering questions about water conservation or billing to repairing a sewer blockage in the street. The surveys allow the customer to rate IRWD's response to their request in eight categories. Each category is rated from 1 to 5, with 1 indicating the highest level of satisfaction. A total score of 100 indicates the highest level of satisfaction in all eight categories. The scores of all responses in the subject month are a weighted average for the monthly index figure.

Method:

Data Collection

Surveys are mailed at the end of each work week for the customer requests completed that week. The monthly index reflects the surveys received within the subject month.

Current Issues

1. Total Overall Satisfaction: 98%  
Satisfaction: 98%  
Timely: 97%  
Phone: 98%  
Field Contact: 98%

**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> May 2010
May 2010	97.00		<i>Thru:</i> April 2011
June 2010	100.00		<i>Goal:</i> 90.00
July 2010	95.00		
August 2010	100.00		
September 2010	96.00		
October 2010	100.00		
November 2010	98.00		
December 2010	99.00		
January 2011	98.00		
February 2011	100.00		
March 2011	97.00		
April 2011	98.00		

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Employee Satisfaction***

**MONTHLY STATUS REPORT**

Metric Owner: Gretchen Maswadeh

Human Resources Manager

Definition of Measure:

Level of employee satisfaction with employment at IRWD.

Method:

Average of all scores on surveys for performance evaluations presented this month

Data Collection

A survey is sent to each employee receiving a performance evaluation this month. The survey simply asks the employee to rate his/her overall employment satisfaction on a scale of 1 to 6 (1 being very dissatisfied and 6 being very satisfied). The ratings are compiled and averaged by Human Resources.

Current Issues

1. 13 surveys were returned of 34 surveys sent (38%). 11 of 13 respondents (85%) rated satisfaction as 5 or 6 on a scale of 1 to 6. In the 12 month period ending April 2011, 117 surveys have been returned of 294 surveys sent (40%). 104 of 117 respondents (89%) rated satisfaction as 5 or 6 on a scale of 1 to 6. 12 month average rating is 5.29%.

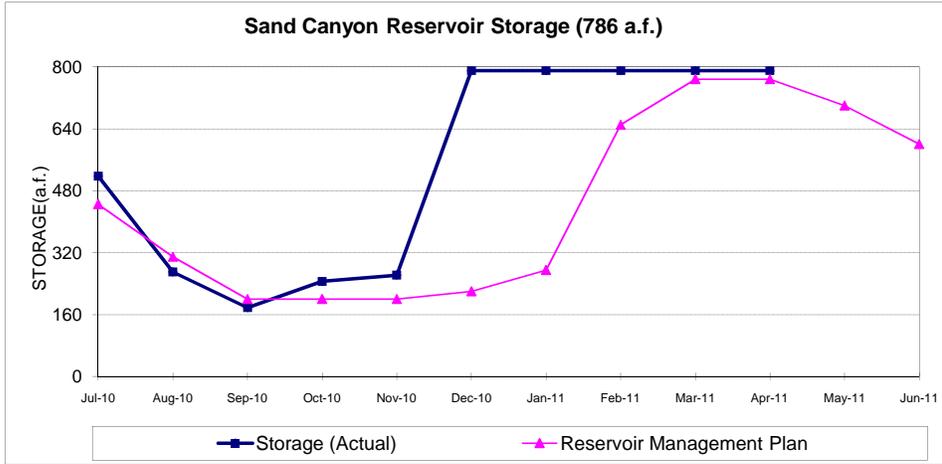
**MONTHLY DATA**

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<b>From:</b> May 2010
May 2010	5.50		<b>Thru:</b> April 2011
June 2010	5.89		<b>Goal:</b> 5.00
July 2010	5.23		
August 2010	5.75		
September 2010	3.86		
October 2010	5.38		
November 2010	5.13		
December 2010	5.56		
January 2011	5.00		
February 2011	5.20		
March 2011	5.50		
April 2011	5.46		

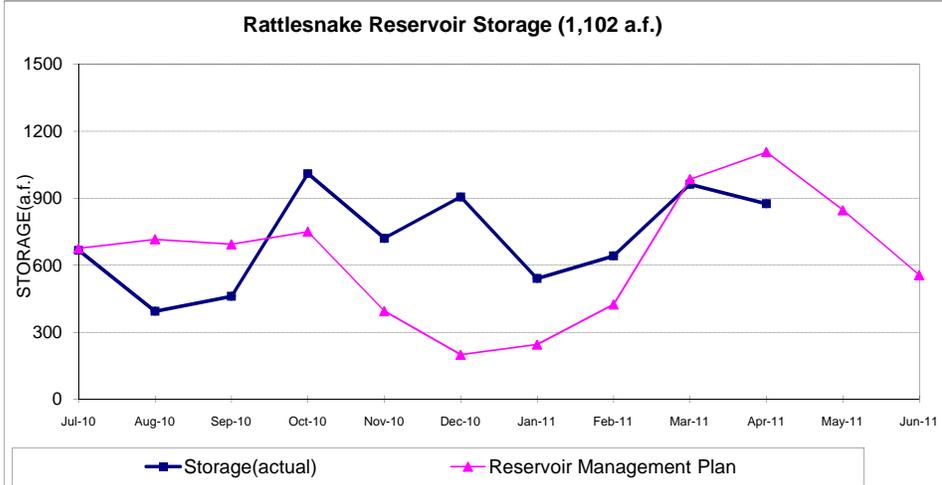
## EXHIBIT "B"

DYER ROAD WELL FIELD STATUS							Apr-2011
Well Number	Production Mo./YTD	Ref. Point Elevation	Depth to Water 4/30/2011	Water Level-MSL	Depth of Bowls	Bowl Setting-MSL	Feet of Water Above Intake
1	57.5 AF 397.4 AF	34	N/A	N/A	270	-236	N/A
				Static			
2	163.1 AF 1,215.3 AF	37	176	-140	270	-234	94
				pumping			
3	0.0 AF 1.8 AF	55	110	-55	215	-160	105
				Static			
4	101.1 AF 949.4 AF	38	153	-115	216	-178	63
				pumping			
5	205.7 AF 920.5 AF	48	248	-200	290	-242	42
				pumping			
6	105.7 AF 426.8 AF	43	146	-103	250	-207	104
				pumping			
7	117.8 AF 633.3 AF	40	228	-188	290	-250	62
				pumping			
C-8 DATS	388.9 AF 3,312.7 AF	37	142	-105	305	-268	163
				pumping			
C-9 DATS	290.8 AF 2,486.0 AF	23	141	-118	305	-282	164
				pumping			
10	333.9 AF 2,254.3 AF	47	173	-126	250	-203	77
				pumping			
11	125.8 AF 627.0 AF	40	122	-82	300	-260	178
				pumping			
12	168.2 AF 1,164.4 AF	51	173	-122	300	-249	127
				pumping			
13	32.3 AF 295.7 AF	40	119	-79	300	-260	181
				Static			
14	142.2 AF 618.3 AF	47	186	-139	311	-264	125
				Static			
15	368.8 AF 2,436.4 AF	44	175	-131	300	-256	125
				pumping			
16	121.2 AF 532.2 AF	47	121	-74	280	-233	159
				Static			
17	271.7 AF 1,860.5 AF	52	182	-131	250	-199	68
				pumping			
18	108.6 AF 943.0 AF	45	221	-176	300	-255	79
				pumping			
Clear production:	2,423.6 AF for the month						
FYTD:	15,276.3 AF						
DATS production:	679.7 AF for the month						
FYTD:	5,798.6 AF						

**RESERVOIR DATA FY 10-11**

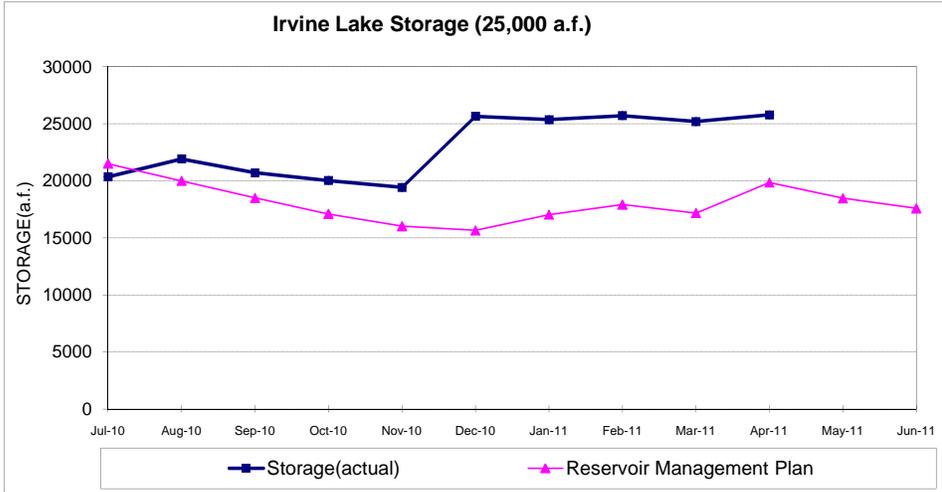


Storage will be under 200 AF by October 1 as required by Regional Board permit. Sand Canyon is currently overflowing.

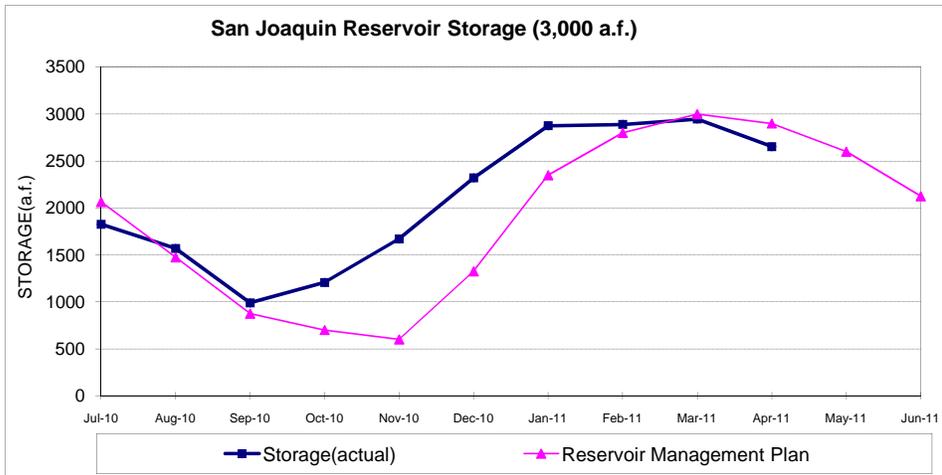


Rattlesnake storage is on track after responding to storms in December and January.

**RESERVOIR DATA FY 10-11**



Irvine Lake is not spilling due to the installation of the flash boards April 1st.



All Lake Forest reclaimed demand is being supplied from the East Irvine Zone B system. San Joaquin's drawdown was less than planned due to early rainfall in October.

May 23, 2011

Prepared by: S. Malloy/P. Uematsu/  
M. Cortez

Submitted by: K. Burton

Approved by: Paul Jones

*[Handwritten signatures and initials: S. Malloy, P. Uematsu, M. Cortez, K.B., Paul Jones]*

CONSENT CALENDAR

UPCOMING PROJECTS STATUS REPORT

SUMMARY:

A status report of Irvine Ranch Water District's Upcoming Projects is presented to the Committee for information.

BACKGROUND:

The information, which is attached as Exhibit "A", is a status report submitted quarterly to the Committee and Board for their review.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 18, 2011.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

Exhibit "A" – Upcoming Projects Status Report

# Exhibit "A"

## IRWD UPCOMING PROJECT STATUS REPORT

Project Name	Planning	Start	Construction	Construction
	Start	Design	Award	Final Acceptance
East Irvine Zone 3 Reservoirs Photovoltaic Systems			Summer 2010	Spring 2011
LAWRP Landscaping			Spring 2011	Summer 2011
Facility Fire Protection Improvements - DW PS Roof Replacements				Spring 2011
Lake Forest Woods Area Sewer Rehabilitation				Summer 2011
Reservoir Recycled Water Dechlorination Stations				Spring 2011
RMS at 5 DW Reservoirs	Winter 2012			
Newport Blvd. (SAH) Waterline Relocation			Summer 2011	Summer 2012
Trabuco Road Bridge DW and RW Upsizing			Summer 2011	Winter 2012
Newport Coast Catholic Protection				Spring 2011
Operations Center Expansion - Mezzanine Conversion			Spring 2011	Spring 2012
Santiago Dam and Outlet Tower Seismic Stability Study	On-going			
SCWD BPS Generators/Walls			Summer 2011	Summer 2012
University Drive Pipelines Cathodic Protection			Fall 2011	Summer 2012
Alton Parkway, Commercentre to Towne Centre (City)				Spring 2012
Alton Parkway, Irvine Boulevard to Commercentre (County)				Spring 2012
16-inch ZC Relocation Lake Forest Glass Creek Sports Park (RA w/ LF)		Spring 2011	Spring 2012	Spring 2013
Barranca-Dyer Redhill Widening -Misc Relocations (RA w/ COI)				Spring 2011
Lake Forest Rancho Parkway Extension (RA w/ LF)			Spring 2012	Spring 2013
Modjeska Canyon Relocations Sites 2, 8, 11		Summer 2011		
PA 40 Capital Pipelines DW S RW (RA w/ ICDC)				Summer 2011
PA 40 Capital Pipelines DW & RW, Phase 2 (RA w/ ICDC)		Spring 2011	Summer 2011	Spring 2012
Capital Pump Sta Zone A to B (completion concurrent w/ PA 40 Phz 3)		Fall 2011	Spring 2012	Winter 2013
PA 39 Phase I Capital Pipelines S & RW, (RA w/ ICDC)		Spring 2011	Fall 2011	Spring 2012
PA-18 (Laguna) DW & RW Pipelines (RA w/ ICDC)				Summer 2011
PA-6 PH2 Neighborhood 3 MCAS RW Zone C 12" (RA w/ ICDC)			Summer 2012	Summer 2013
PA-9B Jeffrey Road Zones 3, A, B and C Pipelines			Summer 2012	Summer 2013
MWRP Phase 2 Expansion				Summer 2012
Operations Center Expansion - Dept. 50 Storage Building				Fall 2011
Sand Canyon Reservoir Strainers at MWRP			Spring 2011	Fall 2011
DRWF Well Starters 10 & 16			Summer 2011	Winter 2012
Sand Canyon Headquarters Video Security Installation				Summer 2011
Lake Forest (LAWD) PLC Replacement and Control System Upgrades			Winter 2012	Summer 2012
Water Operations Transdyn Replacement				Spring 2012
NTS Site 02 & SAMS1			Winter 2011	Fall 2012
OPA 16" Pipeline Replacement				Spring 2012
OPA Phase 3 Modifications - Fire Flow Improvements			Summer 2011	Winter 2012
OPA PRVs, Turnout, and Meads Pump Station Mods			Summer 2011	Winter 2012
Sand Canyon Avenue Grade Separation				Winter 2012



May 23, 2011

Prepared by: K. McLaughlin *KM*

Submitted by: B. Beeman *B. Beeman*

Approved by: Paul Jones *my*

## CONSENT CALENDAR

### 2011 STATE LEGISLATIVE UPDATE

#### SUMMARY:

This report provides an update on state legislation of interest to IRWD including IRWD-sponsored legislation. A copy of the 2011 State Legislative Matrix is attached as Exhibit "A".

Staff recommends that the Board consider the following positions:

- AB 134 (Dickenson): Sac Regional Sanitation District (as amended April 15) – OPPOSE
- AB 403 (Campos): Chromium 6 – WATCH
- AB 506 (Wiecowski): Local government; bankruptcy – OPPOSE
- AB 964 (Huffman): State revolving fund; onsite sewer projects – SUPPORT
- SB 474 (Evans): Contracts; indemnity – OPPOSE
- SB 46 (Correa): Compensation transparency – OPPOSE UNLESS AMENDED

#### BACKGROUND:

Policy committee deadlines were May 6 for fiscal bills and May 13 for non-fiscal bills. Any bills that did not pass their policy committee deadlines are now two-year bills unless they receive rule waivers. Appropriations committee hearings will be held during May in order for bills to meet the appropriations deadline of May 27.

#### IRWD-sponsored Legislation:

*AB 741 (Huffman): Sewer Improvement Financing*

IRWD-sponsored AB 741 (Huffman) passed unanimously in the Assembly Local Government Committee on April 27 and on the Assembly Floor on May 9. The bill will now go to the Senate where it is expected to be assigned to the Senate Governance and Finance Committee, chaired by Senator Wolk. AB 741 continues to receive wide support from throughout the water and wastewater industries as well as support from business, labor and environmental groups.

#### Other 2011 Legislation:

*AB 134 (Dickenson): Sacramento Regional County Sanitation District*

AB 134 (Dickenson), sponsored by the Sacramento Regional County Sanitation District, was significantly amended on April 15, 2011 after Metropolitan Water District of Southern California and Westlands Water District negotiated amendments with Assembly Member Dickenson and Senate President Pro Tem Steinberg. As introduced, SB 134 would have required the State Water Resources Control Board to grant SRCSD an appropriative water right for its discharged

wastewater. As amended, the bill no longer includes the preamble related to the benefits of recycled water, states that the State Board “may” grant SRCSD the appropriative right, and includes additional protections for downstream water users and current water right holders.

As a result of these amendments and the willingness of the author to work with the opposition, much of the original opposition to the bill has been removed. The amendments, as written, now raise questions as to the need for this bill given that SRCSD can apply for these water rights under current law. There are concerns that a removal of opposition by the water industry could be interpreted as an implied “blessing” of SRCSD’s water rights request. In acknowledgement of this concern, some of the letters removing opposition include a specific disclaimer that removal of opposition does not constitute support for the water right request.

While the April 15 amendments do improve the bill, staff recommends that the Board consider maintaining an OPPOSE position on AB 134 (Dickenson).

*AB 403 (Campos): Chromium 6*

Assembly Member Campos introduced AB 403 due to concerns about chromium 6 in her San Jose district. As introduced, this bill would have required the Department of Public Health (DPH) to adopt a drinking water standard for chromium 6 by 2013 and would have defaulted to the Office of Environmental Health Hazard Assessment public health goal as the standard if DPH failed to do so. This approach was met with wide opposition within the water industry because the public health goal process is significantly different than the drinking water standard process. The author was very receptive to feedback and amended AB 403 to delete the default public health goal. Amendments also provide that if the Department of Finance and other state agencies that are required to review or report on the standard adopted by DPH have not done so within 90 days, then DPH may proceed without the review or report.

As amended, AB 403 helps move the establishment of a drinking water standard for chromium 6 forward in a reasonable, science-based method. However, staff does not recommend supporting the legislation because it sets a highly undesirable precedent of the state legislature being directly involved in the establishment of drinking water quality standards. As a result, staff recommends that the Board consider maintaining a WATCH position on AB 403 (Campos).

*AB 506 (Wiecowski) – Local Government: bankruptcy: mediation*

AB 506 (Wiecowski) would require a local government to enter into mediation with interested parties and receive a certificate of good faith participation prior to filing for bankruptcy. The bill would establish a process for mediation to be administered by the California Debt and Investment Advisory Commission. Filing for bankruptcy is never an option local governments consider lightly and is the last option a special district would use. The current system provides a fair and impartial process in which an experienced bankruptcy judge makes the determination that the district or other local entity is, in fact, insolvent and may enter bankruptcy. Adding the additional requirement of mediation is unnecessary and potentially costly to the taxpayers.

Staff recommends the Board consider an OPPOSE position on AB 506 (Wiecowski).

*AB 964 (Huffman): State Water Pollution Control Revolving Fund: Onsite Sewer Projects*

AB 964 (Huffman) would allow for State Water Pollution Control Revolving Fund funding to be used for onsite sewer improvements as long as the local wastewater provider has adopted a 10-year sewer management plan as specified. This bill, which complements the financing approach in IRWD-sponsored AB 741 (Huffman), provides another option for financing of onsite sewer improvements. AB 964 has been thoroughly vetted and supported by members of the California Association Sanitation Agencies and the author has requested that IRWD take a support position. Staff recommends that the Board consider a SUPPORT position on the bill.

*Public Contracting Legislation*

Several bills related to public contracting have been introduced this year. To date, the local government coalition that has been working in opposition to these bills has been very successful.

- AB 249 (Berryhill) related to unlicensed contractors has been made a two-year bill. IRWD has a WATCH position on this bill.
- AB 457(Wagner) related to attorney's fees has been made a two year bill by the author. IRWD does not have a position on this bill.
- AB 1354 (Huber) related to contract retentions has been made a two-year bill by the author. The sponsors, American Subcontractors Association California, have indicated they will try to gut and amend this proposal into another vehicle this year. IRWD has an OPPOSE position on this bill.

SB 474 (Evans) was amended on May 2 to void any provisions in a non-residential construction contract that indemnify, hold harmless or defend another person against actual or claimed liability, damage or expense arising from negligence. As amended, SB 474 shifts liability away from contractors to public agencies by prohibiting a public agency from requiring its private industry partners to indemnify and hold it harmless when a claim implicates an agency. The effect would be to eliminate any indemnity agreements since claims on construction almost always implicate the owner. There is a large local government coalition opposing SB 474. IRWD has opposed previous efforts to shift liability away from contractors toward public agencies in public works projects. Staff recommends that the Board consider an OPPOSE position on SB 474 (Evans).

*Local Government Transparency/Reform Proposals*

Many of the local government transparency and reform bills that were introduced in response to the 2010 City of Bell scandals continue to move through the legislative process with broad support. Approximately 30 local government reform measures have been introduced on topics such as audits and financial reports, compensation disclosure and ethics, public meetings, financial interests and conflicts of interest, and retirement. Most of these bills cleared their first policy committees and continue to move forward in the 2011 legislative session. The attached California Special Districts Association (CSDA) Transparency/Reform Matrix, which is attached as Exhibit "B", provides an overview of these bills. Staff continues to work closely with CSDA

and other industry associations to respond to these measures and provide information to the legislature about how these proposals would impact the delivery of services to their constituents.

*SB 46 (Correa): Public officials: compensation disclosure*

SB 46 would require every person, except for a candidate for public office, who is required or designated to file a statement of economic interest form (a.k.a. Form 700) to include a compensation disclosure form that provides compensation information for the preceding calendar year. SB 46 would require each agency to post on its website the information contained in the compensation disclosure forms and its written policy for the reimbursement expenses. The bill also provides for enforcement mechanisms by allowing a District Attorney or interested person to file suit if an agency or individual does not comply.

In the wake of the City of Bell scandals, the State Controller's Office developed and implemented a process for all local governments to report compensation information to the state. SB 46 is duplicative and could lead to public confusion and additional local agency expense. SB 46 also requires the reporting of reimbursable expenses as part of an individual's compensation. Expenses, like all local government funds, are public money and subject to public disclosure; however, they are not part of an individual's compensation but rather part of the cost of doing business. Agencies' expense reimbursement policies are much more educational to the public than individual expense information. As an aside, Assembly Member Smyth's AB 148 would require the posting of these policies. Finally, there are practical concerns about the implementation of SB 46 as currently written as it would require individuals, rather than the agency, to file their compensation information. This opens the door to additional confusion and errors in the reporting process. Attached as Exhibit "C" is the Senate Governance and Finance Committee's comparison between the current Controller's process and SB 46 (Correa).

CSDA and ACWA have taken positions of OPPOSE unless amended and have requested variations of the following amendments:

- Specify that there is only one compensation disclosure process with the preference being the current Controller's Office process. If improvements are needed, those improvements should be done in a way that builds on the existing Controller's process rather than creating a new, parallel process that may lead to confusion and misinformation.
- Remove the expense reporting requirements from the bill. Expense reimbursements should not be included in any compensation disclosure report as they are part of the cost of doing business and not a form of compensation.

Staff recommends that the Board consider an OPPOSE UNLESS AMENDED position on SB 46 (Correa) with the amendments outlined above.

*Two-year Bills*

There are a number of bills of interest to IRWD that have been made two-year bills. These bills will no longer move in the 2011 session and will be eligible to be brought up in the second year of the current two-year session, should the author choose to do so. These bills include:

- AB 19 (Fong) requiring metering or sub-metering in new multi-family residential construction.
- AB 83 (Jeffries) providing CEQA exemptions for specified recycled water pipeline projects.
- AB 157 (Jeffries) reducing the total amount of bonds authorized in 2012 water bond by 25 percent. IRWD has an OPPOSE position on AB 157.
- AB 262 (Harkey) changing the regional board boundaries to include South Orange County in the Santa Ana Region.
- AB 550 (Huber) requiring legislative approval prior to the development of an alternative conveyance system in the Delta. IRWD has an OPPOSE position AB 550.
- AB 576 (Dickenson) related to Delta Plan financing.
- AB 1048 (Harkey) related to fluoride and recycled water. The sponsor, San Diego County Water Authority, has pulled this bill in order to address its concerns administratively.
- SB 31 (Correa) requiring the creation of local lobbying commissions.
- SB 34 (Simitian) and SB 571 (Wolk): related to the establishment of a public goods charge on water. Both bills have been held in the Senate Appropriations Committee and the authors have committed to conducting stakeholder workgroup meetings going forward. IRWD has an OPPOSE position on SB 34.
- SB 200 (Wolk) related to the Bay Delta Conservation Plan. IRWD has an OPPOSE position on SB 200.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS

This item was reviewed at the Water Resources Policy and Communications Committee on May 17, 2011.

RECOMMENDATION:

THAT THE BOARD TAKE A WATCH POSITION ON AB 403 (CAMPOS), AND TAKE A SUPPORT POSITION ON AB 964 (HUFFMAN), AN OPPOSE UNLESS AMENDED POSITION ON SB 46 (CORREA), AND AN OPPOSE POSITION ON THE APRIL 15, 2011 AMENDMENTS TO AB 134 (DICKENSON), AB 506 (WIECOWSKI), AND SB 474 (EVANS).

LIST OF EXHIBITS:

Exhibit "A" – 2011 IRWD Legislative Matrix

Exhibit "B" – CSDA Matrix of Transparency bills, updated April 29, 2011

Exhibit "C" – Senate Governance and Finance Committee comparison between the Controller's transparency efforts and SB 46 (Correa)

**EXHIBIT "A"**

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>AB 19</b> Fong (D)	Building Standards: Water Meters: Multiunit Structures		Requires a water purveyor providing water service to a newly constructed multiunit residential structure or mixed-use residential and commercial structure, including a structure that is part of a common interest development, that submits and application for a water connection after a specified date, to require the installation of the meter or submeter to measure water to each unit as a condition of new water service. Requires the submeter to meet specified requirements. Relates to billing and disclosure.	04/27/2011 - In ASSEMBLY Committee on HOUSING AND COMMUNITY DEVELOPMENT: Reconsideration granted.
<b>AB 23</b> Smyth (R)	Local Agency Meetings: Compensation Disclosure		Amends the Ralph M. Brown Act which requires each legislative body of a local agency to provide the time and place for holding regular meetings. Authorizes a convened legislative body whose membership constitutes a quorum of any other legislative body to convene a meeting of the second legislative body, simultaneously or in serial order, only if a clerk or member announces the amount of compensation or stipend that each member will receive as a result of convening the simultaneous or serial meetings.	05/02/2011 - In ASSEMBLY. Read second time. To third reading.
<b>AB 54</b> Solorio (D)	Drinking Water		Requires a mutual water company to submit a service boundary map. Relates to service boundary expansion. Allows the Department of Public Health to issue a letter of no prejudice to a public water system that is a lead applicant for a project that may be funded by the Safe Drinking Water Revolving Fund. Makes expenditures related to the project reimbursable. Authorizes a local agency formation commission to review and approve or disapprove the consolidation of territory within a mutual water company.	04/26/2011 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.
<b>AB 83</b> Jeffries (R)	Environment: CEQA Exemption: Recycled Water Pipeline		Amends existing law regarding California Environmental Quality Act environmental impact reports. Exempts a project for the installation of a new pipeline for the distribution of recycled water within an improved public street, highway, or right-of-way.	04/11/2011 - In ASM Com on NAT RES: Failed passage 04/11/2011 - In ASM Com on NAT RES: Reconsideration granted.
<b>AB 134</b> Dickinson (D)	Sacramento Regional County Sanitation District	Oppose	Authorizes the SRCSD to file an application for a permit to appropriate a specified amount of water that is based on the volume of treated wastewater that the district discharges into the Sacramento River and recovers for reuse. Authorizes the SWRCB to grant a permit to appropriate that treated wastewater upon terms and conditions determined by the board. Requires the board to comply with specified related requirements.	04/26/2011 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>AB 148</b> Smyth (R)	Local Government: Ethics Training: Disclosure	Watch	Defines the term ethics laws, for purposes of training for officers and employees of a local government, to include compensation setting guidelines as established by specified organizations. Requires the local agency to post the ethics training records of all elected members on the local agency's Internet Web site, if any, and to submit a copy of the records to the Controller. Requires a local agency that has adopted a written attendance compensation policy to post the policy on the local agency's Web site.	04/27/2011 - From ASSEMBLY Committee on LOCAL GOVERNMENT: Do pass to Committee on APPROPRIATIONS.
<b>AB 157</b> Jeffries (R)	Safe, Clean and Reliable Drinking Water Supply Act	Oppose	Reduces the total amount of bonds authorized to be issued pursuant to the Safe, Clean and Reliable Drinking Water Supply Act of 2012. Makes conforming reductions to amounts specified to be allocated from these bond funds for certain purposes.	02/24/2011 - To ASSEMBLY Committees on WATER, PARKS AND WILDLIFE and ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<b>AB 246</b> Wieckowski (D)	Water Quality: Enforcement	Oppose	Authorizes a regional water quality control board to delegate to its executive officer the authority to apply for judicial enforcement to the Attorney General, a district attorney, a city attorney of a city with a population that exceeds 750,000, or a city attorney for a city and county. Authorizes a district attorney, a city attorney of a city with a specified population to bring civil actions under the Porter-Cologne Water Quality Act and only upon approval of the Attorney General.	04/26/2011 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.
<b>AB 249</b> Berryhill B (R)	Contractors		Limits the action for recovery of compensation paid to services for the construction or improvement of residential property. Authorizes a person who utilizes the services of a contractor for the construction or improvement of property other than specified residential property to bring an action in any court of competent jurisdiction in this state to recover all compensation paid to the contractor for performance of any act or contract during the time the contractor was not properly licensed.	04/04/2011 - From ASM Committee on BUS, PROFESSIONS & CONSUMER PROTECTION with author's amendments. 04/04/2011 - In ASM Read second time and amended. Re-referred to Committee on BUS, PROFESSIONS & CONSUMER PROTECTION.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>AB 262</b> Harkey (R)	California Regional Water Quality Control Boards	Watch	Revises the description of the boundaries of the Santa Ana Regional Water Quality Control Board and the San Diego Regional Water Quality Control Board.	02/18/2011 - To ASM Committee on ENV SAF AND TOX MAT.
<b>AB 275</b> Solorio (D)	Rainwater Capture Act of 2011		Enacts the Rainwater Capture Act of 2011. Authorizes residential, commercial, and governmental landowners to install, maintain, and operate rain barrel systems and rainwater capture systems for specified purposes, provided that the systems comply with specified requirements. Authorizes a landscape contractor to enter into a prime contract for the construction of a rainwater capture system if the system is used for landscape irrigation. Authorizes certain contractors to design and install all exterior parts.	05/02/2011 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<b>AB 392</b> Alejo (D)	Ralph M. Brown Act: Posting Agendas		Requires the legislative body of a local agency, at least 72 hours before a regular meeting of that body, to post the agenda and staff generated reports that relate to an agenda item for the open session of that regular meeting. Requires the legislative body to post the agenda and the writings on its internet web site or in a public location if the body has not web site.	04/27/2011 - From ASSEMBLY Committee on LOCAL GOV: Do pass to Committee on APPROPRIATIONS.
<b>AB 403</b> Campos (D)	Public Drinking Water Standards: Hexavalent Chromium	Watch	Requires the Department of Public Health to establish a primary drinking water standard for hexavalent chromium on or before a specified date. Requires the department to report to the Legislature annually on the progress and any delays caused by other agencies. Authorizes the department to adopt a primary drinking water standard for hexavalent chromium without a required report or review from another state agency after a certain number of days from the date the department requests the report or review.	04/26/2011 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.
<b>AB 457</b> Wagner (R)	Public Works Contracts: Relief for Bidders		Entitles a bidder who successfully challenges the award of a public works contract determined to be invalid due to errors or omissions of the public entity to recover costs and attorney's fees incurred in pursuing the challenge. Allows attorney's fees and costs to be awarded to the public entity under specified circumstances.	05/03/2011 - In ASM Committee on BUS, PROFESSIONS & CONSUMER PROTECTION: Not heard.
<b>AB 550</b> Huber (D)	Sacramento-San Joaquin Delta: Peripheral Canal	Oppose	Prohibits the construction of a peripheral canal that conveys water from a diversion point in the Sacramento River to a location south of the Sacramento-San Joaquin Delta, unless expressly authorized by the Legislature. Requires the Legislative Analyst's Office to complete an economic feasibility analysis prior to the enactment of a statute authorizing the construction of a peripheral canal. Prohibits the construction and operation of a peripheral canal from diminishing water quality.	03/25/2011 - To ASSEMBLY Committees on WATER, PARKS AND WILDLIFE and APPROPRIATIONS.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>AB 576</b> Dickinson (D)	Delta Plan: Financing		Requires the Delta Stewardship Council to develop a long-term finance plan to pay for the costs of implementing the Delta Plan by a specified date. Prohibits the council from adopting new fees for these purposes unless authorized by statute. Authorizes the council, before adopting and collecting long-term revenue sources, to seek to obtain early funding contributions from entities that may benefit from implementation of the Plan and to track those contributions.	03/31/2011 - From ASM Committee on WPW with author's amendments. 03/31/2011 - In ASM. Read second time and amended. Re-referred to Committee on WPW.
<b>AB 741</b> Huffman (D)	Onsite Wastewater Disposal Conversion	Sponsor	Amends an existing law authorizing an owner of property included within an assessment district for construction of a main trunkline or collector sewer lines to request the governing board to construct plumbing to connect his or her property to the adjoining public sewer system. Authorize defined entities, to use this provision for the purpose of converting properties from onsite septic systems and connecting them to the sewer system and for replacing or repairing existing sewer laterals.	05/02/2011 - In ASSEMBLY. Read second time. To third reading.
<b>AB 849</b> Gatto (D)	Water: Use Efficiency: Graywater Building Standards		Repeals the authority of a city, county, or other local agency to adopt building standards that prohibit entirely the use of graywater. Requires that an ordinance enacted pursuant to this authority must include the local climatic, geological, topographical, or any other conditions requiring the more restrictive building standards.	05/02/2011 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on LOCAL GOVERNMENT.
<b>AB 938</b> Perez V (D)	Public Water Systems		Amends existing law that establishes the Safe Drinking Water State Revolving Fund and requires total funding of a single project, to be determined by an assessment of affordability. Adds environmental documentation to the costs of a single project that is required to determine by an assessment of affordability. Requires that written public notice given by a public water system be in various languages. Establishes a presumption of compliance by the utilization of specified data.	04/26/2011 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass as amended to Committee on APPROPRIATIONS.
<b>AB 964</b> Huffman (D)	State Water Pollution Fund: Onsite Sewer Projects	Watch	Requires financial assistance provided from the State Water Pollution Control Revolving Fund to be provided only for projects for which a public agency has adopted a sewer system management plan that includes a prescribed plan for sewer upgrades. Requires a public agency receiving assistance from the fund for that purpose to report to the State Water Resources Board on its progress with respect to developing and implementing the plan.	04/26/2011 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: Do pass to Committee on APPROPRIATIONS.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>AB 1048</b> Harkey (R)	Water Quality: Recycled Water and Wastewater: Fluoride		Requires the State Water Resources Control Board to adopt a statewide policy establishing standards for levels of fluoride in recycled water and wastewater.	03/16/2011 - Withdrawn from ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.;03/16/2011 - Re-referred to ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<b>AB 1184</b> Gatto (D)	Public Employees' Retirement Benefits		Amends the Public Employees' Retirement Law. Provides that the obligations for retirement benefits that are attributable to excess compensation earned by a nonrepresented employee who was employed by one or more public agencies shall be the sole obligation of the subsequent contracting agency that paid the excess compensation. Prohibits a plan of replacement benefits from being administered by the board for a person who first becomes a member on or after a specified date.	04/25/2011 - From ASSEMBLY Committee on PUBLIC EMPLOYEES, RETIREMENT AND SOCIAL SECURITY with author's amendments.;04/25/2011 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on PUBLIC EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.
<b>AB 1283</b> Berryhill B (R) <b>AB 1299</b> Huffman (D)	Safe, Clean, and Reliable Drinking Water Supply Act Marine Fisheries: Forage Species		Declares the intent of the Legislature to enact legislation relating to the Safe, Clean, and Reliable Drinking Water Supply Act of 2012. Enacts the Forage Species Conservation and Management Act of 2011. Requires new fishery management plans and amendments to existing plans that significantly affect an established or emerging fishery in which forage species are a significant component of the catch to be consistent with the policy of the state with regard to forage species. Requires specified agency representatives to advocate for related management plans and for a fair share of allocation to the state fisheries.	02/18/2011 - INTRODUCED. 04/11/2011 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>AB 1354</b> Huber (D)	Public Works: Progress Payments: Notice: Retention	Oppose	Requires that a contractor pay a subcontractor on a public works project within 7 days after receipt of each progress payment. Relates to the time period for written notice regarding a claim against the bond of a contractor under a public works contract. Relates to retention proceeds withheld under a public works contract. Relates to progress payments made under a public works contract.	04/26/2011 - From ASM Committee on BUS, PROFESSIONS & CONSUMER PROTECTION with author's amendments. 04/26/2011 - In ASM. Read second time and amended. Re-referred to Committee on BUS, PROFESSIONS & CONSUMER PROTECTION.
<b>SB 27</b> Simitian (D)	Public Retirement: Final Compensation: Computation		Amends the state Teachers' Retirement Law to include the creditable compensation definition under the Defined Benefit Supplement Program, a lump sum payment under the program, to apply to certain retirees a provision that permits a retired member of the system to perform specified duties as independent contractor with no service credit and limits or prohibits compensation, and the Cash Balance Benefit Program. Relates to service compensation reporting under the Public Employees' Retirement Law.	04/11/2011 - In SENATE Committee on APPROPRIATIONS: To Suspend File.
<b>SB 31</b> Correa (D)	Local Government: Lobbyist Registration		Enacts a comprehensive scheme to regulate lobbying entities that lobby local government agencies, including requirements to register and make periodic reports regarding certain lobbying activities. Requires each agency to create a commission to implement and enforce these provisions. Provides that any person who knowingly or willingly violates a provision, or knowingly or willfully aides and abets any person in violation of any provision is guilty of a misdemeanor.	03/31/2011 - Re-referred to SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS.
<b>SB 34</b> Simitian (D)	Water Resources Investment Act of 2011	Oppose	Requires revenues and charges collected under the Water Resources Investment Program and to be deposited in the state Water Resources Investment Program Fund and a number of regional investment accounts within the fund. Requires money in the regional accounts be for water-related projects and programs. Requires state account moneys be appropriated for specified statewide water-related programs and the Delta plan, mercury contamination in the Sacramento-San Joaquin Delta, and for related bond debt service.	04/13/2011 - In SENATE. Read second time and amended. Re-referred to Committee on GOVERNANCE AND FINANCE.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>SB 46</b> Correa (D)	Public Officials: Compensation Disclosure		Requires every person, except a candidate for public office, who is required to file a statement of economic interests to include a compensation disclosure form that provides compensation information for the preceding calendar year. Requires each designated employee who is required to file statements under a conflict of interest code to include, as a part of that filing, a compensation disclosure form that provides compensation information for the preceding calendar year.	04/27/2011 - From SENATE Committee on GOVERNANCE AND FINANCE: Do pass to Committee on APPROPRIATIONS.
<b>SB 52</b> Steinberg (D)	Water Quality: Sacramento Regional Sanitation District		Appropriates funds to the Department of Water Resources from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 to provide financial assistance to the Sacramento Regional County Sanitation District to offset rate increases associated with the costs of capital improvements to the district's regional sewage treatment plant.	05/02/2011 - In SEN Com on ENV QUAL: Failed passage. 0 5/02/2011 - In SEN Com on ENV QUAL: Reconsideration granted.
<b>SB 186</b> Kehoe (D)	The Controller		Authorizes the Controller to exercise discretionary authority to perform an audit or investigation of any county, city, special district, joint powers authority, or redevelopment agency, if the Controller has reasons to believe, supported by documentation, that the local agency is not complying with state law, grant agreements, local ordinances, to determine fiscal viability and to prepare a report of the results of the audit or investigation and to file a copy with the local legislative body.	04/11/2011 - In SENATE Committee on APPROPRIATIONS: To Suspend File.
<b>SB 194</b> Governance and Finance Cmt	Local Government: Omnibus Bill		Relates to the maximum amount that a legislative body may transfer of unclaimed money from a special fund to the general fund. Local entities investing in certificates of deposit of a federally licensed branch of a foreign bank, community service district boards, local general plan public meetings, Subdivision Map Act relating to conveyances of land and subdivider costs, sanitation employees, local taxation, local facilities improvements, local construction contracts, and business improvement districts.	04/28/2011 - In SENATE. Read second time. To Consent Calendar.
<b>SB 200</b> Wolk (D)	Sacramento-San Joaquin Delta: Bay Delta Conservation	Oppose	Amends the Delta Reform Act of 2009 that requires the Delta Stewardship Council to consider the Bay Delta Conservation Plan (BDCP) for inclusion in a specified Delta Plan and the authorizes the incorporation of the plan into the Delta Plan if the BDCP meets certain requirements. Requires any state agency that is responsible for authorizing or implementing any action of the BDCP to ensure the action is consistent with specified requirements prescribed by these provisions.	03/24/2011 - From SEN Com on NAT RES AND WATER with author's amendments. 03/24/2011 - In SEN. Read second time and amended. Referred to Com on NAT RES AND WATER.

**IRWD 2011 LEGISLATIVE MATRIX – May 5, 2011**

<b>Bill No. Author</b>	<b>Title</b>	<b>IRWD Position</b>	<b>Summary/Effects</b>	<b>Status</b>
<b>SB 215</b> Huff (R)	Invasive Aquatic Species: Mussels	Support	Extends the repeal, to a specified date, of existing law that generally prohibits a person from possessing, importing, shipping, or transporting, or from placing, planting, or causing to be placed or planted in any water within the state, dreissenid mussels, and authorizes the Director of Fish and Game or his or her designee to engage in enforcement activities. Provides that a person who violates, resists, delays, obstructs, or interferes with the implementation of these provisions is subject to a penalty.	04/26/2011 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<b>SB 449</b> Pavley (D)	Controller: Local Agency Financial Review		Authorizes the Controller to conduct a preliminary review to determine the existence of a local agency financial problem, and perform an audit upon completion of that review. Requires the Controller to convene a local agency financial review committee and authorize the committee to recommend a financial recovery plan for a local agency requesting assistance. Requires the Controller to report to the Legislature on the actions of the committee and the status of all engagements with local agencies.	05/02/2011 - In SENATE Committee on APPROPRIATIONS: To Suspend File.
<b>SB 571</b> Wolk (D)	Water Commission: Water Plan: Water Resources		Provides for the organization of the State Water Commission as a separate agency in state government. Enacts the Water Resources Investment Planning Act to establish regional water planning agencies and a state water investment plan. Provides the frequency for plan updates. Requires the State Department of Water Resources and regional agencies to submit related reports to the commission. Prescribes the contents of the reports and the purpose for developing the reports.	04/13/2011 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<b>SB 607</b> Walters (R)	Water Resources Board: Brackish Groundwater Treatment		Requires the Water Resources Control Board to either amend the State Ocean Plan, or adopt separate standards, to address water quality objectives and effluent limitations that are specifically appropriate for brackish groundwater treatment system facilities that produce municipal water supplies for local use.	05/02/2011 - From SENATE Committee on ENVIRONMENTAL QUALITY: Do pass to Committee on APPROPRIATIONS.
<b>SB 834</b> Wolk (D)	Integrated Regional Water Management Plans: Contents		Requires an integrated regional water management plan to demonstrate the manner in which the plan complies with a specified state policy concerning reducing reliance on the Sacramento-San Joaquin Delta for water supply and improving regional self-reliance for water, if the region covered by the plan receives water from the Delta watershed.	04/13/2011 - In SENATE. Read second time and amended. To third reading.

# EXHIBIT "B"

CSDA Transparency/Reform Matrix - Updated 4/29/11

Bill Type	Bill Number	Author	Subject	Description	Sponsor	CSDA Position	Status
AB	162	Smyth	Audits/Financial Reports	*As introduced 1/19/11: requires local agencies to send a separate letter of finding to the Controller's office if a federal single audit reveals certain financial irregularities.	Author	WATCH	Asm Local Gov
AB	187	Lara	Audits/Financial Reports	*As introduced 1/25/11: authorizes the State Auditor to establish a high-risk local agency audit program. *As amended 4/14/11: increases the number of quality control reviews the Controller can perform on independent private auditors hired by local governments to prepare their annual audits and requires local agencies to rotate audit partners at least every six years.	Author	WATCH	Asm Appropriations
AB	229	Lara	Audits/Financial Reports	*As amended 4/4/11: requires JPA's that issue conduit revenue bonds to file annual financial reports with the Controller's office. The bill would also raise the penalties associated with failing to file a financial report within 20 days of a written notice from the Controller from \$5,000 to \$10,000 in the case of a local agency with total revenues of at least \$250,000 and would double these fines if that agency fails to file for 2 consecutive years. If failing to file for 3 consecutive year, would triple fines and allow Controller to conduct an audit of the agency.	Controller	WATCH	Asm Appropriations
AB	276	Alejo	Audits/Financial Reports	*As introduced 2/18/11: prohibits an independent auditor from engaging in an audit unless the auditor completes a quality control review in accordance with General Accounting Office standards every three years.	Controller	WATCH	Asm Appropriations
AB	1287	Buchanan	Audits/Financial Reports		Author	WATCH	Asm Local Gov

Bill Type	Bill Number	Author	Subject	Description	Sponsor	CSDA Position	Status
AB	1350	Lara	Audits/Financial Reports	*As introduced 2/18/11: requires county auditor to verify that the property tax rate increase imposed by a jurisdiction, on or after January 1, 2012, does not exceed the maximum rate authorized by this section. Jurisdiction shall reimburse county auditor for the actual and reasonable costs incurred by the county auditor.	Author	WATCH	Asm Appropriations
SB	186	Kehoe	Audits/Financial Reports	*As amended 4/6/11: authorizes the Controller, if the Controller has reason to believe that any local agency is not complying with the financial requirements in state law, local charters, or local ordinances, to perform an audit or investigation of the issue. The basis for the decision to conduct an audit or investigation shall be supported by credible documentation, including input from the local agency.	Controller	WATCH	Sen Appropriations-Suspense File
SB	449	Pavley	Audits/Financial Reports	*As amended 4/26/11: authorizes the Controller to conduct a preliminary review and/or audit of a local agency if the agency meets certain criteria or requests the review or audit. Authorizes the Controller to assemble a local agency financial review committee chaired by the Controller and including representatives from the Office of the Treasurer and the Department of Finance to provide assistance to local agencies who seek help in averting or managing a financial problem.	Controller	WATCH	Sen Appropriations-May 2

Bill Type	Bill Number	Author	Subject	Description	Sponsor	CSDA Position	Status
AB	148	Smyth	Disclosure/ Compensation/ Ethics	<b>*As amended 4/14/11:</b> requires local agencies to submit a copy of the agency's written attendance compensation policy or reimbursement policy to the State Controller and post it on the agency's website, if any. Requires agencies to post ethics training certificates of any elected officials on the agency's website, if any, and submit a copy to the Controller within 90 days of receiving the certificate.	Author	Support	Asm Appropriations
SB	46	Correa	Disclosure/ Compensation/ Ethics	<b>*As amended 4/6/11:</b> requires public officials who are required to file a statement of economic interest, as a part of that filing, to include a compensation disclosure form.	Author	Oppose Unless Amended	Sen Appropriations- May 9
AB	527	Hernandez	Financial Interests	<b>*As amended 4/14/11:</b> prohibits a public agency from authorizing the expenditure of public funds, regardless of whether a contract is made in furtherance of the expenditure if any member of the body or board is financially interested in the person or entity that receives the expenditure. Requires an officer, in order to be deemed not interested in that contract, to disclose that interest at a public meeting and requires counsel to identify a statutory basis for classifying the interest as remote.	Author	WATCH	Asm Appropriations

Bill Type	Bill Number	Author	Subject	Description	Sponsor	CSDA Position	Status
AB	785	Mendoza	Financial Interests	<p>*As amended 4/25/11: provides that a public official who is an elected or appointed member of a state or local agency has a financial interest in a decision of that agency, if an immediate family member of the public official has a financial interest in the decision, defined as a spouse or domestic partner, child, parent, sibling, or the spouse or domestic partner of a child, parent or sibling.</p>	Author	WATCH	<p>Asm Elections - May 3 Asm Local Gov- May 4</p>
AB	23	Smyth	Meetings	<p>*As amended 4/14/11: This bill would require a verbal announcement of board member compensation at a board meeting if that meeting convenes simultaneously or in serial order of another meeting of a separate legislative body and whose membership constitutes a quorum of the prior meeting of a legislative body.</p>	Author	WATCH	Asm Floor
AB	392	Alejo	Meetings	<p>*As amended 4/14/11: requires a local agency to post the agenda and specified staff generated reports that relate to items on the agenda on its website, if any, 72 hours before a meeting and would prohibit a local agency from acting on any item on the agenda unless the related staff generated report was properly disclosed at least 72 hours prior to the meeting. If the agency has no website, then the posted agenda shall disclose a public location where the agency shall make any applicable staff generated report available for copying and public inspection for at least 72 hours prior to the meeting.</p>	Realtors	Oppose	<p>Asm Appropriations</p>

Bill Type	Bill Number	Author	Subject	Description	Sponsor	CSDA Position	Status
AB	582	Pan	Meetings	*As amended 4/14/11: amends the Brown Act to require proposed compensation increases of more than 5 percent for a city manager, deputy city manager, county CAO, deputy county CAO, or similar employee to be publicly noticed twice before adoption.	Controller	WATCH	Asm Appropriations
SCA	7	Yee	Meetings	*As amended 4/13/11: includes in the California Constitution the requirement that each public body provide public notice of its meetings and disclose any action taken.	CNPA	WATCH	Sen Elections - May 3
AB	834	Hernandez	Contracts	*As amended 4/14/11: requires a local agency to review any contract with a total value of \$250,000 or more with a private party that contains an automatic renewal clause on or before the annual date by which the contract may be rescinded and requires the legislative body to make specified findings.	Author	WATCH	Asm Floor
AB	1344	Feuer	Contracts	*As amended 4/25/11: prohibits an employment contract for an excluded employee from including any clause that provides for an automatic renewal, an automatic compensation increase that is linked to another contract, or an automatic compensation increase in excess of the COLA. Requires the local agency to complete a performance review of any excluded employee before an increase in compensation in excess of a COLA may be implemented.	Author	WATCH	Asm Elections - May 3

\* denotes bills referred to CSDA Transparency Subcommittee

Last updated 4/29/11

**EXHIBIT "C"**

**Appendix: Comparing Requirements for Disclosing Public Officials' Compensation**

	<b><u>State Controller's Office</u></b>	<b><u>Senate Bill 46 (Correa)</u></b>
Statutory authority?	Gov't Code §12463 & §53895	Amends the Political Reform Act
Who reports?	Counties, cities, special districts State departments (May 2011)	Everyone who files a Form 700: * Local officials * State officials
How reported?	By job classification	By individual name
What's reported?	Salary range (min/max) Box 5 wages (Medicare) Pension formula Employer pension contribution Employer paid deferred comp Employer paid benefits: *Health, dental, vision	Agency cost of salary/stipend Agency cost of benefits Agency cost of reimbursements Agency cost of other perquisites Date of last ethics training
When reported?	Annually; 2009 data filed in 2010	Annually, starting in 2012
Where filed?	State Controller's Office	Same methods as Form 700
Internet posting?	<a href="http://lgcr.sco.ca.gov">http://lgcr.sco.ca.gov</a>	Only if agency has website, plus SCO must recommend database
Enforcement?	SCO notifies agencies that fail to comply	Mandamus or injunction, but only after chance to correct
Penalties?	Noncompliant agencies owe forfeiture payments	Court-ordered performance
Copies available?	Required by Public Records Act (CD copies of spreadsheets)	Required by Political Reform Act
Evaluation?	None planned	State Auditor may evaluate in 2018
Permanent?	Yes	Sunsets on January 1, 2019

Senate Governance and Finance Committee  
Revised: April 12, 2011

May 23, 2011

Prepared by: B. Beeman *BB*

Submitted by: B. Beeman *BB*

Approved by: Paul Jones *Paul Jones*

## CONSENT CALENDAR

### PROJECT GREENFILL COOPERATIVE AGREEMENT

#### SUMMARY:

In an effort to promote sustainability, reduce trash and plastics in the waste stream and promote water quality, staff collaborated with Orange County Parks (County) to develop Project GreenFill, a plan to install water bottle filling stations in appropriate community locations throughout the Irvine Ranch Water District service area. These water bottle filling stations are based on a successful water bottle filling station project in Zion National Park that received the 2009 United States Department of the Interior Environmental Achievement Award. It is estimated that IRWD costs associated with this initial partnership for the two water bottle filling stations at Mason Park will be approximately \$15,000 and will be funded with undesignated over-allocation funding. Staff recommends that the Board approve a cooperative agreement with the County of Orange for Project GreenFill.

#### BACKGROUND:

At the October 2010 Water Resources Policy and Communications Committee meeting, staff presented an overview of the Zion National Park water bottle filling stations that have been installed throughout the park in an effort to promote sustainability, reduce trash and plastic in the waste stream and promote water quality. Americans use about 50 billion plastic water bottles yearly, 167 for each person and approximately 30 billion ends up in landfills. After installation of the water bottle filling stations, Zion park staff estimates that they reduced the number of plastic water bottles in the waste stream by approximately 60,000 bottles, or equivalent of 5,000 pounds of plastic, simply by encouraging park visitors to use the water filling stations. They also used this opportunity to stop selling plastic bottles at park concessions and to promote water quality. As a result, the water bottle filling stations received national recognition in 2009, with the United States Department of the Interior Environmental Achievement Award.

After discussion, the Committee directed staff to work with the County of Orange to develop a partnership to install water bottle filling stations in appropriate locations throughout the IRWD service area. Staff worked with County staff and developed a cooperative agreement, which is attached as Exhibit "A", whereas IRWD will assist with developing the graphics and establishing water service to the filling stations, and the County will be responsible for construction and installation of the water bottle filling stations, site maintenance and associated water service costs at locations mutually agreed-upon. Examples of a graphic design panel for Project GreenFill are included as Exhibit "B".

In collaboration with Orange County Parks, staff has selected Mason Park in Irvine for the first installation of two water bottle filling stations. One station will be located just outside an upgraded restroom facility near the center of the park; the other will be located at the park entrance located off Culver Drive in Irvine. After completion of the project at Mason Park, staff will promote this new community resource via an outreach plan utilizing traditional and internet

capabilities along with a groundbreaking ceremony with the County of Orange and the City of Irvine. It is estimated that IRWD costs associated with this initial partnership for the two pilot water bottle filling stations at Mason Park will be approximately \$15,000 and will be funded with over-allocation funding. Once the Mason Park installations are complete, staff will continue to work with the Orange County Parks to refine a list of proposed Project GreenFill stations in other park facilities. Additionally, a Project GreenFill station will be installed at the IRWD San Joaquin Marsh and at other appropriate IRWD facilities.

Staff recommends that the Board authorize the General Manager to execute a cooperative agreement with the County of Orange for mutually agreed-upon locations for Project GreenFill.

**FISCAL IMPACTS:**

IRWD costs of approximately \$15,000 for Project GreenFill locations will be funded using undesignated over-allocation use funding revenues.

**ENVIRONMENTAL COMPLIANCE:**

Not applicable.

**COMMITTEE STATUS**

This item was reviewed at the Water Resources Policy and Communications Committee on May 17, 2011.

**RECOMMENDATION:**

**THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A COOPERATIVE AGREEMENT WITH THE COUNTY OF ORANGE FOR MUTUALLY AGREED-UPON LOCATIONS FOR PROJECT GREENFILL, A PLAN TO INSTALL WATER BOTTLE FILLING STATIONS THROUGHOUT IRWD'S SERVICE AREA.**

**LIST OF EXHIBITS:**

Exhibit "A" – Project GreenFill Cooperative Agreement

Exhibit "B" – Examples of Project GreenFill Graphic Display Board

- B. Install water lines to deliver a supply of potable water to the points of connection for the water bottle filling stations in COUNTY regional parks at no cost to the COUNTY. If construction is necessary, upon completion, IRWD will obtain a no-fee OC Parks Permit and return the construction area to its original condition. New water lines leading up to and including the water meter, if required, shall be owned by IRWD and not subject to Paragraph 6 (OWNERSHIP OF IMPROVEMENTS).
- C. Be responsible for securing permits required for installation of all water lines, including a no-fee OC Parks Permit if necessary.

#### **4. COUNTY RESPONSIBILITIES**

COUNTY agrees to:

- A. Provide two (2) initial locations for water bottle filling stations in COUNTY regional parks. The initial parks for consideration will be Mason Regional Park and Peters Canyon Regional Park. Provide such additional locations for water bottle filling stations in COUNTY regional parks as COUNTY, in consultation with IRWD, shall determine to be feasible. The specific location within each park, as well as, all future parks and locations shall be as designated by the Director of OC Parks.
- B. Design the water bottle filling stations. All stations will include both IRWD and OC Park logos.
- C. Provide a no-fee OC Parks Permit to IRWD for installation of water lines to station locations, where necessary.
- D. Be responsible for securing permits required for installation of the stations.
- E. Maintain the water bottle filling stations.
- F. Pay IRWD normal water service charges for water supplied to the stations.

#### **5. MUTUAL RESPONSIBILITIES**

COUNTY and IRWD mutually agree to:

- A. Collaborate in limited public affairs programs related to increasing environmental awareness.
- B. Include acknowledgment of COUNTY and IRWD in all distribution of public information, notices and news releases for which the subject is Operation GreenFill stations in COUNTY regional parks.

#### **6. OWNERSHIP OF IMPROVEMENTS**

Upon completion, all improvements installed or constructed by IRWD under this Agreement in COUNTY regional parks must be free and clear of liens, claims, or liability for labor or material and shall become the property of the COUNTY.

**7. INSURANCE**

Prior to the provision of services under this Agreement, IRWD agrees to purchase all required insurance at IRWD's expense and to deposit with COUNTY Certificates of Insurance, including all endorsements required herein, necessary to satisfy the COUNTY that the insurance provisions of this Agreement have been complied with and to keep such insurance coverage and the certificates therefore on deposit with the COUNTY during the entire term of this Agreement. In addition, all subcontractors performing work on behalf of IRWD pursuant to this Agreement shall obtain insurance subject to the same terms and conditions as set forth herein for IRWD.

All self-insured retentions (SIRs) and deductibles shall be clearly stated on the Certificate of Insurance. If no SIRs or deductibles apply, indicate this on the Certificate of Insurance with a 0 by the appropriate line of coverage. Any self-insured retention (SIR) or deductible in an amount in excess of \$25,000 (\$5,000 for automobile liability), shall specifically be approved by the County Executive Office (CEO)/Office of Risk Management.

If the IRWD fails to maintain insurance acceptable to the COUNTY for the full term of this Agreement, the COUNTY may terminate this Agreement.

Qualified Insurer

Minimum insurance company ratings as determined by the most current edition of the Best's Key Rating Guide/Property-Casualty/United States or ambest.com shall be A- (Secure A.M. Best's Rating) and VIII (Financial Size Category).

The policy or policies of insurance must be issued by an insurer licensed to do business in the state of California (California Admitted Carrier). If the carrier is a non-admitted carrier in the state of California and does not meet or exceed an A.M. Best rating of A-/VIII, CEO/Office of Risk Management retains the right to approve or reject carrier after a review of the company's performance and financial ratings. If the non-admitted carrier meets or exceeds the minimum A.M. Best rating of A-/VIII, the agency can accept the insurance.

The policy or policies of insurance maintained by the IRWD shall provide the minimum limits and coverage as set forth below:

<u>COVERAGES</u>	<u>MINIMUM LIMITS</u>
<u>Commercial General Liability</u> with broad form property damage and contractual liability	\$1,000,000 combined single limit per occurrence; \$2,000,000 aggregate contractual liability
<u>Automotive Liability</u> including coverage for owned, non-owned and hired vehicles	\$1,000,000 combined single limit per occurrence
<u>Worker's Compensation</u>	Statutory
<u>Employers' Liability Insurance</u>	\$1,000,000 per occurrence

IRWD may elect to self insure for the insurance coverages required by this Agreement.

### Required Coverage Forms

The Commercial General Liability coverage shall be written on Insurance Services Office (ISO) form CG 00 01, or a substitute form providing liability coverage at least as broad.

The Business Auto Liability coverage shall be written on ISO form CA 00 01, CA 00 05, CA 0012, CA 00 20, or a substitute form providing coverage at least as broad.

### Required Endorsements

The Commercial General Liability policy shall contain the following endorsements, which shall accompany the Certificate of insurance:

- 1) An Additional Insured endorsement using ISO form CG 2010 or CG 2033 or a form at least as broad naming the County of Orange, its elected and appointed officials, officers, employees, agents as Additional Insureds.
- 2) A primary non-contributing endorsement evidencing that the IRWD's insurance is primary and any insurance or self-insurance maintained by the County of Orange shall be excess and non-contributing.

All insurance policies required by this Agreement shall waive all rights of subrogation against the County of Orange and members of the Board of Supervisors, its elected and appointed officials, officers, agents and employees when acting within the scope of their appointment or employment.

The Workers' Compensation policy shall contain a waiver of subrogation endorsement waiving all rights of subrogation against the County of Orange, and members of the Board of Supervisors, its elected and appointed officials, officers, agents and employees.

The Commercial General Liability policy shall contain a severability of interests clause also known as a "separation of insureds" clause (standard in the ISO CG 0001 policy).

Insurance certificates and endorsements shall be forwarded to the County of Orange (OC Community Resources, Orange County Parks, 13042 Old Myford Road, Irvine, CA 92602)

COUNTY expressly retains the right to require IRWD to increase or decrease insurance of any of the above insurance types throughout the term of this Contract. Any increase or decrease in insurance will be as deemed by County of Orange Risk Manager as appropriate to adequately protect COUNTY.

COUNTY shall notify IRWD in writing of changes in the insurance requirements. If IRWD does not deposit copies of acceptable certificates of insurance and endorsements with COUNTY incorporating such changes within thirty days of receipt of such notice, this Contract may be in breach without further notice to IRWD, and COUNTY shall be entitled to all legal remedies.

The procuring of such required policy or policies of insurance shall not be construed to limit IRWD's liability hereunder nor to fulfill the indemnification provisions and requirements of this Contract, nor act in any way to reduce the policy coverage and limits available from the insurer.

## **8. HOLD HARMLESS**

Neither COUNTY nor any officer, agent or employee thereof shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by IRWD under or in connection with any work, authority or jurisdiction delegated to IRWD under this Agreement or in the exercise of the rights herein granted to IRWD. It is also understood that, pursuant to Government Code Section 895.4, IRWD shall fully indemnify, protect, defend and hold COUNTY, its officers, agents and employees, harmless from any liability imposed for injury (as defined by Government Code Section 810.8), including attorneys fees and costs, occurring by reason of anything done or omitted to be done by IRWD under or in connection with any work, authority or jurisdiction delegated to IRWD under this Agreement or in the exercise of the rights herein granted to IRWD.

Neither IRWD nor any officer, agent or employee thereof shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by COUNTY under or in connection with any work, authority or jurisdiction delegated to COUNTY under this Agreement or in the exercise of the rights herein granted to COUNTY. It is also understood that, pursuant to Government Code Section 895.4, COUNTY shall fully indemnify, protect, defend and hold IRWD, its officers, agents and employees, harmless from any liability imposed for injury (as defined by Government Code Section 810.8), including attorneys fees and costs, occurring by reason of anything done or omitted to be done by COUNTY under or in connection with any work, authority or jurisdiction delegated to COUNTY under this Agreement or in the exercise of the rights herein granted to COUNTY.

## **9. TIME OF ESSENCE**

Time is of the essence of this Agreement and each and every term and provision hereof.

## **10. AMENDMENTS**

This Agreement expresses all the understandings of the parties concerning all matters covered. No addition to or alteration of the terms of this Agreement shall be valid unless made in the form of a written amendment to this Agreement and formally approved by the Parties hereto.

## **11. SEVERABILITY**

If any term, provision, condition or covenant of this Agreement, or the application thereof, to any party or circumstances shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement, or the application of such term, provision, condition or covenant to persons or circumstances other than those as to whom or which it is held invalid or unenforceable, shall not be affected thereby, and each term or provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

## **12. TERMINATION**

Either party may terminate this Agreement with one hundred and twenty (120) days notice to the other Party. Notice of termination shall be in writing and the date upon which such termination is effective. Notice shall be served as provided in Paragraph 20 (NOTICES) above.

**13. FURTHER ASSURANCES**

Each Party agrees to cooperate with the other Party, at no additional cost to such Party, and to execute such additional instruments and documents as may be reasonably necessary or proper in order to carry out the provisions of this Agreement.

**14. ATTORNEYS' FEES**

In any action or proceeding between the Parties arising out of or related to the terms of this Agreement, or in any way connected herewith, the Parties agree that attorney fees shall not be recoverable by the prevailing party.

**15. AGREEMENT ORGANIZATION**

The various headings and numbers herein, the grouping of provisions of this Agreement into separate clauses and paragraphs, the organization hereof, are for the purpose of convenience only and shall not be considered otherwise.

**16. SUCCESSORS AND ASSIGNS**

The provisions of this Agreement shall be binding on and inure to the benefit of the Parties hereto and their respective successors and assigns.

**17. NO THIRD PARTY BENEFICIARIES**

No person or entity other than the parties to this Agreement shall be deemed to be a third party beneficiary hereof, and nothing in this Agreement, either express or implied, is intended to confer upon any person or entity, other than the Parties to this Agreement and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement.

**18. GOVERNING LAW AND VENUE**

This Agreement has been negotiated and executed in the state of California and shall be governed by and construed under the laws of the state of California. In the event of any legal action to enforce or interpret this Agreement, the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California, and the Parties hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure Section 394.

**19. AUTHORITY TO SIGN**

Each person signing this Agreement on behalf of a Party hereto represents and warrants to the other Parties that he/she has all requisite power and authority to execute and deliver this Agreement for such Party and that this Agreement, when so executed and delivered, will be a binding obligation of, and enforceable against, such party in accordance with its terms.

**20. NOTICES**

Any notice or other communication to be given one Party to the other hereunder shall be in writing and given by personal service, express mail, Federal Express or any similar form of airborne/overnight delivery service, or by United States certified mail, return receipt requested, addressed to the Party at its respective address as follows:

COUNTY: County of Orange  
OC Parks  
13042 Old Myford Road  
Irvine, California 92602-2304  
Attn: Director, OC Parks

IRWD: Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92619  
Attn: Director of Water Operations

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IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date first written above.

**IRWD**

District Counsel

Irvine Ranch Water District

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

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

Dated \_\_\_\_\_

APPROVED AS TO FORM:  
County Counsel

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

Dated \_\_\_\_\_

Signed and certified that a copy of this document has been delivered to the Chair of the Board per G.C. Sec 25103, Resolution 79-1535

**COUNTY**

County of Orange

Attest:

By: \_\_\_\_\_  
Chair, Board of Supervisors

\_\_\_\_\_  
Darlene J. Bloom  
Clerk of the Board of Supervisors  
Orange County, California

# Water Bottle Filling Station

Feeling thirsty?  
Drink up!

OCparks



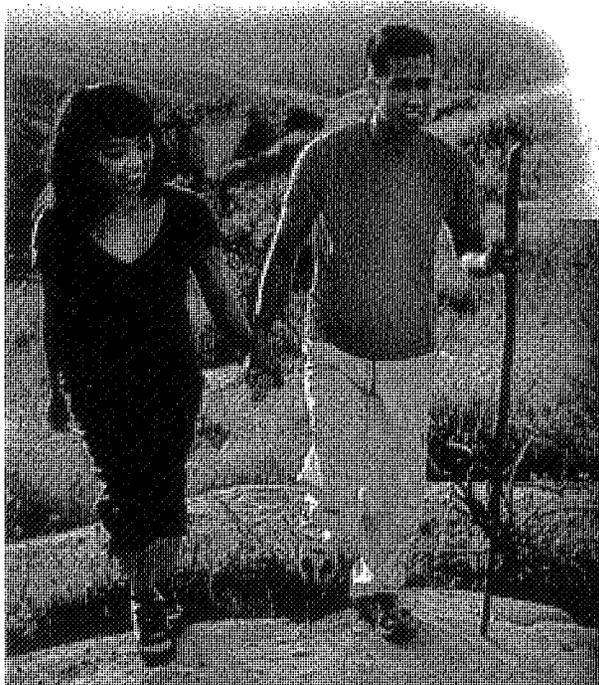
cityofirvine.org



Irvine Ranch Water District  
irwd.com

OC Parks and Irvine Ranch Water District have teamed up to provide this convenient and environmentally smart way for you to access quality drinking water.

The clean, pure tap water provided here exceeds state and federal water quality standards.



When using this station to refill your reusable bottle, you're protecting the environment by reducing plastic waste and saving the energy needed to package and distribute water in disposable bottles.

Thanks for choosing the sustainable way to quench your thirst!  
For questions about our water, call Irvine Ranch Water District at: (949) 453-5300 or email: [info@irwd.com](mailto:info@irwd.com).

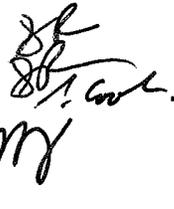
For questions about this OC Parks facility, visit [www.ocparks.com](http://www.ocparks.com), call (866) OC-PARKS or email: [ocparks@ocparks.com](mailto:ocparks@ocparks.com).

May 23, 2011

Prepared by: B. Beeman

Submitted by: B. Beeman

Approved by: Paul Jones



CONSENT CALENDAR

RATIFICATION OF PROPOSED BY-LAWS FOR  
THE ORANGE COUNTY SPECIAL DISTRICT SELECTION COMMITTEE

SUMMARY:

The Orange County Local Agency Formation Commission (LAFCO) is conducting an election to ratify the new by-laws for the Orange County Special District Selection Committee. Staff recommends that the Board approve the proposed by-laws.

BACKGROUND:

Due to issues arising at the January 27, 2011 election, a working group was convened at the request of the Executive Committee of the Independent Special Districts of Orange County (ISDOC). The ISDOC Executive Committee is comprised of Rich Freschi of Serrano Water District, John Withers of Irvine Ranch Water District, Bob Moore of South Coast Water District, Patricia Quilizapa of McCormick, Kidman & Behrens, Joan Finnegan of Municipal Water District of Orange County, and Sandra Jacobs of Santa Margarita Water District. The working group was tasked with drafting new by-laws for the Orange County Special Districts Selection Committee. The draft by-laws are included as Exhibit A.

The board of each independent special district has been asked to vote on the proposed by-laws. LAFCO must receive the ballots before 3:00 p.m. on Thursday, May 26, 2011. Adoption of the proposed by-laws requires the approval of a majority (14 or more) of the districts.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS

This item was reviewed at the Water Resources Policy and Communications Committee on May 17, 2011.

RECOMMENDATION:

**THAT THE BOARD APPROVE THE DRAFT BY-LAWS FOR THE ORANGE COUNTY SPECIAL DISTRICT SELECTION COMMITTEE.**

**LIST OF EXHIBITS:**

Exhibit "A" – Draft By-laws for the Orange County Special District Selection Committee

# EXHIBIT "A"

LOCAL AGENCY FORMATION COMMISSION

ORANGE COUNTY



April 11, 2011

Steven LaMar  
Irvine Ranch Water District  
P.O. Box 57000  
Irvine, CA 92619

CHAIR  
JOHN MOORLACH  
Supervisor  
2<sup>nd</sup> District

VICE CHAIR  
CHARLEY WILSON  
Director  
Santa Margarita  
Water District

PAT BATES  
Supervisor  
5<sup>th</sup> District

PETER HERZOG  
Councilmember  
City of Lake Forest

SUSAN WILSON  
Representative of  
General Public

JOHN WITHERS  
Director  
Irvine Ranch Water District

ALTERNATE  
BILL CAMPBELL  
Supervisor  
3<sup>rd</sup> District

ALTERNATE  
JAMES FISLER  
Director  
Mesa Consolidated  
Water District

ALTERNATE  
DEREK J. MCGREGOR  
Representative of  
General Public

ALTERNATE  
BOB RING  
Councilmember  
City of Laguna Woods

JOYCE CROSTHWAITE  
Executive Officer

**SUBJECT: Ratification of Proposed By-laws for the Orange County Special District Selection Committee**

Dear Mr. La Mar,

The Orange County Special District Selection Committee is responsible for selecting special district members to the Local Agency Formation Commission (LAFCO) for Orange County. For the past 17 years, the Orange County Special District Selection Committee has successfully operated under the "*Independent Special Districts Selection Committee Rules of Procedure*" (attached).

Due to issues arising at the January 27, 2011 election, a working group was convened at the request of the Executive Committee of the Independent Special Districts of Orange County (ISDOC). This working group was tasked with drafting new by-laws for the Orange County Special District Selection Committee. The draft by-laws, as developed by the working group, are attached.

Your district is asked to vote on the proposed by-laws through the enclosed mail-in ballot. The ballots must be received by LAFCO by 3:00 pm on Thursday, May 26, 2011. Please return the ballots by certified mail, Fed-Ex or another delivery service which provides proof of receipt.

Also enclosed is information regarding the proposed by-laws and a copy of the 1994 "*Independent Special Districts Selection Committee Rules of Procedure*." If you have any questions, please feel free to call me at 714-834-2556.

Sincerely,

  
Joyce Crosthwaite  
Executive Officer

Enclosures:

1. "Independent Special Districts Selection Committee Rules of Procedure" (1994)
2. Proposed Bylaws for Orange County Special District Selection Committee (2011)
3. Ballot
4. FAQs

12 Civic Center Plaza, Room 235, Santa Ana, CA 92701  
(714) 834-2556 • FAX (714) 834-2643  
<http://www.oalafco.org>

INDEPENDENT SPECIAL DISTRICT SELECTION COMMITTEE

*RULES OF PROCEDURE*  
adopted February 10, 1994

A. Registration

Each member of the Selection Committee shall be entitled to one vote for each independent special district of which he or she is the presiding officer (or alternate board member selected by the district's board). Each member shall provide written authorization (such as resolution or minute excerpt) at the time of registration.

Each voting member shall register and sign a declaration of qualification. The member will then be given ballots and other voting materials.

B. Quorum

Members representing a majority of the eligible districts shall constitute a quorum. Before calling the meeting to order, the chair shall verify that a quorum has registered and is present.

C. Nomination

Independent special districts may submit nominations for the regular member positions and the alternate position. Such Nominations shall be submitted on forms to be prepared by the Executive Officer and may be accompanied by resumes [and other written material] if desired. ALL NOMINATION FORMS MUST BE RECEIVED BY THE EXECUTIVE OFFICER ON OR BEFORE 5:00 P.M. ON THE 10TH DAY PRIOR TO THE DATE OF THE ELECTION MEETING. The Executive Officer will distribute a copy of the nominations and accompanying materials to each member at least five (5) days prior to the date of the election meeting.

D. Voting

Voting shall be conducted separately for each position. A candidate must receive a majority of the votes cast in order to be elected. In the event no candidate receives a

majority, run-off balloting shall be conducted between the two candidates receiving the highest number of votes. In the case of a tie in the second highest total, the tied candidates will all be included in the runoff. Balloting will continue until one candidate receives at least a majority of the votes cast.

The above process shall be conducted to elect the first regular member from among all regular member nominees.

To elect the second regular member, the above process will then be repeated among all remaining nominees for the regular member positions.

The above process will then be followed to elect the alternate member from the alternate member nominees.

E. Selection of Terms

The candidates elected for the two regular member positions shall draw lots for the four-year term and the two-year term.

**BYLAWS OF THE ORANGE COUNTY  
SPECIAL DISTRICT SELECTION  
COMMITTEE**

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**ARTICLE I**

**Name and Location**

*Section A      Name*

This organization is the Orange County Special District Selection Committee, herein referred to as "The Special District Selection Committee."

**ARTICLE II**

**Nature and Purpose**

*Section A      General Function*

The Special District Selection Committee shall consist of representatives from each independent special district in Orange County for purposes of the special districts acting jointly to appoint Special District representatives to the Orange County Local Agency Formation Commission (LAFCO).

*Section B      Selection Responsibilities*

The Special Districts Selection Committee shall select two regular commissioners and one alternate commissioner from the special districts within the County (§56332). Such appointments shall be made in accordance with these bylaws as established by the Special Districts Selection Committee.

1. Orange County Local Agency Formation Commission

Two (2) regular members

One (1) alternate member

### ARTICLE III

#### Membership and Government

##### *Section A Presiding Officer as Members*

The membership of the Special District Selection Committee shall consist of the presiding officer of each independent special district within Orange County (Government Code 56332 {a}). The Orange County LAFCO Executive Officer or designee shall provide a list of independent special districts to the Special District Selection Committee upon request.

##### *Section B Presiding Officer's Representatives*

If the Presiding Officer of an independent special district is unable to attend a Special District Selection Committee meeting, the legislative body of the district may appoint one of its members to attend the meeting of the special districts selection committee in the presiding officer's place (Government Code 56332{a}).

##### *Section C Declaration of Qualification*

The presiding officer or Board Secretary of each independent special district shall sign a "Declaration of Qualification" (*attached*) prior to receiving a copy of the ballot. No other written authorization to vote shall be required.

##### *Section D Necessary Quorum*

Representatives of a majority of the independent special districts shall constitute a quorum (Government Code 56332{a}). If a quorum is not present at a meeting of the Special District Selection Committee, the meeting shall be adjourned or postponed to a time and place determined by the Chair.

##### *Section E Voting and Other Actions*

All votes and actions of the Special District Selection Committee shall be recorded in writing by the Orange County LAFCO Executive Officer or designee. The record is public and ballots shall include the name of agency and of the member voting.

##### *Section F Election in Writing*

If the Orange County LAFCO Executive Officer or designee determines that a meeting of the Special District Selection Committee, for the

purpose of selecting the special district representatives or for filling a vacancy, is not feasible, the Orange County LAFCO Executive Officer or designee may conduct the business of the Special District Selection Committee in writing (Government Code 56332{c}).

(1) The Orange County LAFCO Executive Officer or designee may call for nominations to be submitted in writing within 30 days. At the end of the nominating period, the Orange County LAFCO Executive Officer or designee shall prepare and deliver, or send by certified mail, to each independent special district one ballot and voting instructions. If only one candidate is nominated for a vacant seat, that candidate shall be deemed selected, with no further proceedings.

(2) As an alternative to the delivery by certified mail, the Orange County Executive Officer or designee, with the prior concurrence of the district, may transmit the ballot and voting instructions by electronic mail, provided that the Orange County LAFCO Executive Officer or designee shall retain written evidence of the receipt of that material.

(3) The ballot shall include the names of all nominees and the office for which each was nominated. The districts shall return the ballots to the Orange County LAFCO Executive Officer or designee by the date specified in the voting instructions, which shall be at least 30 days from the date on which the Orange County LAFCO Executive Officer or designee mailed the ballots to the districts.

(4) If the Orange County LAFCO Executive Officer or designee has transmitted the ballot and voting instructions by electronic mail, the districts may return the ballots to the Orange County LAFCO Executive Officer or designee by electronic mail, provided that the Orange County LAFCO Executive Officer or designee retains written evidence of the receipt of the ballot.

(5) Any ballot received by the Orange County LAFCO Executive Officer or designee after the specified date is invalid. The Orange County LAFCO Executive Officer or designee shall announce the results of the election within seven days of the specified date.

#### *Section G Compensation*

Members of the Special District Selection Committee shall serve without compensation.

#### *Section H Dues or Assessments*

No fixed dues or assessments shall be regularly levied on any Independent Special District for operation for the Special District

Selection Committee.

## **ARTICLE IV**

### **Officers**

#### *Section A Positions*

The elected officers of the Special District Selection Committee shall be a Chair and a Vice Chair. Both shall be Presiding Officers when elected. The Orange County LAFCO Executive Officer or designee shall act as the permanent Secretary and Recording Officer for the Special District Selection Committee.

#### *Section B Election*

The Chair and Vice Chair shall be elected at a Special District Selection Committee meeting to be held concurrently with the Independent Special Districts of Orange County (ISDOC) second quarterly meeting of odd-numbered years or whenever a vacancy occurs. The election of officers shall be by a majority vote of the members present.

#### *Section C Terms*

The terms of the Chair and Vice Chair shall be for a period of two years. A Chair or Vice Chair no longer serving as Presiding Officer of an Orange County special district shall be removed.

#### *Section D Duties*

The Chair shall preside at all meetings of the Special District Selection Committee, and perform all duties required by law or specified herein to facilitate the purposes of the Special District Selection Committee. The Vice Chair shall act in the place and stead of the Chair in the Chair's absence. If both the Chair and Vice Chair are absent from a meeting, a Chair Pro Tem shall be selected from the members present to conduct the proceedings. The Orange County LAFCO Executive officer or designee shall be present at all meetings and maintain the records of the Special District Selection Committee and transmit to each member notices and minutes of all meetings.

## **ARTICLE V**

## **Meetings**

### *Section A Regular Meetings*

The only scheduled regular meetings of the Special District Selection Committee shall be held concurrently with the Independent Special Districts of Orange County (ISDOC) second quarterly meeting of odd-numbered years. All other meetings shall be considered special meetings.

### *Section B Special Meetings*

The Orange County LAFCO Executive Officer or designee shall call and give written notice of all special meetings of the Special District Selection Committee (Government Code 56332 {b}). A meeting shall be called and held under one of the following circumstances:

(1) Whenever the Orange County LAFCO Executive Officer or designee anticipates that a vacancy will occur within the next 90 days among the members or alternate member representing independent special districts on the committee.

(2) Whenever a vacancy exists among the members or alternate member representing independent special districts upon the Orange County LAFCO Commission.

(3) Upon receipt of a written request by one or more members of the Special District Selection Committee representing districts having 10 percent or more of the assessed value of taxable property within the county, as shown on the last equalized county assessment roll.

### *Section C Meetings Notices*

At least six weeks prior to a regular or special meeting of the Special District Selection Committee, the Chair shall notify the Orange County LAFCO Executive Officer or designee of the date, time, and place of the meeting. At least three weeks prior to each meeting, the Orange County LAFCO Executive Officer or designee shall give written notice to each special district of the date, time and place of the meeting. The Orange County LAFCO Executive Officer or designee shall also give electronic notice to each member of the date, time and place to which any meeting of the Special District Selection Committee is continued.

*Section D      Conduct of Meetings*

Unless otherwise specified herein, all meetings shall be conducted in accordance with prevailing parliamentary law.

**ARTICLE VI**

**Selection of Special District Representatives**

*Section A      Nominations*

Any special district may submit nominations for the regular or alternate position on Orange County LAFCO. Such nominations shall be submitted on the attached forms. Nominations may be accompanied by resumes and any other written material if desired. All nominations shall be received by the Orange County Executive Officer or designee on or before 3:00 P.M. on the twentieth (20<sup>th</sup>) day prior to the date of the meeting of the Special District Selection Committee. The Orange County LAFCO Executive Officer or designee shall distribute a copy of the nominations and any accompanying material to each special district at least five (5) days prior to the meeting of the Special District Selection Committee. Each special district shall be responsible for distributing the nominations and accompanying material to its presiding officer and board.

*Section B      Balloting*

Selection of Special District representatives shall be by written ballots which show the name and Special District of the member voting and the name of the nominee for whom the vote is cast. The completed ballots for each appointment shall be presented concurrently to the Orange County LAFCO Executive Officer or designee. When all ballots are in the hands of the Orange County LAFCO Executive Officer or designee, the results shall be tallied and announced to the membership. A separate balloting shall be held for each appointed position.

*Section C      Appointment Requirements*

1. All appointees shall be elected or duly appointed officials and serve terms of four years, except as otherwise provided by law. Appointees no longer serving as elected or duly appointed officials are removed.
2. A majority vote of the representatives of the special districts present

at the Special District Selection Committee meeting is necessary for appointments. If there are three or more nominees and none receives a majority vote of the special districts present, the two nominees with the highest number of votes shall be the candidates for a run-off vote and the balloting repeated. In case of a tie, the tied candidates shall be included in the run-off election. If neither receives the required majority of the special districts present, after two additional ballots the meeting shall be continued to a subsequent time for further consideration. This rule limiting the number of ballots to a total of three (3) may be suspended upon a two-thirds vote of eligible special districts present.

*Section D Responsibilities of Special District Representatives*

All Special District representatives appointed by this Special District Selection Committee are responsible for exercising the duties of their positions with diligence, integrity and the highest regard for the public trust and the joint interest of the citizens of the cities within Orange County. Representatives are expected periodically to report regularly to the special districts on matters of interest or concern to the member districts.

All Special District representatives shall endeavor to attend all duly noticed meetings of the LAFCO Commission.

*Section E Removal of a Special District Representative*

Any Special District representative appointed by the Special District Selection Committee to LAFCO can be removed by the Special District Selection Committee through the same balloting procedure and majority vote required for appointment.

**ARTICLE VII  
Amendments**

*Section A Authority*

These bylaws may be amended at a meeting of the Special District Selection Committee where two-thirds of the members are present, and then by majority vote of those members present.

*Section B Notice*

Proposed amendments to these bylaws must first be submitted in writing to all members at least four weeks prior to the meeting at which adoption is considered.

## **ARTICLE VIII**

### **Conduct of Meeting**

#### *Section A Notice of Meetings*

Notice of all regular and special meetings of the Special Districts Selection Committee shall be provided in accordance with the "Open Meeting Law", Section 54954.1 of the Government Code, and other applicable provisions of existing law.

#### *Section B Order of Business*

Though the order of business may vary slightly per the Chair of the Special District Selection Committee direction, conduct of the Special District Selection Committee meetings for the purposes of selecting representatives to the Orange County LAFCO Commission shall generally adhere to the following order of business:

- 1. Call to Order*
- 2. Pledge of Allegiance*
- 3. Roll Call*
- 4. Approval of Minutes*
- 5. Public Comment*
- 6. Candidate Statements*
- 7. Distribution of Ballots*
- 8. Counting of ballots*
- 9. Run-off ballots (if necessary)*
- 10. Announcement of results*
- 11. Other Business*
- 12. Adjournment*

**DECLARATION OF QUALIFICATION TO VOTE**

NAME OF DISTRICT

Address

City, State, Zip Code

I, \_\_\_\_\_, \* hereby attest that  
\_\_\_\_\_ \*\*has been authorized by the Board of  
(name of district) to vote in the Orange County Special  
District Selection Committee election.

The Board also designated \_\_\_\_\_ \*\*\*as the  
alternate voting member.

**Name and**

**Title\*:** \_\_\_\_\_

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

**Date:** \_\_\_\_\_

*\*Must be signed by either Board President or Board Secretary*

*\*\* Must be a member of the Board*

*\*\*\*Must be a member of the Board*

**BALLOT**

**ORANGE COUNTY SPECIAL DISTRICT SELECTION COMMITTEE**

**RATIFICATION OF PROPOSED BY-LAWS**

**Instructions**

To vote for ratification of the proposed Orange County Special District Selection Committee By-laws, check the box to the left of your selection, complete the information and sign below.

**Does the Irvine Ranch WD approve the proposed bylaws for the Orange County Special District Selection Committee?**

Yes, the **Irvine Ranch WD** approves the proposed bylaws for the Orange County Special District Selection Committee

No, the **Irvine Ranch WD** does not approve the proposed bylaws for the Orange County Special District Selection Committee

---

Signature of Board President

---

Date of Board Action

**LAFCO must receive ballots by 3:00 pm**

**Thursday, May 26, 2011**

**LAFCO**

**12 Civic Center Plaza, Room 235 Santa Ana, CA 92701**

## Frequently Asked Questions

### 1. Who is the Orange County Special District Selection Committee?

The Orange County Special District Selection Committee is established by Government Code Section 56332 which states: (a) *The independent special district selection committee shall consist of the presiding officer of the legislative body of each independent special district.*

### 2. What is the function of the Orange County Special District Selection Committee?

The Orange County Special District Selection Committee appoints two regular members and one alternate member to the LAFCO Commission. (Government Code 56332{5}.d)

### 3. How is the Orange County Special District Selection Committee different from the Independent Special Districts of Orange County (ISDOC)?

The **Special District Selection Committee** is comprised of the presiding officer (President or Chair) of each independent special district. It is established by the Government Code.

The **Independent Special Districts of Orange County (ISDOC)** is a membership association representing Orange County's independent special districts. ISDOC is the affiliated Orange County chapter of the California Special District Association (CSDA).

### 4. Who wrote the new bylaws?

The Executive Committee of ISDOC established a working group comprised of the following individuals to revise the by-laws for the Special Districts Selection Committee:

- David Cordero—MWDOC/ISDOC
- Patricia J. Quilizapa--- ISDOC
- Robert Ennis—OCWD/ISDOC
- Joyce Crosthwaite—Orange County LAFCO
- John Schatz—Santa Margarita Water District
- Scott Smith—Orange County LAFCO

The ISDOC Executive Committee is comprised by: Rich Freschi (Serrano Water District), John Withers (Irvine Ranch Water District), Bob Moore (South Coast Water District),

Patty Quilizapa (McCormick, Kidman & Behrens), Joan Finnegan (Municipal Water District of Orange County), and Sandra Jacobs (Santa Margarita Water District).

**5. How are the proposed bylaws different from the 1994 "Rules of Procedure"?**

The proposed bylaws:

- Specify that ballots shall be public with the name of special district voting on each ballot.
- Provide a form to be signed by the Presiding Officer or Secretary of the district attesting that the person voting has been designated by the district's governing body. No other authorization will be required.
- Provide a process for mail-in ballots.
- Clarify the voting process.

**6. What is the process for approval of the bylaws?**

Ballots were sent to the presiding officer of each independent special district via certified mail. The board of each independent special district will be asked to meet, discuss, and vote on the proposed by-laws. LAFCO must receive the ballots before 3:00 pm, Thursday, May 26, 2011. Districts may use certified mail, Fed-Ex or another delivery service that provides proof of receipt. Adoption of the proposed bylaws requires the approval of a majority (14 or more) of the districts.

May 23, 2011

Prepared by: C. Spangenberg/S. Malloy

Submitted by: K. Burton

Approved by: Paul Jones 

## CONSENT CALENDAR

### MICHELSON WATER RECYCLING PLANT BIOSOLIDS AND ENERGY RECOVERY FACILITIES - VARIANCE NO. 6

#### SUMMARY:

Staff identified the need to perform a special study to validate the best use of the biogas generated by the Michelson Water Recycling Plant (MWRP) at the April 2011 Technology Ad Hoc Committee. Staff recommends that the Board approve Variance No. 6 to Black & Veatch's engineering services agreement in the amount of \$87,500 to complete the Biogas Utilization Validation Study for the MWRP Biosolids and Energy Recovery Facilities, Project 20847.

#### BACKGROUND:

The Biosolids and Energy Recovery Facilities Preliminary Design Report (PDR) recommended feeding the biogas to a fuel cell to generate electricity. At that time, the fuel cell option provided a financially attractive capital incentive estimated at \$5.6 million. However, since the PDR was completed in September 2010, several technical and financial issues have been identified that warrant reassessment of the fuel cell alternative. As a result, staff is recommending that the life cycle cost net of incentives for the fuel cell option be reassessed and compared to various alternative biogas uses.

#### Proposed Scope of Work for Variance No. 6:

The Biogas Utilization Validation Study will investigate the following five alternatives for biogas use:

1. Feed biogas to the biosolids dryer and the boilers to heat the digesters;
2. Feed biogas to a fuel cell with remaining biogas to the dryer and boilers;
3. Feed biogas to the biosolids dryer and any remaining biogas to microturbines;
4. Sell the biogas to the Gas Company; and
5. Feed biogas to the dryer, boilers and to existing uses at MWRP.

The scope of work, attached as Exhibit "A", includes developing design criteria for each alternative, process flow diagrams, conceptual plan layouts, space requirements, utility requirements, and air permitting requirements. Each alternative will then be evaluated for greenhouse gas emissions, net power use, operations and maintenance costs, and other economic and non-economic considerations. Outside renewable energy funding sources will be updated including application deadlines and an implementation schedule for each alternative. A workshop with staff, draft report, and presentation with recommendations will be made to the Technology Ad Hoc Committee after which the Biogas Utilization Validation Study will be finalized.

Schedule:

The following is the schedule for Biogas Utilization Validation Study.

- Draft Biogas Utilization Validation Study Report – June 27, 2011
- Workshop with IRWD Project Team on Draft Report and Recommendations – July 2011
- Presentation and Recommendation to Technology Ad Hoc Committee – July 2011
- Final Biogas Utilization Validation Study Report – July 22, 2011

FISCAL IMPACTS:

Variance No. 6 in the amount of \$87,500 covers the Biogas Utilization Validation Study and is attached as Exhibit “B”. Sufficient funds exist in the existing expenditure authorization to complete this work.

ENVIRONMENTAL COMPLIANCE:

Staff has initiated the CEQA process for the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities. It is anticipated that the Final Environmental Impact Report will be completed in October 2011.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 18, 2011.

RECOMMENDATION:

**THAT THE BOARD APPROVE VARIANCE NO. 6 TO THE BLACK & VEATCH ENGINEERING SERVICES AGREEMENT IN THE AMOUNT OF \$87,500 TO COMPLETE THE BIOGAS UTILIZATION VALIDATION STUDY FOR THE MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES, PROJECT 20847.**

LIST OF EXHIBITS:

Exhibit “A” – Biogas Utilization Validation Study Scope of Work  
Exhibit “B” – Variance No. 6

# Exhibit "A"

## IRVINE RANCH WATER DISTRICT BIOGAS UTILIZATION VALIDATION STUDY

### BACKGROUND

The Irvine Ranch Water District (IRWD) owns and operates the Michelson Water Recycling Plant (MWRP). New digesters are being designed that will produce biogas, which is a biogenic fuel source and can be used to reduce the plant's purchased energy requirements. This *Biogas Utilization Validation Study* will provide an analysis of the technical and economic viability of various gas utilization technologies. The technologies considered will include biogas cleaning followed by fuel cells or micro turbines for on-site power generation, use of the biogas as a fuel for boilers, pumps in the onsite Pump Station FPS-2, or the thermal solids dryer, and biogas cleaning to meet "near" natural gas quality for purchase by So Cal Gas. Five combined biogas utilization alternatives have been identified that represent a combination of these technologies as shown in Table 1. Digester gas is considered a renewable energy source and its use in place of fossil fuel significantly reduces greenhouse gas (GHG) emissions.

### PURPOSE

The purpose of this study is to evaluate viable alternatives for biogas utilization at the MWRP to validate or supersede the recommendation for fuel cell cogeneration listed in the Preliminary Design Report PDR (HDR, September 2010) for the MWRP Biosolids & Energy Recovery Facilities project. The preferred alternative will be carried forward for detailed project design.

### EVALUATION TASKS

#### A. Identify Existing Process Data and Constraints.

1. Use existing data from the PDR (HDR, September 2010) and IRWD to identify unit costs for utilities and staffing to be used for evaluation of alternatives.
2. Use projected digester gas (biogas) production from the Basis of Design Report prepared by Black & Veatch to perform the evaluation. Consider both startup conditions and design (28 mgd) conditions. Biogas characteristics will be assumed based on similar biosolids facilities.
3. Use the existing design criteria for the heat dryer, boiler, and flare from the Black & Veatch Basis of Design Report.
4. Contact So Cal Gas to determine its level of interest for a biogas purchase agreement.

## **B. Develop Utilization Alternatives for Evaluation.**

1. Prepare narrative description of each biogas utilization technology. Prepare descriptions of all biogas utilization alternatives (combined technologies as shown in Table 1) with preliminary design criteria.
2. Prepare preliminary process flow diagrams and/or identify gas cleaning requirements for the following technologies: (a) fuel cells, (b) micro turbines, and (c) gas cleaning to natural gas quality, (d) dryer, and (e) boiler. The capacity of all evaluated combined heat and power technologies (CHP), including fuel cells and microturbines, will be developed based on a single, constant quantity of biogas feed, to be determined through discussions with IRWD staff. B&V proposes to use a 1.4 MW fuel cell for the evaluation to match the PDR, then size the micro turbine option to utilize the same biogas quantity.
3. Prepare conceptual plan layout drawings and identify space requirements for the following technologies: (a) fuel cells, (b) micro turbines, and (c) gas cleaning to natural gas quality.
4. Model biogas utilization technologies to determine gas utilization potential and benefits from alternatives.
5. Identify water and wastewater requirements for all biogas utilization technologies.
6. Review air emissions permitting requirements associated with each biogas utilization technology. Identify necessary equipment needs to meet expected emission permitting requirements. Permitting requirements will be developed to aid in alternative screening effort; however, detailed permit investigations, including expected permit application schedules and level of effort will not be performed as a part of this task.

## **C. Perform a Non-Economic Evaluation of Alternatives.**

1. Prepare additional information that discusses the advantages, benefits and the disadvantages of each of the biogas utilization alternatives.
2. Estimate greenhouse gas impacts for the purpose of comparing alternatives using Intergovernmental Panel on Climate Change (IPCC) recommended methodology.

## **D. Perform an Economic Evaluation of Alternatives.**

1. Provide initial equipment sizing and selections. See Item B-2 above for the approach to sizing of the fuel cell and micro turbines.

2. Prepare planning level capital cost opinions based on vendor quotes and Engineer's experience with similar facilities. There will be no capital costs associated with the heat dryer, boiler, or flare since these are already part of the current project design.
3. Prepare planning level operation and maintenance cost opinions, including:
  - a. Energy requirements (fuel and electricity).
  - b. Energy benefits (replacement of purchased fuel, etc.).
  - c. Maintenance costs including chemicals (gas cleaning), materials, media, etc.
  - d. Operations and maintenance labor.
  - e. Estimated revenue from replacement of fossil fuel based energy.
  - f. Estimated revenue from sale of treated biogas (to NG quality) to So Cal Gas.
  - g. There will be no O&M costs associated with operating the heat dryer, boiler, and flare since these are already part of the current project design.
4. Develop and update list of funding sources from federal and/or state sources for renewable energy. As part of this task, identify potential deadlines for funding and a high level review of application requirements.
5. Perform a present worth cost analysis for each alternative using a mid-point of biogas production quantities between startup conditions and 28-mgd. In addition, develop a Pro Forma cost model for each alternative.
6. Identify a planning level implementation schedule for each alternative.

**E. Conduct Workshop with Owner.**

Based on information developed above and presented by the Engineer, conduct a review workshop with the District to discuss and recommend the preferred alternative.

1. Prepare a Power Point presentation that summarizes the alternatives, non-economic evaluation, and economic evaluation. Discuss advantages and disadvantages and present a recommended alternative for discussion.
2. Present results, review and discuss with Owner.
3. Based on the review workshop proceedings, revise the evaluation of alternatives.
4. Prepare workshop meeting minutes

**F. Prepare Draft Biogas Utilization Validation Study**

A *Draft Biogas Utilization Validation Study* will be prepared documenting the above evaluation tasks. The draft study will have the following general outline:

- Executive Summary
- Introduction and Background
- Biogas Quantities and Characteristics
- Process Technology Schematics
- Preliminary Process Technology Layout Plans
- Summary of Alternatives (combined process technologies)
- Air Permit Issues and Discussion
- Green House Gas Emission Results
- Preliminary Non-Economic Evaluation
- Preliminary Economic Evaluation
- Alternative Delivery Approaches
- Findings and Recommendations
- Appendices (as required)

**G. Present Findings and Recommendations to Technology Ad Hoc Committee.**

Based on information developed above, make a presentation to the IRWD Technology Ad Hoc Committee to review and recommend the preferred alternative.

1. Prepare a Power Point presentation that summarizes the alternatives, non-economic evaluation, and economic evaluation. Discuss advantages and disadvantages and present a recommended alternative for discussion.
2. Attend two pre-meetings to review the presentation with the General Manager and make revisions.
3. Conduct a presentation to the Technology Ad Hoc Committee.

**H. Finalize Biogas Utilization Validation Study.**

Incorporate final IRWD review comments from the committee meeting and submit *Final Biogas Utilization Validation Study* and attachments. Provide 10 hard copies and one electronic copy (pdf) of the study to the District.

Equipment	TABLE 1 - BIOGAS UTILIZATION ALTERNATIVES				
	Alternative #1 - Base Case	Alternative #2 - Current Design	Alternative #3 - Microturbines	Alternative #4 - Gas Co.	Alternative #5 - Base Case plus FPS-2 gas use
Heat Dryer	<b>Primary</b> use for biogas when in operation. Use low temp. waste heat for APAD sludge heating.	<b>Secondary</b> use of biogas (after fuel cell) when in operation. Use low temp. waste heat for APAD sludge heating.	<b>Primary</b> use of biogas when in operation. Use low temp. waste heat for APAD sludge heating.	<b>Secondary</b> use natural gas in dryer; negotiate rate with Gas Co. Use low temp. waste heat for APAD sludge heating.	<b>Primary</b> use for biogas when in operation. Use low temp. waste heat for APAD sludge heating.
Boiler	<b>Secondary</b> use of surplus biogas after dryer and when dryer is off.	<b>Tertiary</b> use - Use surplus biogas after fuel cell and dryer; otherwise use natural gas.	<b>Tertiary</b> use - Use surplus gas after dryer and microturbines; otherwise use natural gas.	<b>Tertiary</b> use of natural gas; negotiate rate with Gas Co.	<b>Tertiary</b> - Use surplus biogas after dryer and FPS-2 Pumps; otherwise use natural gas.
Flare	<b>Tertiary</b> use - Flare excess biogas after dryer and boiler.	<b>4th</b> - Flare excess biogas after fuel cell, dryer, and boiler.	<b>4th</b> - Flare excess biogas after dryer, microturbines, and boiler.	<b>4th</b> - Flare excess biogas not sold to Gas Co.	<b>4th</b> - Flare excess biogas after dryer, boiler, and FPS-2 Pumps.
Fuel Cell	None - allocate space for future.	<b>Primary</b> use for biogas. Utilize waste heat for primary heat loop.	No.	No.	No.
Microturbines	None - allocate space for future.	No.	<b>Secondary</b> use for biogas. Utilize waste heat for primary heat loop.	No.	No.
FPS-2 Pumps	No.	No.	No.	No.	<b>Secondary</b> use of biogas after dryer.
So Cal Gas	No.	No.	No.	<b>Primary</b> - Sell all biogas & "green credits" to Gas Co./ they treat all biogas to NG quality.	No.



**IRVINE Exhibit "B" DISTRICT  
PROFESS VARIANCE**

Project Title: MWRP  
Biosolids & Energy Recovery Facilities

Project No.: 20847

Purchase Order No.: 126171

File No.: \_\_\_\_\_

Date: April 26, 2011

Variance No.: 6

Project No. 20847

Originator:     IRWD     ENGINEER/CONSULTANT     Other (Explain) \_\_\_\_\_

Description of Variance (*attach any back-up material*):

Prepare a Biogas Utilization Validation Study to evaluate energy recovery alternatives for utilizing biogas. The purpose of this study is to validate the PDR recommendation of a fuel cell as the preferred alternative. See attachment for further details.

Engineering & Management Cost Impact:

Classification	Man-hours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
<b>See Attachment for Details</b>						
<b>Total \$ =</b>						<b>87,500</b>

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
4	Draft Special Study – Biogas Utilization	None	NA	June 27, 2011
4	Final Special Study – Biogas Utilization	None	NA	July 22, 2011
6	Complete Final Design	December 14, 2011	None (assuming fuel cell is the preferred alternative)	December 14, 2011

Required Approval Determination:

Total Original Contract	\$ <u>12,883,316</u>	<input type="checkbox"/> General Manager: Single Variance less than or equal to \$30,000.
Previous Variances	\$ <u>1,318,660</u>	<input type="checkbox"/> Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000.
This Variance	\$ <u>87,500</u>	<input checked="" type="checkbox"/> Board: Single Variance greater than \$60,000.
Total Sum of Variances	\$ <u>1,406,160</u>	<input type="checkbox"/> Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher.
New Contract Amount	\$ <u>14,289,476</u>	
Percentage of Total Variances to Original Contract	<u>10.9%</u>	

ENGINEER/CONSULTANT: Black & Veatch Corp.

[Signature] April 29, 2011  
Project Engineer/Manager Date

[Signature] April 29, 2011  
Engineer's/Consultant's Management Date

IRVINE RANCH WATER DISTRICT

[Signature] 5/6/11  
Department Director Date

\_\_\_\_\_  
General Manager/Comm./Board Date

# IRVINE RANCH WATER DISTRICT

## PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: MWRP Biosolids and Energy Recovery Facilities

Project No.: 20847 Project Manager: Carl Spangenberg

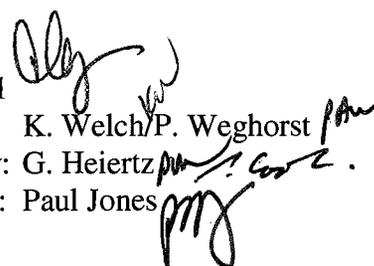
Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	OpenCEL, Egg-Shaped Digesters, P Recovery, Risk Mgmt, HAZOP, Upsize Dryer System to 6,000 kg/hr.	01-13-11	01-31-11	\$783,000
2	Solids Receiving Facility and Upsizing Dryer to 7,000 kg/hr.	01-13-11	01-31-11	\$458,000
3	Additional geotechnical field investigation services and additional geotechnical seismic analysis and recommendations.	03-07-11	03-07-11	\$20,360
4	Prepare and Conduct Presentation to the Board Technology Ad Hoc Committee	03-30-11	04-04-11	\$27,500
5	Conduct Additional 2-Day HAZOP	04-22-11	04-26-11	\$29,800
6	Prepare a Biogas Utilization Validation Study	04-26-11		\$87,500

May 23, 2011

Prepared by: K. Welch/P. Weghorst

Submitted by: G. Heiertz

Approved by: Paul Jones



## CONSENT CALENDAR

### VARIANCE REQUEST FOR STRAND RANCH RECOVERY FACILITIES DESIGN

#### SUMMARY:

Staff has requested additional work from Kennedy Jenks/Consultants (KJC) for the design of the Strand Ranch Water Banking Project Recovery facilities. This work includes participation in unforeseen meetings, enhanced outside agency coordination and additional design services. Staff has prepared Variance No. 4 to KJC's Professional Services Agreement and requests that the Board approve the work.

#### BACKGROUND:

In July 2010, the Board approved a contract in the amount of \$400,916 with KJC to complete the design of the Strand Ranch Recovery Facilities. Several variances to the contract have been approved including:

- Variance No. 1 in the amount of \$18,000 for direct costs associated with electric service applications for 9 wells;
- Variance No. 2 in the amount of \$25,338 for supplemental geotechnical services and additional soils investigations to support detailed design of pipe crossings; and
- Variance No. 3 in the amount of \$22,038 for additional field survey work needed to prepare detailed design plans.

KJC has completed the 90-percent design package for the recovery facilities and received comments from IRWD, Kern County Water Agency (KCWA) and Rosedale-Rio Bravo Water Storage District. KJC is currently preparing the 100-percent designs. During the process of providing these design services staff has requested additional work from KJC. The additional work items include:

1. Attendance of additional meetings to resolve hydrogeology and well siting issues related to the project.
2. Enhanced coordination with the Kern County Water Agency in the design of the Cross Valley Canal turn-ins.
3. Evaluation of the use of alternate pump and motor configurations that provide for a wider range of operating conditions while taking into consideration efficiencies and costs of operation.
4. Incorporation of an existing well into the recovery project design.
5. Detailed coordination with Pacific Gas and Electric required for well location changes and in preparing easements for new electric service lines.

6. Revisions to wellhead, pipeline and Cross Valley Canal turn-in designs based on new well locations and the need to optimize water quality blending capabilities.
7. Revisions to expected levels of bid and construction phase support.

KJC has submitted a scope of work for the above work items. The scope of work is included as Exhibit "A". Variance No. 4 to KJC's Professional Services Agreement to perform this work for the amount of \$75,246 is attached as Exhibit "B".

**FISCAL IMPACTS:**

The Strand Ranch Recovery Facilities, Project 11289, is included in the FY 2010-11 Capital Budget and staff has determined that sufficient funds exist in the budget contingency to include all of the proposed work in the amount of \$75,246.

Project No.	Current Budget	Addition <Reduction>	Total Budget	Existing EA	This EA Request	Total EA Request
11289	\$13,162,700	\$0	\$13,162,700	\$11,401,300	\$0	\$11,401,300

**ENVIRONMENTAL COMPLIANCE:**

A Final Environmental Impact Report has been prepared, certified and the project approved in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. Seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3.

**COMMITTEE STATUS:**

This item was reviewed at the Engineering and Operations Committee on May 18, 2011.

**RECOMMENDATION:**

THAT THE BOARD APPROVE VARIANCE NO. 4 TO THE PROFESSIONAL SERVICES AGREEMENT WITH KENNEDY JENKS/CONSULTANTS IN THE AMOUNT OF \$75,246 FOR ADDITIONAL MEETINGS, ENHANCED OUTSIDE AGENCY COORDINATION AND ADDITIONAL DESIGN SERVICES.

**LIST OF EXHIBITS:**

- Exhibit "A" – Kennedy Jenks Consultants Scope of Work for Variance Work Items
- Exhibit "B" – Variance No. 4 for Kennedy Jenks/Consultants Professional Services Agreement

## Kennedy/Jenks Consultants

### Engineers & Scientists

2355 Main Street, Suite 140  
Irvine, California 92614  
949-261-1577  
FAX: 949-261-2134

9 May 2011

Mr. Paul Weghorst  
Water Resources Manager  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, California 92618

Subject: Variance No. 4 Request  
Strand Ranch Recovery Facility Design Services  
Project No.: 11289 K/J 1083035\*00

Dear Paul:

The final design package for the Strand Ranch Recovery Facilities is being finalized, based on the recent receipt of key stakeholder (Kern County Water Agency, Rosedale-Rio Bravo Water Storage District, and Irvine Ranch Water District (IRWD)) comments on the 90-percent design package that was submitted on 31 January 2011. Many of the previously unresolved hydrogeology and well siting issues related to the project have now been resolved, and our focus is to assist IRWD in achieving the objective of completing construction of the recovery facilities in early 2012. This letter summarizes the chronology of a number of key project issues that were resolved during design development, and how these issues impacted the scope of work and fee estimate for Kennedy/Jenks Consultants' (Kennedy/Jenks) design services. This serves as the basis for this request for Variance No. 4 to our Agreement dated 2 August 2010.

### Overview

Kennedy/Jenks prepared the original scope of work for the design (July 2010) on the premise that key siting and design parameters were established by the pre-design work that was performed by a prior IRWD consultant, such as the number and location of recovery wells and their associated production rates and water quality parameters. During the design development, the design team worked closely with IRWD, Wildermuth, PG&E and key agency stakeholders (KCWA, RRBWSD) to work through a number of evolving project issues and technical challenges, some of which are still unresolved at this time. These issues are primarily associated with the completion of groundwater modeling and water quality issues, which were dependent upon information from a well drilling and testing program that was performed in parallel with the design. This work was intentionally performed in parallel, in order for IRWD to maintain an important project schedule milestone of having operational recovery facilities by early 2012. The well drilling and testing program took more time than originally anticipated. The original project basis is restated below, followed by a chronology of these project issues and their impacts to the design process.

Original Project Basis - The original scope included design of wellhead facilities and pipelines to equip up to 9 wells on the Strand Ranch. This scope assumed that certain key design

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Irvine Ranch Water District  
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parameters were established as a basis for design, as described in the July 2010 Project Manual for Drilling and Construction of Extraction Wells (Wildermuth 2010). These included the well locations, target production rate (5 cfs), and operating water level (less than 50 feet bgs to more than 180 feet bgs). These parameters were confirmed and refined during an initial meeting with IRWD and Wildermuth on 27 August 2010 and were used as the best available information on which to prepare the draft Preliminary Design Report (PDR) and the 30 percent design drawings (14 October 2010). The well locations and preliminary design (motor sizes) were used as basis for submittal of PG&E applications for service in September 2010.

**Incorporating Flexibility for Potential "Worst-case" Groundwater Level Decline** - As a water supply reliability project, a key issue that surfaced early during the design process was the need to plan for future decline of water levels to below historic levels. This became particularly relevant as the impacts of the recent drought and the resulting significant local pumping of banked groundwater resulted in exceptional groundwater level declines. During October and November 2010, IRWD directed Wildermuth to conduct groundwater modeling to simulate a worst-case scenario, where initial groundwater levels are 50-feet below current conditions, or at 270 feet bgs. At the request of IRWD, Kennedy/Jenks attended a series of meetings with IRWD and Wildermuth to review on-going groundwater modeling results. Results of this modeling confirmed that the desired capacity of 36 to 40 cfs could be achieved with 8 wells operating at an initial water level of 270 feet. IRWD then directed Kennedy/Jenks to revise the design to equip 8 wells (SREX-9 was dropped), with SREX-6 to be used to achieve short term peaking at 40 cfs. These design changes were incorporated into the Final PDR (10 December 2010) and the subsequent 90-percent Design Submittal.

**Optimization of Production and Energy Costs under Varying Operating Conditions** - Another issue that developed during October 2010, was the interest to optimize both production rates and energy costs, based on the wide range of possible water level conditions that were now being considered. IRWD requested that Kennedy/Jenks consider an innovative approach to efficiently meet both high and low groundwater operating conditions. This approach would include establishing a higher production rate for some wells during average or shallow groundwater level conditions, while preserving system capacity for the worst-case scenario. Specifically, IRWD asked Kennedy/Jenks to evaluate use of a larger pump that could deliver up to about 8.9 cfs at shallow water levels (i.e., 20 to 50 feet bgs), but maintain the 5 cfs target at the low water level of 270 feet. In response, Kennedy/Jenks prepared a technical and cost evaluation and submitted a Technical Memorandum (17 November 2010) with the recommendation to incorporate the larger pump into the design. This change also prompted the need to upsize the pipeline system design to accommodate the larger flow capacity of the wells. These design modifications were also incorporated into 90-percent Design Submittal.

**Additional Agency Coordination** - Final implementation of the project is dependent upon securing an approval from the Kern County Water Agency (KCWA) to discharge recovered groundwater from the wells into the Cross Valley Canal (CVC). The KCWA must approve construction plans for the CVC Turn-In facilities, and enter into an Operating Agreement for

Mr. Paul Weghorst  
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discharge. Extra effort has been required to coordinate with the KCWA. Kennedy/Jenks initially contacted Martin Varga, KCWA Engineering Manager, but was directed to coordinate all correspondence through Eric Averett of the Rosedale Rio-Bravo Water Storage District (RRBWSD). Several attempts were made to arrange an initial meeting with RRBWSD during August and September 2010 to discuss their design requirements. In a further effort to obtain their design requirements, Kennedy/Jenks submitted a letter to the KCWA (via Rosedale Rio-Bravo) on 29 September 2010 with conceptual design plans and a request for access to perform geotechnical investigations at representative CVC Turn-In locations. Initial comments from the KCWA were received on 7 October 2010. A meeting and site visit was subsequently held on 22 November 2010 to review the design concepts, their comments, and confirm locations for the geotechnical investigations. Coordination efforts with KCWA have continued during detailed design, and KCWA comments were addressed and included in the 90-percent Design Submittal which was also provided to KCWA for review. Design comments were received from KCWA on 17 March 2011. The 100% design submittal slated for submittal in early June will address these comments. In addition to these design changes, requested KCWA revisions to the geotechnical report are also being provided.

Well Site Relocation - Results of the ongoing well drilling and testing program prompted the need to consider alternate locations for the remaining wells that were not yet drilled at that time. IRWD called for a meeting on 28 January 2011 with Kennedy/Jenks and Wildermuth to discuss possible alternate locations for wells SREX-2 and SREX-8. The decision was made to locate SREX-2 and SREX-8 at locations further west on the Strand Ranch. This prompted the need for additional topographic survey, and revisions to the 90-percent Design Package, including preparation of plans for wellhead facilities at the new SREX-2 and SREX-8 locations, revised pipeline alignments, and a new location for one of the CVC Turn-Ins.

Design Modifications to Blend for Water Quality – Results of water quality testing during the drilling program indicated elevated levels of arsenic in certain wells. IRWD called for a meeting on 23 March 2011 with Wildermuth and Kennedy/Jenks to discuss options to address water quality. Design modifications included revising the piping system and CVC turn-in design associated with the southern extraction wells to provide operating flexibility to blend from combinations of SREX-5, 6 and 7. On 6 May 2011, the decision was made to not install SREX-8 since well field production capacity can be achieved with seven (7) wells, and to avoid anticipated elevated arsenic levels at the proposed location. The 100% design submittal will address these design changes.

Consolidated Submittals - The original design was based on the following design submittals: 1) pipeline systems design, 90% and 100% submittals, and 2) wellhead facilities design – 60%, 90% and 100% submittals. Based on changes to the construction schedule, Kennedy/Jenks recommended that the design packages be combined into a single design package for bidding and construction. This should result in cost savings during design, by preparing and submitting one design package instead of two. This should also provide additional savings in the administrative and consulting costs associated with bidding and construction.

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### **Scope of Work for Variance 4 Request**

The Scope of Work changes are organized consistent with the task structure presented in the 2 August 2010 Agreement for Strand Ranch Recovery Facility Design Services.

#### **Task 1 – Project Management, QA/QC**

This task is expanded to include several items of new work.

Meetings – a series of requested meetings with IRWD, Wildermuth and stakeholders as required to address technical issues that were not anticipated in the original scope. These included topics such as how to design for lower groundwater levels, revised location and number of wells to address production requirements, and water quality constraints. The original scope included a project kick-off meeting, a site visit/meeting and four (4) meetings. The scope is expanded to include a total of 15 meetings, as listed below. Nine (9) meetings are beyond what was included in the original scope and fee.

- Kick-off Meeting with IRWD (8/2/10)
- Site Visit/Meeting with Rosedale Rio-Bravo (8/17/10)
- IRWD/Wildermuth/Hydrogeology Basis of Design (8/27/10)
- PDR Review Meeting with IRWD (10/25/10)
- IRWD/Wildermuth/Groundwater Modeling (10/26/10)
- IRWD/Wildermuth/Groundwater Modeling (11/16/10)
- Site Visit/Meeting with Kern County Water Agency (11/22/10)
- IRWD/Wildermuth/Number & Location of Wells (1/28/11)
- Design Review Meeting with IRWD (2/22/11)
- IRWD/Wildermuth/Arsenic Levels (3/23/11)
- Constructability Review Meeting with IRWD and Dee Jasper (TBD)
- 100% Design Review Meeting with IRWD (TBD)
- IRWD/Wildermuth Water Quality Meeting (TBD)
- IRWD//Operating Agreement Meetings (2) (TBD)

Agency Coordination - The scope of this task also includes the extra efforts required to coordinate design input and review with Rosedale Rio-Bravo and the KCWA. This includes the on-going efforts during design development and approval for the Turn-In designs at each of the four locations, and will include an estimate of effort to provide future technical support to IRWD during negotiations of the Operating Agreement that applies collectively to the new Turn-ins.

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**Schedule Updates** - The scope of this task included updates to the project schedule and approach to reflect changes in priority, as directed by IRWD. This included changes made to the schedule in September 2010 for phased construction of the northern and then southern recovery systems, to accommodate proposed basin recharge operations. The schedule was revised again in February 2011 to accommodate further changes in basin recharge operations. The current schedule (as of this Variance) calls for construction of all wellhead facilities first, with construction of each pipeline system to be coordinated with Rosedale Rio-Bravo in early 2012 as certain basins can be made available (i.e., based on recharge activities and when certain basins can be made available). Based on the revised construction schedules, Kennedy/Jenks recommended that the two separate design packages (Pipeline, Wellhead Facilities) called for in the original scope be combined into a single design package for bidding with savings in associated design costs. Costs for these updates were accommodated within the original project budget for this task.

#### **Task 2 - Research Existing Record and Inventory Facilities**

No changes to this task scope are required.

#### **Task 3 – Preliminary Design Report**

This scope included preparation of a draft and final PDR which we submitted to IRWD on 14 October 2010 and 10 December 2010, respectively, and a workshop. The scope of Variance 4 includes the following additional work:

Preparation of a Technical Memorandum to evaluate larger pump size performance, efficiency and costs, submitted to IRWD on 17 November 2010.

Evaluate use of SREX-6 based on existing conditions (limited perforations/depth, smaller casing). Develop recommendations on whether to equip SREX-6 for short term peaking and possible design options.

#### **Task 4 – PG&E Services Coordination**

The scope of this task included preparation of Memorandum to define design criteria and coordination requirements and nine (9) service applications. The memorandum was submitted (as email) on 17 September 2010 and incorporated into the PDR on 14 October 2010. The service applications were submitted to IRWD and PG&E in September 2010 (9/20/10 – 9/22/10) to initiate PG&E design activities, along with application fees (approved under Variance 1).

The scope of Variance 4 includes the following additional work:

- Extra coordination with PG&E to relocate service locations (i.e., currently in design) for SREX-2 and SREX-8.

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- Extra coordination with PG&E for SREX-6 service: Cancel permanent service to SREX-6 (January 2011). Research requirements for providing temporary power (February 2011); restart application for service based on use of SREX-6 for water quality blending (April 2011).
- Prepare "Savings by Design" applications and submit to PG&E for use of premium efficiency motors. (TBD).
- Provide technical support (exhibits) for modifications to PG&E easements on Strand Ranch to accommodate the new service lines.
- PG&E designs have been completed for SREX-1, 2, 3, 4, 5 and 7 and will be incorporated into the wellhead facilities design package. PG&E design requirements for SREX-6 and SREX-8 will be incorporated by bid addendum or construction change orders as they become available.

#### **Task 5 – Prepare Pipeline PS&E**

The scope of this task included preparation of a 90-percent and 100-percent design package based on the original well locations, using the original survey as base-maps and the previous geotechnical investigations (Kleinfelder and BSK). The 90-percent design package was submitted on 31 January 2011. The 100-percent design package will be submitted in early June 2011. We anticipate a final submittal will be required, to be submitted in late June 2011. The scope of this task was amended by Variance 2 to provide additional geotechnical investigation to support design of the CVC turn-ins and proposed basin embankment and Pioneer canal crossings. The scope was amended by Variance 3 to provide additional survey required for the proposed pipeline routes and CVC turn-in locations.

The scope of Variance 4 includes the following additional work:

- Development of revised AutoCAD base-maps using updated survey information provided by subconsultants under Variance 3.
- Revised pipeline sizes/design to accommodate increased production rates (i.e., from 5 cfs to 8.9 cfs) from individual wells.
- Additional survey to cover revised location of SREX-2 and the revised location of the CVC Turn-in associated with pipeline system for SREX-1/SREX-2. Additional survey for the revised location of SREX-8 was included to provide IRWD the option to construct SREX-8 should it become required.
- Design of pipelines associated with new location of SREX-2.
- Design of CVC Turn-in at revised location associated with revised pipeline system for SREX-1/SREX-2.

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Irvine Ranch Water District  
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- Modification of pipeline design and CVC turn-in to provide blending for water quality from SREX-5, 6 and 7.
- Revise Design to address comments received from KCWA on CVC turn-ins.
- Provide technical support (exhibits) for modifications to KCWA easements on Strand Ranch to accommodate the new CVC Turn-ins.

Final design submittal - The original scope included a 90-percent and 100-percent submittal, but did not include a final submittal.

Additional Survey/Geology Work - The original design scope was also based on the use of preliminary site plans, survey and geotechnical studies that were made available by IRWD from a previous consultant. Additional survey and geotechnical investigations and survey were required to complete the design to accommodate requested changes to the project configuration. Variances 2 and 3 were previously approved to cover the additional geotechnical investigation and survey work by our subconsultants in advance of them completing their work. However, these variances did not include the additional coordination, engineering and drafting time that was required to finally coordinate these activities and incorporate the results into the base maps and engineering design.

This Variance will also reflect the savings associated with combined the design package into one submittal (e.g., savings associated with fewer sheets (e.g., title sheet, combined notes, reproduction).

#### **Task 6 – Prepare Wellhead Facility PS&E**

The scope of this task included preparation of 60, 90 and 100-percent design submittals. We submitted a 60-percent submittal (as part of a combined pipeline and wellhead facility design package) on 31 January 2011. The design submittal was based on previously completed pump tests for SREX-1 and SREX-6. Data from SREX-1 was used as basis for the other proposed wells. Since pump tests for recently drilled wells are now available, the design will be revised to incorporate results of actual well pumping tests for SREX-2, 3, 4, 5 and 7.

The scope of Variance 4 includes the following work items:

- Design of new wellhead facilities at the new location for SREX-2. The wellhead design for SREX-8 will be removed from the design package. (The 60-percent design submittal was based on original locations for these two 2 wells).
- Develop revised recommendations for target pumping rate for SREX-4 and SREX-7, based on the lower specific capacities (i.e., 22 gpm/ft drawdown) observed during recent pump tests. These recommendations should be developed in coordination with Wildermuth to consider drawdown impacts over the range of water levels, and water quality blending considerations. Target production should achieve 5 cfs at 270-foot bgs

Mr. Paul Weghorst  
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static water level, but may need to be limited at shallower depths to avoid excessive drawdown.

**Task 7 – Bid Phase Services**

The scope of this task included technical support during bidding of two contract packages. The scope is reduced to reflect bid phase services for only one contract package.

**Task 8 – Construction Phase Services**

The scope of this task provided for on-call technical support during construction, limited to submittal reviews, RFIs, and preparation of record drawings. The scope of this Task is expanded to include a pre-construction kick-off meeting in Bakersfield.

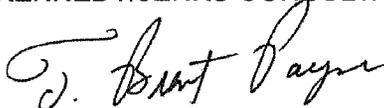
**Budget Request for Variance 4**

The total budget request for Variance 4 is \$75,246. We have attached the cost breakdown, along with the IRWD Variance form and supporting subconsultant quotes.

We look forward to working with you to complete this important project, and we appreciate your support. If you have any questions or comments, please feel free to contact me directly at (949) 567-2107, or Craig Lichty at (707) 526-1064, ext. 1302.

Very truly yours,

KENNEDY/JENKS CONSULTANTS



T. Brent Payne, P.E.  
Project Manager



Craig Lichty, P.E.  
Officer in Charge

**Exhibit "B"**  
**IRVINE RANCH WATER DISTRICT**  
**PROFESSIONAL SERVICES VARIANCE**

Project Title: Strand Ranch Recovery Facility Design File No.: \_\_\_\_\_  
 Date: 05/09/2011  
 Variance No.: 4

Project No.: 11289  
 Purchase Order No.: 126111  
 Originator:  IRWD  ENGINEER/CONSULTANT  Other (Explain) \_\_\_\_\_

Description of Variance (attach any back-up material):  
Changes in Scope of Design Services

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
See attached						
<b>Total \$ =</b>						<b>\$75,246</b>

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
5 & 6	Prepare Pipeline Plans, Specifications, and Cost Estimate	100% Design – March 2011	Extend 100% Design – 3 Months	100% Design – early June 2011. Final Design in late June 2011

Required Approval Determination:

Total Original Contract	<u>\$400,916</u>	<input type="checkbox"/> General Manager: Single Variance less than or equal to \$30,000. <input type="checkbox"/> Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000. <input type="checkbox"/> Board: Single Variance greater than \$60,000. <input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher.
Previous Variances	<u>\$65,376</u>	
This Variance	<u>\$75,246</u>	
Total Sum of Variances	<u>\$140,622</u>	
New Contract Amount	<u>\$541,538</u>	
Percentage of Total Variances to Original Contract	<u>35.1%</u>	

ENGINEER/CONSULTANT:

*J. Sant Payne* 9 May 2011  
 Project Engineer/Manager Date

*Cheryl Wolcott* 9 May 2011  
 Engineer's/Consultant's Management Date

IRVINE RANCH WATER DISTRICT

*[Signature]* <sup>for Gary Harvick</sup> 5/10/11  
 Department Director Date

\_\_\_\_\_  
 General Manager/Comm./Board Date

**Proposal Fee Estimate**

**Kennedy/Jenks Consultants**

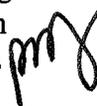
CLIENT Name: Irvine Ranch Water District  
 PROJECT Description: Strand Ranch Recovery Project -Variance 4  
 Proposal/Job Number: PR 11289 Date: 5/9/2011

Classification:	Hourly Rate:	Eng-Sc-8 - B. Payne, C.	Eng-Sc-7 - A. Peterson, P.	Eng-Sc-6 - K. Wong, S.	Eng-Sc-5 - R. Lyons, J.	Eng-Sc-4	Eng-Sc-3, Staff	Eng-Sc-2, S. Rosolia,	Designer	CAD	Project Admin.	Admin. Assst.	Aide	Total Hours	KJ Labor Fees	Sub	KJ Sub-Markup 10%	KJ ODCs Fees	Total Expenses	Fees	Total Labor + Expenses
9 July 2010 Schedule of Charges																					
<b>Task 1 - Project Management, QA/QC</b>																					
Meetings	24	10	4																		\$9,836
Coordination with Stakeholders	16	8																			\$5,456
<b>Task 1 - Subtotal</b>	40	18	4											62	\$13,892	\$0	\$400	\$400	\$400	\$400	\$14,292
<b>Task 2 - Research Existing Records and Inventory Facilities</b>																					
None																					
<b>Task 2 - Subtotal</b>																					
<b>Task 3 - Preliminary Design Report</b>																					
Technical Memorandum (Pump Memo)	8	8	24											42	\$8,220	\$0	\$0	\$0	\$0	\$0	\$8,220
SREX-6 Evaluation	4	8	16											28	\$5,648	\$0	\$0	\$0	\$0	\$0	\$5,648
<b>Task 3 - Subtotal</b>	12	16	40											70	\$13,868	\$0	\$0	\$0	\$0	\$0	\$13,868
<b>Task 4 - PG&amp;E Service Coordination</b>																					
Design Coordination (Relocation of Service at SREX-2)	2													2	\$472	\$0	\$0	\$0	\$0	\$0	\$472
Research Temporary Facilities at SREX-6	2													2	\$472	\$0	\$0	\$0	\$0	\$0	\$472
Prepare PG&E Design-for-Savings Applications	2													2	\$472	\$1,900	\$190	\$190	\$2,090	\$2,090	\$2,562
Review/Incorporate PG&E Design Requirements	4													12	\$1,744	\$0	\$0	\$0	\$0	\$0	\$1,744
<b>Task 4 - Subtotal</b>	10	0	0											18	\$3,160	\$1,900	\$190	\$0	\$2,090	\$2,090	\$5,250
<b>Task 5 - Prepare Pipeline Plans, Specifications and Cost Estimates</b>																					
Revise Basemaps per new survey	16													24	\$2,672	\$0	\$0	\$0	\$0	\$0	\$2,672
Revise Design for Upsizing Flows/Pipe Sizes	4													6	\$872	\$0	\$0	\$0	\$0	\$0	\$872
Revise Design to change well location for SREX-2	2													2	\$3,744	\$3,480	\$348	\$3,828	\$3,828	\$7,572	
Design CVC Turn-in at new location	2													2	\$7,324	\$0	\$0	\$0	\$0	\$0	\$7,324
Address KCWA comments, including easement support	2													2	\$6,252	\$0	\$0	\$0	\$0	\$0	\$6,252
Final Design Submittal	4													4	\$6,112	\$0	\$0	\$0	\$0	\$0	\$6,112
Credit for one design package	-2													-27	-\$3,626	\$0	\$0	\$0	\$0	\$0	-\$3,626
<b>Task 5 - Subtotal</b>	8	15	0											197	\$27,606	\$3,480	\$348	\$0	\$3,828	\$31,434	
<b>Task 6 - Prepare Well Equipping Plans, Specifications and Cost Estimates</b>																					
Design of wellhead facilities at new locations for SREX-2	2													2	\$9,428	\$0	\$0	\$0	\$0	\$0	\$9,428
Develop recommendations for production at SREX-4, 7	2													12	\$2,404	\$0	\$0	\$0	\$0	\$0	\$2,404
<b>Task 6 - Subtotal</b>	4	4	32											80	\$11,832	\$0	\$0	\$0	\$0	\$0	\$11,832
<b>Task 7 - Bid Period Services</b>																					
Reduce scope to reflect one bid package	9													-35	-\$5,332	\$0	\$0	\$0	\$0	\$0	-\$5,332
<b>Task 7 - Subtotal</b>	9													0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

May 23, 2011

Prepared by: K. McLaughlin

Submitted by: B. Beeman

Approved by: Paul Jones 

## ACTION CALENDAR

### EPA WATERSENSE PROGRAM: WATER SOFTENERS

#### SUMMARY:

This report provides an update on the US Environmental Protection Agency's (EPA) WaterSense Program. Staff recommends that the Board consider opposing EPA's efforts in developing WaterSense standards for self-regenerating water softeners, and joining a coalition of other agencies in this effort.

#### BACKGROUND:

In November 2010, the EPA issued a Notice of Intent (NOI) to develop draft efficiency and performance specifications for cation exchange water softeners, which include self-regenerating water softeners. While it is commendable for WaterSense to develop water efficiency standards for water softeners, the WaterReuse community has concerns that these standards may act as an implied endorsement of self-regenerating water softeners and encourage the use of these devices that have a detrimental impact on salt management in the Western United States. A coalition letter opposing the NOI was sent to the EPA in January, which is attached as Exhibit "A", and several meetings have been held with EPA representatives on this topic in the past several months. To date the EPA has not demonstrated an interest in addressing the coalition's concerns in the development of water softener standards.

Staff recommends that the Board consider recommending to the Board that the District oppose the Environmental Protection Agency's development of draft efficiency and performance specifications for residential cation exchange water softeners and that IRWD join coalition efforts against the development of WaterSense standards for self-regenerating water softeners.

#### FISCAL IMPACTS:

Not applicable.

#### ENVIRONMENTAL COMPLIANCE:

Not applicable.

#### COMMITTEE STATUS

This item was reviewed at the Water Resources Policy and Communications Committee on May 17, 2011.

RECOMMENDATION:

THAT THE BOARD OPPOSE THE ENVIRONMENTAL PROTECTION AGENCY'S DEVELOPMENT OF DRAFT EFFICIENCY AND PERFORMANCE SPECIFICATIONS FOR RESIDENTIAL CATION EXCHANGE WATER SOFTENERS AND THAT IRWD JOIN COALITION EFFORTS AGAINST THE DEVELOPMENT OF WATERSENSE STANDARDS FOR SELF-REGENERATING WATER SOFTENERS.

LIST OF EXHIBITS:

Exhibit "A" – Coalition Letter to EPA Opposing Notice of Intent

**Association of California Water Agencies (ACWA)  
Association of Metropolitan Water Agencies (AMWA)  
California Association of Sanitation Agencies (CASA)  
California Municipal Utilities Association (CMUA)  
City of Phoenix, Water Services Department  
City of Scottsdale, Water Resources  
Clean Water Action  
Inland Empire Utilities Agency  
Las Cruces Utilities  
Metro Wastewater Reclamation District  
Multi-State Salinity Coalition  
National Association of Clean Water Agencies (NACWA)  
National Water Research Institute  
National Resources Defense Council  
Planning and Conservation League  
Sanitation Districts of Los Angeles County  
Southern California Alliance of Publicly Owned Treatment Works (SCAP)  
Southern California Salinity Coalition  
Southern California Water Committee  
Tri-TAC  
WaterReuse Association  
WaterReuse California  
Western Coalition of Arid States (WESTCAS)**

January 25, 2011

Peter S. Silva, Assistant Administrator  
Office of Water  
Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Mailcode 4101M  
Washington, DC 20460

**Subject: WaterSense Notification of Intent to Develop Efficiency and Performance  
Specifications for Residential Cation Exchange Water Softeners**

Dear Mr. Silva:

The undersigned organizations are writing to call to your attention our concerns regarding the Notification of Intent (NOI) to Develop Efficiency and Performance Specifications for Residential Cation Exchange Water Softeners by the U.S. Environmental Protection Agency's (EPA's) WaterSense Program. For the reasons indicated below, we urge that the NOI be

Peter S. Silva  
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expanded to include non-salt discharging appliances. We request the opportunity to meet with you, at your earliest convenience, to discuss potential solutions to these concerns. We believe

that we can work with you to develop a fully integrated approach that will work for WaterSense Partners throughout the nation.

The undersigned organizations are all strong supporters of the Environmental Protection Agency's WaterSense program. We firmly believe in the importance of improving the water efficiency of appliances, buildings, and landscapes, and in the significance of creating an easily-recognizable "brand" for products with the highest water efficiency ratings. Indeed, many of the undersigned organizations are WaterSense Partners. We actively promote the water efficient products endorsed by the EPA through this program.

We understand that typical Cation Exchange Water Softeners (also known as Self-Regenerating Water Softeners (SRWS)) used in homes are water intensive. These devices are also very effective at removing hardness from water, which means they are useful for protecting other water and energy efficient appliances from the impacts of calcium and magnesium that are found in local water supplies. For WaterSense to identify self regenerating water softeners as candidates for evaluation is understandable.

The problem is the amount of salt that this type of water softener discharges to the sewer system on average 1 pound or more of salt per day. From a national perspective, this is a significant water quality concern, potentially contributing to impairments in surface and groundwater supplies. The EPA's 303 (d) impaired waters list shows almost 1,800 listings across the country due to salinity or related compounds (including total dissolved solids, chloride, sulfates, conductivity and/or combinations of these compounds). High levels of salt entering sewer systems also compromise the ability of communities to use recycled water when salinity in these supplies rises to unacceptable levels.

Salt management is a major water challenge facing our nation, especially, though not exclusively, in the arid West. The EPA, along with the Department of Agriculture and the Department of Interior, have congressional mandates for implementing programs to reduce salt impacts, including the Colorado River Salinity Control Act and the joint federal/California initiative to protect the San Francisco Bay Delta. In addition, these agencies, along with the U.S. Council on Environmental Quality, are promoting the use of recycled water as a water efficiency measure.

Many communities throughout the nation have found self-regenerating water softeners to be a significant contributor to pollutant loadings. Local and state agencies in California, Texas, Arizona, Montana, Kentucky, Michigan, Massachusetts, Connecticut, and New Jersey and elsewhere have at one time enacted or are now contemplating laws, regulations, and ordinances to limit or ban the use of self-regenerating water softeners.

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Understandably, for those of us who have been working for decades and spending ratepayer dollars to reduce salt loadings into our systems, the possibility of an EPA WaterSense label limited to devices that discharge significant quantities of salt (even if the amount could be less than comparable softeners) is of profound concern. If approved as proposed by the NOI, such a WaterSense specification would preclude many WaterSense partners from promoting the water softener specification.

We have spoken with the WaterSense staff about this problem, and understand that the existing program guidelines *currently* preclude a better approach to identifying the appropriate water efficient product for the control of hardness or scale. Staff indicates that the WaterSense process is limited to a consideration of older technology that may be able to achieve a 20% or more improvement in water efficiency. *This means that the available alternative technologies (used in Europe and now starting to be introduced into the American market) that use neither water nor salt cannot be evaluated in the WaterSense Program – even though these appliances may achieve 100% water efficiency while protecting the nation’s water quality.*

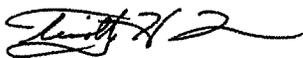
Our recommendation is that the WaterSense program guidelines be modified to permit evaluation of non-water using technologies *and* that the NOI be revised so that the EPA can evaluate and compare salt and non-salt discharging appliances.

Admittedly, this will be a somewhat more extensive and challenging task than the evaluation contemplated under the NOI, but the benefits to the public and to the implementation of the Clean Water Act will be substantial.

In summary, we strongly believe that there is a better way to integrate EPA’s water resource and water quality goals through the WaterSense Program. We are committed to working with you and the WaterSense program to develop a broader water softener evaluation initiative.

Thank you for your consideration of our request to meet with you at your earliest convenience to discuss our concerns and a possible new joint initiative.

Sincerely,

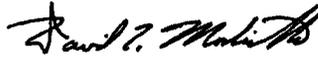


Tim Quinn  
Executive Director  
Association of California Water Agencies



Catherine Smith  
Executive Director  
California Association of Sanitation Agencies

Peter S. Silva  
Page Four



David Modisette  
Executive Director  
California Municipal Utilities Association



Marshal Brown  
Water Resources Executive Director  
City of Scottsdale



Jennifer Clary  
Policy Analyst  
Clean Water



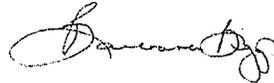
Edmund G. Archuleta  
MSSC Chairman  
President and CEO  
El Paso Water Utilities



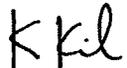
Thomas A. Love  
General Manager  
Inland Empire Utilities Agency

**Joshua Rosenblatt**

Joshua Rosenblatt  
Regulatory & Environmental Analyst  
Las Cruces Utilities



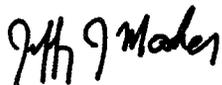
Barbara Biggs  
Governmental Affairs Officer  
Metro Wastewater Reclamation District



Ken Kirk  
Executive Director  
National Association of Clean Water Agencies  
Owned Treatment Works



Ed Osann  
Senior Policy Analyst  
National Resources Defense Council



Jeff Mosher  
Executive Director  
National Water Research Institute



Jonas Minton  
Senior Water Policy Advisor  
Planning and Conservation League

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John Pastore  
Executive Director  
Southern California Alliance of Publicly  
Owned Treatment Works



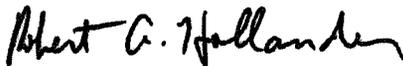
Richard W. Atwater  
Executive Director  
Southern California Water Committee



Mark R. Norton  
Chair  
Southern California Salinity Coalition



Ben Horenstein  
Chair  
Tri-TAC



Robert Hollander  
President  
Western Coalition of Arid States



Dave Smith  
Managing Director  
WaterReuse California



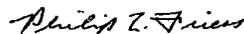
Wade Miller  
Executive Director  
WaterReuse Association



Barbara Glaus  
Acting Water Services Director  
Phoenix Water Services Department



Diane Van De Hein  
Executive Director  
Association of Metropolitan Water Agencies



Philip L. Friess  
Department Head, Technical Services  
Sanitation Districts of Los Angeles County

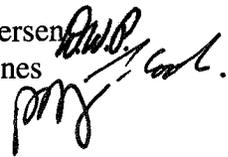
cc: Nancy Stoner, Deputy Administrator  
Bob Perciasepe, EPA Assistant Administrator for Water  
Jim Hanlon, Director, EPA Office of Wastewater Management  
Veronica Blette, WaterSense Program, EPA Office of Wastewater Management  
Alexis Strauss, Director, EPA Region IX Water Division  
Tom Howard, Executive Director, California Water Resources Control Board

May 23, 2011

Prepared and

Submitted by: D. Pedersen

Approved by: Paul Jones



## ACTION CALENDAR

### PROPOSAL TO PROVIDE CROSS-CONNECTION AND BACKFLOW PREVENTION SERVICES TO THE CITY OF SAN JUAN CAPISTRANO

#### SUMMARY:

The City of San Juan Capistrano's Utilities Department is planning to outsource their Cross-Connection and Backflow Prevention Program and requested that Irvine Ranch Water District (IRWD) submit a proposal to perform the work. Staff recommends that the Board approve the terms and conditions for IRWD to provide cross-connection and backflow prevention services to the City of San Juan Capistrano (City) and to authorize the General Manager to execute a Consultant Services Agreement with the City, subject to legal counsel review.

#### BACKGROUND:

In March 2011, the City of San Juan Capistrano contacted IRWD staff to discuss plans to outsource their Cross-Connection and Backflow Prevention Program (Program). The City is considering outsourcing the work to improve efficiency and ensure that routine work such as the annual testing of approximately 1,300 backflow prevention devices is completed in a timely manner.

#### Cross-Connection and Backflow Prevention Services Provided to the City of Tustin

Since December 1999, IRWD has provided cross-connection and backflow prevention services on a contract basis to the City of Tustin. The services include issuing backflow prevention device test request notices, sending follow-up notices to customers who do not respond, reviewing backflow prevention device test results, performing site inspections, submitting periodic reports to the City of Tustin on the status of the program and providing program record keeping. The program has been very successful and proven to be beneficial for both the City of Tustin and IRWD.

#### Proposal to Provide Similar Services to the City of San Juan Capistrano

Based upon the city's request, staff proposes to provide cross-connection and backflow prevention services to the City of San Juan Capistrano in a similar manner as already provided to the City of Tustin. The proposal structure is more fully described in Exhibit "A": Proposal to Provide Cross-Connection and Backflow Prevention Services to the City of San Juan Capistrano, Draft Terms and Conditions. The following services would be provided to the City of San Juan Capistrano: (1) start-up services, (2) on-going program administration, (3) inspection services, and (4) documentation and reporting.

Start-up services would include reviewing and validating City-provided customer account and backflow assembly data, uploading the City's data into IRWD's computerized system and establishing a dedicated phone line for receiving phone calls from the City's customers. On-going program administration would consist of sending backflow assembly test request notices, following up with City customers who do not respond to the test request notices and referring non-complaint customers to the City's staff for further action.

Inspection services would include providing customer site inspections based on the degree of the potential hazard assigned to the account, coordinating site inspections for high potential hazard facilities with the Orange County Health Care Agency, completing site inspections for new and/or existing customers as requested by City staff and providing additional inspection services for non-potable and/or recycled water service customers. Documentation and reporting services would include providing a monthly status report to the City, preparing and submitting to the City an Annual Cross-Connection and Backflow Prevention Report and meeting quarterly with the City's staff.

#### Proposed Fees for Services to the City of San Juan Capistrano

The proposed fees to provide cross-connection and backflow prevention services to the City of San Juan Capistrano would be similar to those for the City of Tustin, which consist of a one-time fee for program start-up, an annual fee per backflow assembly and an annual fee for documentation and reporting. The City of Tustin currently pays an annual fee of \$25 per backflow assembly and \$5,600 annually for documentation and reporting. Customer site inspections are included in the fee structure; however, site inspections for non-potable and recycled water service customers are extra and billed at the hourly rate for IRWD's staff.

Exhibit "A" includes a summary of the proposed fees for the City of San Juan Capistrano's program. The first year cost of the program would be \$44,100, including \$6,000 for one-time start-up services, \$32,500 for on-going program administration (based upon 1,300 assemblies at \$25/assembly/year), and \$5,600 for documentation and reporting. The on-going annual cost for the program is estimated to be \$38,100.

The initial term for the agreement is five years, with provisions for renewal by mutual agreement by the parties. At the end of the initial term or subsequent renewals, IRWD may adjust program fees, as appropriate.

#### Web-Based System for Submittal of Backflow Assembly Test Results

Staff has been working on the development of a web-based system for submittal of backflow assembly test results that will substantially improve the efficiency of the IRWD program. The new system will enable independent backflow testers to directly enter test results into the IRWD database for review and approval. The new process will eliminate the need for IRWD staff to manually enter the test results and support their ability to provide the additional services to the City of San Juan Capistrano without the need for additional employees.

**FISCAL IMPACTS:**

This activity will provide IRWD with an estimated first-year revenue of \$44,100 and on-going revenue of approximately \$38,100 per year. The revenues will be partially offset by direct expenditures for administering the program such as postage and software development costs; however, a large portion of the revenue will be realized as income by utilizing existing staff to provide the services. Sufficient funds are available in the approved Fiscal Year 2010-11 Operating Budget to provide these services to the City of San Juan Capistrano.

**ENVIRONMENTAL COMPLIANCE:**

This activity does not constitute a project as defined by the California Environmental Quality Act pursuant to Section 15378 of the California Code of Regulations, Title 14, Division 6, Chapter 3.

**COMMITTEE STATUS**

This item was reviewed at the Engineering and Operations Committee on May 18, 2011.

**RECOMMENDATION:**

**THAT THE BOARD APPROVE THE TERMS AND CONDITIONS FOR IRWD TO PROVIDE CROSS-CONNECTION AND BACKFLOW PREVENTION SERVICES TO THE CITY OF SAN JUAN CAPISTRANO AND TO AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSULTANT SERVICES AGREEMENT WITH THE CITY OF SAN JUAN CAPISTRANO, SUBJECT TO LEGAL COUNSEL REVIEW.**

**LIST OF EXHIBITS:**

Exhibit "A" – Proposal to Provide Cross-Connection and Backflow Prevention Services to the City of San Juan Capistrano – Draft Terms and Conditions

# **EXHIBIT “A”**

FOR DISCUSSION PURPOSES ONLY

## **PROPOSAL TO PROVIDE CROSS-CONNECTION AND BACKFLOW PREVENTION SERVICES TO THE CITY OF SAN JUAN CAPISTRANO**

### **DRAFT TERMS AND CONDITIONS**

May 2, 2011

The Irvine Ranch Water District (IRWD) proposes to provide cross-connection control and backflow prevention services (Program) to the City of San Juan Capistrano (City) in accordance with the following terms and conditions.

#### **I. General**

- All services for the Program shall be provided in accordance with Title 17 and Title 22 of the California Code of Regulations and the City’s Ordinance No. 895.
- Correspondence to City customers will be provided on City-approved letterhead and incoming phone calls from City customers will be received on a dedicated phone line.
- IRWD will provide a schedule to the City for all Program activities upon approval of the terms and conditions.
- IRWD’s relationship to the City in the performance of the Program activities will be that of an independent contractor.

#### **II. Startup Services**

- IRWD will review and validate City-provided customer account and backflow assembly data for IRWD use to administer the Program.
- IRWD will upload City customer account and backflow assembly data into IRWD’s computerized system for administering the Program.
- IRWD will establish a dedicated phone line for receiving Program-related phone calls from the City’s customers.

#### **III. On-going Program Administration**

- IRWD will send test request notices to all City customers with backflow assemblies for annual testing.
- IRWD will handle follow-up notifications to City customers with backflow assemblies who do not respond to the test request notice.
- IRWD will refer non-compliant City customers to City staff for further action.

FOR DISCUSSION PURPOSES ONLY

**IV. Inspection Services**

- All Inspection services will be provided by IRWD’s Cross-Connection Control Specialists.
- IRWD will perform customer site inspections based on the degree of the potential hazard (high, moderate or low) assigned to each City customer with a backflow assembly.
- IRWD will coordinate site inspections for high potential hazard facilities with the Orange County Health Care Agency.
- IRWD will perform site inspections for new services and/or existing customers as requested by City staff.
- IRWD will provide additional inspection services for non-potable and/or recycled water service customers as requested by the City. These additional inspection services will be billed based on the actual time and hourly rates for the employees, including general and administrative overhead rates.

**V. Documentation and Reporting**

- IRWD will provide monthly Program status reports to the City including the total number of backflow assemblies in the Program indicating added or removed backflow assemblies; total number of notices sent for the month and year-to-date; total number of past due notices sent for the month and year-to-date; and total number of inspections performed for the month and year-to-date.
- IRWD will prepare and submit to the City an Annual Cross-Connection and Backflow Prevention Report suitable for demonstration of compliance with Title 17 of the California Code of Regulations and the City’s Ordinance No. 895.
- IRWD will meet quarterly with the City’s Utility Programs Supervisor to review the status of the Program and any suggested changes for administration of the Program.

**VI. Program Costs and Billing**

- The following table provides a summary of the estimated Program costs. The initial annual cost is currently estimated to be \$44,100, including a one-time startup services cost of \$6,000. The on-going annual cost for the Program is estimated to be \$38,100.

<b><u>Description</u></b>	<b><u>Costs</u></b>
Startup Services (one-time)	\$6,000
On-going Program Administration (1,300 devices @ \$25/device/year)	\$32,500
Documentation and Reporting	\$5,600
<b>TOTAL</b>	<b>\$44,100</b>

FOR DISCUSSION PURPOSES ONLY

- IRWD will submit detailed invoices to the City based upon the actual work performed accompanied by backup documentation as requested by the City.
- Payment for work performed shall be paid by the City within thirty (30) days of the date of IRWD's invoice.

**VII. Term**

- The initial term for services shall be for a period of five (5) years.
- The parties may mutually agree to extend the services beyond the initial five year term at which time program administration, documentation and reporting costs may be adjusted for inflation.

**VIII. Insurance**

- IRWD will provide and maintain comprehensive general liability, personal injury, and automobile liability insurance with limits of at least \$1,000,000 combined single limit coverage per occurrence.
- IRWD will carry and pay for compensation insurance as is necessary for IRWD employees under California Worker's Compensation Insurance and Safety Laws and relieve the City from all responsibility under said laws in connection with the performance of the Program's work.

#####

May 23, 2011

Prepared by: J. Stanearth / M. Cortez

Submitted by: K. Burton

Approved by: Paul Jones

*JS.*  
*M.C.*  
*KB*  
*PJ*

## ACTION CALENDAR

### ORANGE PARK ACRES TRANSMISSION PIPELINE PROJECT CONTRACT CHANGE ORDER NO. 9

#### SUMMARY:

The Orange Park Acres Transmission Pipeline Project is currently being constructed by Leatherwood Construction, Inc. Staff recommends that the Board approve Contract Change Order (CCO) No. 9, in the amount of \$264,882, to Leatherwood Construction, Inc. for the Orange Park Acres Transmission Pipeline Project, Project 11408.

#### BACKGROUND:

Construction of the Orange Park Acres Transmission Pipeline Project (Project) was awarded to Leatherwood Construction, Inc. (Leatherwood) in October 2010 in the amount of \$6,786,397. This project will replace the existing riveted steel pipeline installed in 1929 that has experienced repeated failures, and will improve fire flow water system pressure to the Orange Park Acres area. A Location Map of the project is attached as Exhibit "A".

#### Contract Change Order No. 9:

CCO No. 9, in the amount of \$264,882, includes the following Change Requests (CR):

- Substitute gate valves for butterfly valves at four locations (CR-01);
- Demolish and re-construct retaining walls and a 500 foot long, steep, private concrete drive to install a 16-inch pipeline in alternate property easement. (CR-09);
- Add 4-inch outlet and 1-inch service for irrigation connection to corner monument project site (CR-10);
- Modifications and deletions to tie-ins and sloped pipe on open-space lot (CR-11);
- Construct 300 feet of 16-inch pipe in tight quarters on private drive (CR-12);
- Delete OPA Reservoir connection and modify pipe and services (CR-13); and
- Construct additional fire hydrant assembly, air-vac and service in easement on private property (CR-15)

A staff report, which is attached as Exhibit "B", provides more details on CCO No. 9. A copy of CCO No. 9 is attached as Exhibit "C". A summary of the previous CCO's is attached as Exhibit "D".

Staff reviewed Leatherwood's cost proposals, negotiated changes, and believes Leatherwood's final costs are appropriate and reasonable.

FISCAL IMPACTS:

Project 11408 is included in the FY 2010-11 Capital Budget. The existing budgets and Expenditure Authorizations are sufficient to fund Contract Change Order No. 9 with Leatherwood Construction, Inc.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations, Title 14, Chapter 3, Section 15004, a Mitigated Negative Declaration was adopted on August 9, 2010.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 18, 2011.

RECOMMENDATION:

THAT THE BOARD APPROVE CONTRACT CHANGE ORDER NO. 9 WITH LEATHERWOOD CONSTRUCTION, INC. IN THE AMOUNT OF \$264,882 FOR THE ORANGE PARK ACRES TRANSMISSION PIPELINE PROJECT, PROJECT 11408.

LIST OF EXHIBITS:

- Exhibit "A" – Location Map
- Exhibit "B" – Staff Report - Contract Change Order No. 9
- Exhibit "C" – Contract Change Order No. 9
- Exhibit "D" – Contract Change Order Log



# Exhibit "B"

Staff Report  
for  
Orange Park Acres Transmission Pipeline Project  
Contract Change Order No. 9

The Orange Park Acres Transmission Pipeline Project (PR 11408) is currently being constructed by Leatherwood Construction, Inc. The purpose of this staff report is to summarize and explain the components of Contract Change Order No. 9 (CCO No. 9).

## Contract Change Order No. 9

CCO No. 9, in the net amount of \$264,882 has an absolute value of \$627,338 due to \$181,228 in contract deductions and \$446,110 of contract additions. The change order includes seven (7) change order requests from the contractor comprised of forty seven (47) individual work task charges. They are detailed hereafter:

***Substitute gate valves for butterfly valves at four locations - (CR No. 01):*** In response to a contractor's RFI, staff and the design consultant determined that butterfly valves were more suited for the pressures ultimately anticipated in the proposed 12-inch diameter pipeline than were the resilient wedge gate valves called for on the project plans. Staff and the contractor discussed the change and agreed to a simple adjustment of the bid quantities for each valve type. Both were priced as part of the original project bid. Changing four valves at the contract unit prices results in a net deduction of \$1,400.

***Demolish & re-construct retaining walls and 500 ft. long, steep, narrow private concrete drive to install 16-inch transmission pipeline in alternate property easement - (CR No. 09):*** This change was necessary because the original pipe route proposed to cross the adjacent property (owned by Poort) as the route afforded an alignment that was less steep and more open to facilitate construction equipment and activities. However, due to strong objections by the Poorts (and a legal challenge with the attendant lengthy project delays), the District chose to redesign the pipeline to change alignment onto the Randazzo property (where the existing pipe traverses beneath many private structures and improvements). The revised alignment was designed minimize the effects to private improvements. This change request includes eleven (11) different work task items. The net cost of these items is \$193,426. Each is listed below:

Item No. 9-1 in the amount of \$42,950 is for labor and equipment to demolish 7,100 square feet of concrete driveway and asphalt paved areas; 600 linear feet of AC dike and to excavate subgrade then remove and haul away the debris. The price was negotiated to a lump sum total based on "time & materials" monitoring over the 5 work days it took to perform the work and to haul away the debris and pay for dump fees.

Item No. 9-2 in the amount of \$5,400 is for labor, equipment and material costs for demolition and removal of two retaining walls and concrete wall pilasters. These walls took one day to remove. The contractor incurred dump fees and concrete saw rental costs. The price was negotiated to a lump sum total based on "time & materials" work tickets.

Item No. 9-3 in the amount of \$9,855 is for two days of labor and equipment plus dump fees to remove and dispose of the imitation “wishing well” enclosure around the existing air & vacuum release assembly on the transmission pipeline that traverses the Randazzo property. Removal also included saw-cutting of the existing stamped-pattern concrete. The price was negotiated to a lump sum total based on “time & materials” work tickets.

Item No. 9-4 in the amount of \$25,560 is a negotiated lump sum amount based upon the contractor’s quoted “time & materials” estimate to prepare, compact and fine-grade the subgrade for the 500 foot-long Randazzo private driveway. This work task is estimated to take three (3) crew days and includes placement of Mirafi HP370 stabilization fabric, then 6-inches of “crushed miscellaneous base” (CMB), compacted in place.

Item No. 9-5 in the amount of \$13,200 is for the installation of approximately 500 feet of 3-inch perforated PVC drain line required to collect hillside drainage and direct it away from the new driveway subgrade and the IRWD water line trench. This price is a negotiated lump sum price based upon the contractor’s “time & materials” price quotation. The scope includes two crew days to trench and install the drain line in a crushed rock trench enclosed in a filter fabric.

Item No. 9-6 in the amount of \$15,000 is for the installation of Type “A” concrete curb along one side of the new concrete drive (to replace the one removed). The price is a lump sum negotiated price which includes one crew day of labor and equipment and a unit price quote of \$18.00 per lineal foot of curb.

Item No. 9-7 in the amount of \$9,000 is for installation of “brick banding” across the driveway at 50-foot intervals (to match the existing drive and those removed). The price for this item is a negotiated lump sum price based on the contractor’s quantity estimate materials, equipment and manpower.

Item No. 9-8 in the amount of \$49,700 is for construction of the Portland Cement Concrete (PCC) reinforced driveway surface (to replace the one removed). The price is a negotiated lump sum price based on labor and equipment of two (2) crew days plus a unit price quotation of \$5.10 per square foot for PCC placed.

Item No. 9-9 in the amount of \$4,145 is for replacement of “stamped concrete” to match the existing sections removed at the upper portion of the Randazzo property during the demolition of the “wishing well” and placement of the fire hydrant and water service line. The price is a negotiated lump sum price based on a price quotation to replace approximately 100 square feet of custom “stamped concrete”.

Item No. 9-10 in the amount of \$17,116 is for the reconstruction of the two (2) retaining wall segments previously removed to construct the 16-inch water line. The price is a negotiated lump sum price to construct approximately 25 linear feet of cement masonry unit (CMU) retaining wall with a colored stucco finish. The estimated labor and equipment for this work task includes five (5) crew days to complete the work.

Item No. 11 in the amount of \$1,500 is for the addition of the required fiber-mesh reinforcement within the concrete mix design to supplement the weld-wire mesh reinforcement in the slab section. Fiber mesh is an admixture at a dose rate of 3 pounds per cubic yard to concrete. It will help prevent cracking of the slab because of temperature changes and intermittent truck loading.

***Add 4-inch outlet & 1-inch service for Women’s Auxiliary project site CR No. 10):*** After the commencement of construction the Women’s Auxiliary group approached the District to request that a service outlet be installed with the project adjacent to a parcel at the corner of Orange Park Blvd. and Chapman Avenue. Staff requested the design engineer, Stantec to revise the plans and then asked the contractor to prepare revised shop drawings from the pipe fabricator to provide an outlet for the proposed service. The contractor followed up with a price quotation for the costs of shop drawing modification and for the costs of installation. A lump sum price of \$6,725 was negotiated for this change.

***Modifications & deletions to tie-ins and sloped pipe on open-space lot (CR No. 11):*** Revisions to the project plans as part of Delta 5 to re-align the 16-inch pipeline onto the Randazzo property resulted in reductions to several quantities on the contract bid schedule. This affected four (4) pay items: bid item no. 16, deletion of one 16-inch butterfly valve (\$4,100 credit); bid item no. 48, deletion of three (3) slope anchors (\$3,000 credit); bid item no. 55, deletion of 110 sq. ft. of AC base paving (\$990 credit); and bid item no. 56, deletion of 132 sq. ft. of AC cap paving (\$198 credit). Aggregated, these changes result in a net credit of \$8,288.

***Construct 300 ft. of 16-inch pipe in tight quarters on private drive (CR No. 12):*** This change request consists of the individual items to delete the installation of the 16-inch transmission pipe (bid item no. 6) from the Poort property, resulting in a credit of \$38,920, and to construct it on the Randazzo property on a “time and materials” basis. The “time and materials” work tasks consist of fourteen (14) items. The additive cost of these fourteen items is \$97,213. Including the credit for the deletion of bid item no. 6, the net cost for this change is \$58,293. Each item is listed below:

Item No. 12-1 in the amount of \$38,494 is the cost of all of the revised ductile iron pipe and fittings from S&J Supply for the entire reach, plus the labor, equipment to construct 16-inch ductile iron pipe and fittings near station 138+05. The price for this item is a negotiated lump sum price based on the contractor’s paid invoice for materials, plus a work ticket for equipment and manpower on 2-28-11.

Item No. 12-2 in the amount of \$3,530 is a lump sum price for labor, equipment and materials to excavate and remove hard rock from the pipe trench between station 138+08 and station 138+30 on 3-1-11.

Item No. 12-3 in the amount of \$4,541 is a lump sum price for labor, equipment and materials for saw-cutting the existing stamped concrete in preparation for installing the water service and fire hydrant and for delivering and off-loading trench plates for the pipe installation along the Randazzo property driveway on 3-2-11.

Item No. 12-4 in the amount of \$7,041 is a lump sum price for labor, equipment and materials for work performed to trench for the 16-inch pipeline on the Randazzo property between station 138+30 and 138+91 on 3-3-11.

Item No. 12-5 in the amount of \$7,941 is a lump sum price for labor, equipment and materials for work performed to trench for the 16-inch pipeline on the Randazzo property between station 138+91 and 140+66 on 3-4-11.

Item No. 12-6 in the amount of \$5,169 is a lump sum price for labor, equipment and materials for work performed to install trench bedding for the 16-inch pipeline on the Randazzo property and to bolt fittings (above-grade) on 3-8-11.

Item No. 12-7 in the amount of \$3,641 is a lump sum price for labor, equipment and materials for work performed to install the 16-inch pipeline on the Randazzo property between station 138+22 and 139+51 on 3-9-11.

Item No. 12-8 in the amount of \$3,582 is a lump sum price for labor, equipment and materials for work performed to install the 16-inch pipeline on the Randazzo property between station 139+51 and 140+22 on 3-10-11.

Item No. 12-9 in the amount of \$3,108 is a lump sum price for labor, equipment and materials for work performed to install the 16-inch pipeline on the Randazzo property between station 140+22 and 140+73 on 3-11-11.

Item No. 12-10 in the amount of \$1,995 is a lump sum price for labor, equipment and materials for work performed to excavate and remove rock for the fire hydrant assembly at the top of the hill on the Randazzo property near station 138+25 on 3-14-11.

Item No. 12-11 in the amount of \$3,487 is a lump sum price based on “time & materials” work tickets to install the “test-head” and to “cad-weld” each of the pipe joints and fittings; then to shade the pipe and fittings with sand prior to backfill. This work was performed on 3-15-11.

Item No. 12-12 in the amount of \$7,413 is a lump sum price based on “time & materials” to place sand-cement slurry backfill in the pipe trench zone. Eight (8) truck loads of sand cement slurry were pumped into the trench.

Item No. 12-13 in the amount of \$2,942 is a lump sum price based on “time & materials” to complete the tasks related to chlorinating and pressure testing the new reach of 16-inch pipeline.

Item No. 12-14 in the amount of \$4,329 is a lump sum price based on “time & materials” to remove the trench plates and return them and to obtain and place 15 tons of temporary AC for trench resurfacing.

**Delete OPA Reservoir connection and modify pipe & services (CR No. 13):** The District requested the contractor to provide a price quotation to delete the 12-inch transmission pipe connection in Calle Grande Street and at the OPA Reservoir (as a result of the Planning & Water Resources review of the new OPA SAMP). Stantec revised and the District re-issued the project plans (Delta 4) to reflect the changes. Concurrently, the contractor had discovered that a number of the existing water services thought to be 1-inch were 1-1/2-inch size.

Revisions to the project plans (Delta 4) deleting the 12-inch pipeline to the OPA reservoir on Calle Grande resulted in reductions to several quantities on the contract bid schedule and the addition of three items. The changes affected six (6) pay items: bid item no. 8, deletion of 1,116 feet of 12-inch PVC (\$78,120 credit); bid item no. 33, deletion of the point of connection & tie-in at the reservoir (\$14,300 credit); bid item no. 34, deletion of three “cut & plug” tasks (\$3,150 credit); bid item no. 55, deletion of 820 sq. ft. of AC paving (\$7,790 credit); bid item no. 42, addition of one “end-of-the-line blow-off assembly (\$6,000 cost); bid item no. 37, deletion of seven 1-inch water services (\$14,350 credit); modification to intersection piping and the addition of slurry back-fill over a 623 ft. reach of 12-inch PVC in Chapman and the Calle Grande intersection (\$50,463 cost); addition of one 12-inch butterfly valve (\$6,415 cost) and the addition of eight 2-inch water services at the unit price (\$4,100 cost). Aggregated, these changes result in a net credit of \$24,492.

**Construct additional FH, air-vac & service in easement on private property (CR No. 15):** The revisions to the project plans as part of Delta 5 to re-align the 16-inch pipeline onto the Randazzo property also resulted the addition of two fire hydrant assemblies; one at station 138+25 at the unit price (\$5,280 cost) and the need to re-locate a second fire hydrant assembly, a cathodic test station and a 2-inch water service within an easement area on private property. The piping for the second hydrant assembly, test station and service was installed on a branch off of the 16-inch transmission main from the community open-space parcel. The branch piping had to be constructed on a steep rocky slope, then under a private retaining wall to a flat hill-top slab area where it was accessible for use and maintenance. This item (CR No. 15) was performed on a “time and materials” basis at a net cost of \$31,788. The addition of the cathodic test station was done at the contract unit price of \$1,500. The service size change was done at the contract unit prices (delete 1-inch WS - \$2,050 credit) and (add 2-inch WS - \$4,100 cost). Aggregated, these changes result in a net cost of \$40,618.

# Exhibit "C"

## CONTRACT CHANGE ORDER

**IRVINE RANCH WATER DISTRICT**  
 15600 Sand Canyon Avenue  
 Irvine, CA 92618  
 (949) 453-5300



C.O. No. 9 Page 1 of 1

Final

Project No. 11408

Date: 05-03-11

Orange Park Acres Pipelines Code 5406

Project Title

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
Item No. 1: (CR No. 01) Unit price change to replace 4 each RW valves with 4 each BF valves at the contract unit prices.	\$10,400.00	\$11,800.00	0
Item No. 2: (CR No. 09) Negotiated lump sum price adjustment based on review of "time & materials" cost reports for additional work for 10 work task items related to placing pipe and reconstructing private improvements across the Randazzo property including retaining wall replacement and concrete drive reconstruction.	\$193,426.00		21
Item No. 3: (CR No. 10) Negotiated lump sum price adjustment for addition of 4-inch outlet and 1-inch service connection off of transmission line for Women's Auxiliary project site.	\$6,725.00		1
Item No. 4: (CR No. 11) Lump sum price change negotiated for Delta 5 plan revisions to change pipe location between Meads Ave. & open space lot.	\$0	\$8,288.00	0
Item No. 5: (CR No. 12) Negotiated lump sum price based on "time & materials" work on 14 tasks to install 16-inch DIP in tight quarters in the steep Randazzo property driveway. Credit back for contract work not performed.	\$97,213.00	\$38,920.00	9
Item No. 6: (CR No. 13) Negotiated lump sum price for Delta 4 plan revisions to delete pipe extension to Calle Grande Reservoir site and to change 8 services.	\$95,678.00	\$120,170.00	<5>
Item No. 7: (CR No. 15) Negotiated lump price increase based on "time & materials" costs to add a FH assembly; cross a retaining wall, add a CPTS and a 2-inch service for the Randazzo property within the easement area near top of hill.	\$42,668.00	\$2,050.00	3
<b>NOTE: The Contract Completion Date of February 17, 2012 is changed to March 17, 2012 with this Change Order.</b>			
<b>TOTAL =</b>	<b>\$446,110.00</b>	<b>\$181,228.00</b>	<b>29</b>

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	\$264,882.00	29
2. ORIGINAL CONTRACT AMOUNT	=	\$6,786,397.00	455
3. TOTAL PREVIOUS CHANGE ORDERS	=	\$220,787.00	32
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$7,007,184.00	487
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$7,272,066.00	516

We hereby agree to make the above change subject to the terms of this change order for the sum of:

two hundred sixty four thousand eight hundred eighty two dollars and no cents

5/3/11                      Leatherwood Construction, Inc.                      *Tracy Curran*  
 Date                                      Name of Contractor                                      By

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
<u><i>J. Stewart</i></u> IRWD Project Engineer or Consulting Engineer	<u>5/3/11</u> Date	Department Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Committee Approval Required <input type="checkbox"/> Board Approval Required <input checked="" type="checkbox"/>
<u><i>Malcolm Cortez</i></u> Principal Engineer / Construction Manager	<u>5/9/11</u> Date	
<u><i>Kevin L. Burton</i></u> Director of Engineering & Construction	<u>5/9/11</u> Date	
_____ General Manager	_____ Date	
		By _____ Date _____
		127808
		Purchase Order No.

**NOTE:** The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

**CHANGES:** All workmanship and materials called for by this Change Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Change Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.

# EXHIBIT "D"

OPA Transmission Pipelines - Code 5406  
PR 11408  
Construction Summary

Contractor: **Lesterwood Construction  
Design Engineers Stantec**

Change Order	Description	Category	Contract Amount						Contract Days			Original Completion Date	
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days		Revised Total Contract Days
1	Approved by Director of Engineering and Construction on February 7, 2011 1.1 Additional potholing on December 3, 2010 of undisclosed utility conduits along Chapman Avenue at five locations. 1.2 Additional potholing on December 9, 2010 of undisclosed utility conduits in the intersection of Jamboree and Chapman Avenue. 1.3 Additional potholing on December 6, 2010 of undisclosed utility conduits in the intersection of Jamboree and Chapman Avenue at the 54-in. and 72 in. pipelines. 1.4 Additional potholing on December 28, 2010 of undisclosed utility conduits along Chapman Avenue at four locations. 1.5 Addition of a 20-inch Cl. 250 butterfly valve at contract unit price.	B	\$ 7,060.00	\$ 24,670.00	\$ -	\$ 24,670.00	0.4%	\$ 6,811,067.00	3	0	3	455	3/25/2012
2	Approved by Director of Engineering and Construction on February 15, 2011 2.1 Up-size 4-inch diameter blow-offs to 6-inch blow-offs per IRWD standards.	C	\$ 18,393.00	\$ 18,393.00	\$ 24,670.00	\$ 43,063.00	0.6%	\$ 6,829,460.00	0	3	3	458	1/28/2012
3	Approved by Assistant General Manager on February 25, 2011 3.1 Addition of four new fire hydrants on Jons Way to replace existing FH's in poor condition. 3.2 Upsize 5 ea. 1-in. water services to 2-in. water services to match existing connection sizes. 3.3 Additional potholing on Jons Way on 12/7, 12/8 & 12/9 to locate existing utilities not shown on project plans. 3.4 Additional potholing on Jons Way to locate 11 different undisclosed utility crossings not shown on the project plans.	B	\$ 8,334.00	\$ 48,084.00	\$ 43,063.00	\$ 91,147.00	1.3%	\$ 6,877,544.00	30	3	13	468	2/7/2012
4	Approved by Director of Engineering and Construction on March 23 2011 4.1 Additional potholing on Chapman, Calle Grande & Jons Way East to pothole utilities not shown on project plans. 4.2 Additional work to remove & salvage cactus plants for habitat restoration on a "lima & materials" basis.	B	\$ 12,575.00	\$ 22,830.00	\$ 91,147.00	\$ 113,977.00	1.7%	\$ 6,900,374.00	9	13	22	477	2/16/2012
5	Approved by Director of Engineering and Construction on March 18, 2011 5.1 Rock excavation & removal between stations 138 & 138 in open-space lot between Cannon & Meads on "lima & materials" basis. 5.2 No cost time extension to allow for rain days through the end of February 2011.	D	\$ 10,255.00	\$ 22,834.00	\$ 113,977.00	\$ 136,811.00	2.0%	\$ 6,923,208.00	25	22	47	502	3/12/2012
6	Approved by Assistant General Manager on April 28, 2011 6.1 Additional work to remove AC pavement & excavate services at 896 & 898 Jons Way. 6.2 Additional work to excavate & construct new service laterals at 895, 898 & 932 Jons way. 6.3 Additional work to excavate for new service lateral at 930 Jons Way; excavate 4-inch ACP & prepare for 3 hot-taps.	A	\$ 5,792.00	\$ 34,571.00	\$ 136,811.00	\$ 171,382.00	2.5%	\$ 6,957,779.00	5	47	52	507	3/17/2012

OPA Transmission Pipelines - Code 5406  
PR 11408  
Construction Summary

Contractor: Leatherwood Construction  
Design Engineer: Stantec

Change Order	Description	Category	Contract Amount						Contract Days			Original Completion Date						
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days		Revised Total Contract Days					
6.4	Additional work to complete new service at 930 Jons Way and 4 each, hot-taps and construct new 2-in. services on 4-in. ACP.	A	\$ 4,306.00															
6.5	Additional work to base pave all trenches on Jons Way East related to added services.	A	\$ 5,964.00															
7	Approved by Director of Engineering and Construction Approved on April 28, 2011																	
7.1	Additional traffic control along Chapman Avenue reach east of Newport Blvd. due to change in alignment of existing gas line.	B	\$ 21,400.00	\$ 24,500.00	\$ 171,382.00	\$ 195,882.00	2.9%	\$ 6,982,279.00	3	52	55	510						3/20/2012
7.2	Lump sum adjustment for additional daily work to set-up and tear-down traffic control along Chapman Ave. from Orange Hill to Equestrian Dr. Required due to change in gas line location.	B	\$ 3,100.00						2									
8	Approved by Director of Engineering and Construction Approved on April 29, 2011																	
8.1	Lump sum adjustment to add 12-in. vent pipes for PRV vault no. 1. Includes AC removal, trenching, backfill, paving & traffic control.	A	\$ 24,905.00	\$ 24,905.00	\$ 195,882.00	\$ 220,787.00	3.3%	\$ 7,007,184.00	2	55	57	512						3/22/2012
9	Approved by Board pending review of E&O Committee Not yet approved.																	
9.1	Change 4 each, gate valves to butterfly valves at the contract unit prices.	A	\$ (1,400.00)	\$ 264,482.00	\$ 220,787.00	\$ 485,269.00	7.2%	\$ 7,271,666.00	2	57	86	541						4/20/2012
9.2	Lump sum price change for 10 work tasks related to placing pipe and reconstructing private improvements across Randazzo property including retaining walls and concrete driveway.	C	\$ 193,426.00						0									
9.3	Lump sum adjustment to add service connection and modify steel pipe for Women's Auxiliary project site.	D	\$ 6,725.00						21									
9.4	Lump sum price reduction for change (Delta 5) pipe connection between Meadows and open-space lot.	B	\$ (9,288.00)						1									
9.5	Additional work to perform 14 tasks to install 16-inch DIP in tight quarters along steep private drive alignment on Randazzo property.	C	\$ 58,293.00						0									
9.6	Lump sum adjustment to delete pipe & connection for OPA reservoir on Calle Grande & change pipe at Chapman Ave.	A	\$ (24,492.00)						9									
9.7	Additional work to add FH's and service to easement serving Randazzo property in private easement up steep slope.	A	\$ 40,218.00						-5									

A - District Convenience/Initiation - Project Related	\$ 73,802.00
B - Differing Site Conditions	\$ 116,075.00
C - Design Oversight	\$ 278,412.00
D - District Convenience/Initiation - Non-Project Related	\$ 16,980.00
<b>TOTAL (A+B+C+D)</b>	<b>\$ 485,269.00 7.2%</b>

May 23, 2011

Prepared by: J. McGehee/B. Uematsu

Submitted by: K. Burton

Approved by: Paul Jones

## ACTION CALENDAR

### WELLS 21 AND 22 DESALTER PROJECT PIPELINES AND WELLHEAD FACILITIES EXPENDITURE AUTHORIZATION, VARIANCE, AND CONSULTANT SELECTIONS

#### SUMMARY:

Additional design support and construction services are required for the Wells 21 and 22 Desalter Project Pipelines and Wellhead Facilities. The construction award for the Wells 21 and 22 Pipelines was approved at the April 25, 2011 Board meeting, and the Wellhead Facilities will be bidding in June 2011. Staff recommends that the Board:

- Approve an Expenditure Authorization in the amount of \$388,500 for Project 10286;
- Authorize the General Manager to execute Variance No. 3 in the amount of \$183,500 with RBF Consulting, Inc. for design and engineering construction support services for the Wells 21 and 22 Desalter Project Pipelines and Wellhead Facilities, Project 10286;
- Authorize the General Manager to execute a Professional Services Agreement in the amount of \$70,274 with Ninyo and Moore for Construction Phase Geotechnical Services, Project 10286; and
- Authorize the General Manager to execute a Professional Services Agreement in the amount of \$109,885 with Borchard Surveying, Inc. for Construction Phase Surveying Services, Project 10286.

#### BACKGROUND:

Staff is proceeding with the implementation of the Wells 21 and 22 Project. This project is eligible to receive funding of up to \$11,700,000 in Title XVI funding from the American Recovery and Reinvestment Act of 2009 (ARRA) through the United States Bureau of Reclamation (USBR). Pursuant to funding requirements, the project is required to be substantially complete by June 2012. The Wells 21 and 22 Desalter Plant is being completed via the ongoing design/build construction contract. On April 25, the Board awarded Flatiron West, Inc. the construction contract for the Wells 21 and 22 Desalter Project Pipelines. The final construction contract for the Wells 21 and 22 Wellhead Facilities will be bidding in June 2011.

#### Additional Design Services Included in RBF's Variance No. 3:

Several additional design tasks have been required for the coordination with the City of Tustin (Tustin), Orange County Flood Control District (OCFCD), Orange County Sanitation District (OCSD), and others for the design of the pipelines and wellhead facilities for this project. Staff met several times with Tustin in February and March to review the pipeline alignment and Tustin's additional encroachment permit requirements. The submitted 90% plans aligned the product water pipeline within Tustin's Peters Canyon Bridge on Edinger. Through Tustin's plan check review process, staff agreed to include Tustin's requirements in order to receive the

encroachment permit. Changes included relocating the product water pipeline from the Peters Canyon Bridge on Edinger to the adjacent flood control channel, replacing sections of existing Tustin water pipelines at crossings with the untreated water pipeline, traffic control, working hours, and paving limits. The product water pipeline alignment change requires an additional OCFCD permit and coordination. Tustin also required the District to work with OCFCD to include the Gisler-Red Hill Interconnect Project with the IRWD pipeline work to limit traffic and paving impacts to the surrounding community. The OCFCD Interconnect Project will include the construction of new and modified manholes to interconnect the Edinger and Red Hill interceptor and trunk sewers. RBF also performed additional coordination with BNSF and OCTA to finalize license agreements for bore and jack operations under existing railroad tracks.

RBF's Variance No. 3 request in Exhibit "A" summarizes the additional work items in the amount of \$59,250 for the design related activities. Additional engineering construction support was also requested and included in this variance as described below.

#### Construction Phase Engineering Services Included In RBF's Variance No. 3:

Staff requested RBF Consulting include additional construction support services for the Project in Variance No. 3. RBF was the engineer of record for the Wells 21 and 22 Preliminary Design Report, final construction plans for both the pipelines and wellhead facilities, and is currently assisting with ongoing coordination efforts with the City of Tustin and OCFCD. RBF proposes the same team that designed the final construction plans and understands the critical engineering design issues for the pipeline construction. Staff has negotiated the scope and fee with RBF and find that the \$124,250 additional construction phase engineering services is acceptable. The original proposal for construction phase services included with the initial design contract included a fee of \$126,172. The total construction phase services fee for both the pipelines and wellhead facilities will be \$250,422.

Staff recommends the execution of Variance No. 3 with RBF Consulting in the total amount of \$183,500, including both the additional design and construction services. RBF's scope of work and fee are included with Variance No. 3 as Exhibit "A".

#### Construction Phase Geotechnical Services:

Staff requested proposals from GMU, NMG, and Ninyo & Moore to provide construction phase geotechnical services for the Wells 21 and 22 Desalter Project Pipelines and Wellhead Facilities. The proposed geotechnical services include field geotechnical observation services, field and laboratory testing, meeting attendance, and report preparation. The NMG and Ninyo and Moore proposals demonstrated a level of service that was consistent with staff's expectations, while GMU's proposal demonstrated a level of effort that was significantly less than anticipated.

Staff's evaluation of the proposals is summarized in the Consultant Selection Matrix attached as Exhibit "B". Based on previous successful work with IRWD and the competitive hourly fee for the proposed services, staff recommends that a Professional Services Agreement for construction phase geotechnical services be awarded to Ninyo and Moore in the amount of \$70,274. Ninyo and Moore's scope of work and fee are attached as Exhibit "C".

Construction Phase Surveying Services:

Staff requested proposals from Bush & Associates, Guida Surveying, and Borchard Surveying to provide construction phase surveying services for the Wells 21 and 22 Desalter Project Pipelines and Wellhead Facilities. The proposed surveying services include staking for all pipelines, appurtenances, facilities, and structures, potholing, and meeting attendance. Borchard Surveying and Bush & Associate's proposals demonstrated a level of service that was consistent with staff's expectations, while Guida Surveying's proposal demonstrated a level of effort that was significantly less than anticipated.

Staff's evaluation of the proposals is summarized in the Consultant Selection Matrix attached as Exhibit "D". Based on previous successful work with IRWD and the competitive hourly fee for the proposed services, staff recommends that a Professional Services Agreement for construction phase surveying services be awarded to Borchard Surveying in the amount of \$109,885. Borchard Surveying's scope of work and fees are attached as Exhibit "E".

FISCAL IMPACTS:

Project 10286 is included in the FY 2010-11 Capital Budget. An Expenditure Authorization to fund staff and engineering services is requested as shown in the table below and in Exhibit "F".

Project No.	Current Budget	Addition <Reduction>	Total Budget	Existing EA	This EA Request	Total EA Request
10286	\$39,921,200	\$-0-	\$39,921,200	\$30,962,600	\$388,500	\$31,351,100

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, a Mitigated Negative Declaration was adopted February 8, 2010. To fulfill requirements of the American Recovery and Reinvestment Act of 2009, the project is also subject to compliance with the National Environmental Policy Act (NEPA). An Environmental Assessment was prepared to achieve NEPA compliance for the project and the USBR is anticipated to adopt a Categorical Exemption for the project.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 18, 2011.

RECOMMENDATION:

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$388,500; AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 3 IN THE AMOUNT OF \$183,500 WITH RBF CONSULTING FOR DESIGN AND ENGINEERING CONSTRUCTION SUPPORT SERVICES; AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT IN THE AMOUNT OF \$70,274 WITH NINYO AND MOORE FOR CONSTRUCTION PHASE GEOTECHNICAL SERVICES; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT IN THE AMOUNT OF \$109,885 WITH BORCHARD SURVEYING FOR CONSTRUCTION PHASE SURVEYING SERVICES FOR THE WELLS 21 AND 22 DESALTER PROJECT PIPELINES AND WELLHEAD FACILITIES, PROJECT 10286.

LIST OF EXHIBITS:

- Exhibit "A" – Variance No.3 – RBF Consulting, Inc.
- Exhibit "B" – Construction Phase Geotechnical Services Consultant Selection Matrix
- Exhibit "C" – Scope of Work – Ninyo and Moore
- Exhibit "D" – Construction Phase Surveying Services Consultant Selection Matrix
- Exhibit "E" – Scope of Work – Borchard Surveying
- Exhibit "F" – Expenditure Authorization

# Exhibit "A"



March 31, 2011

Ms. Patty Lee Uematsu, PE  
Principal Engineer – Capital Projects  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

**Subject: Wells 21/22 Wellhead Facilities and Pipeline Design – Request for Variance No. 3**

Dear Patty,

RBF Consulting, Inc. (RBF) has completed the design of the pipelines that are part of the Wells 21 and 22 Desalter Project, with the project currently out to bid. In addition we are near completion of the final design for the Wells 21 and 22 wellhead facilities. Several issues have arisen during the final design process that have required RBF to provide services beyond our contracted scope of work. In addition, the construction support needs of the Wellhead Facilities and Pipeline project will require additional manhours. Therefore, RBF is respectfully requesting a variance to our agreement with IRWD.

## **ADDITIONAL DESIGN SERVICES**

### **A. Peters Canyon Channel Re-Design**

IRWD and RBF met on June 8, 2010 with the City of Tustin (City) staff to discuss the Wells 21/22 Desalter Project. At that meeting, we discussed the alternatives for crossing Peters Canyon Channel. Based on our preliminary studies, RBF concluded that the most cost-effective alternative would be to hang the pipeline on the side of the existing Peters Canyon Channel bridge. We also discussed other options including installing smaller diameter pipelines within two of the bridge cells and jack-and-bore under the channel.

At that meeting, City staff stated that they did not like the concept of hanging a large pipeline on the side of one of their bridges. They also mentioned known contaminated soil in vicinity of Edinger Avenue and Peters Canyon Channel, called the "Moffet Trenches." City staff stated that their preference was to install the pipelines within the bridge.

On August 23, 2010, IRWD and RBF again met with City staff to discuss the design project. During that meeting, RBF stated that we were designing the Product Water Pipelines to be routed through two existing bridge cells. City staff concurred with this alternative.

Based on our analysis and conceptual approval from the City of Tustin, RBF performed the structural and mechanical design for the bridge crossing. The design was submitted to the City on December 1, 2010. On January 19, 2011, the City provided their review comments to RBF and IRWD. The plan check included several structural comments from Moffat & Nichol, the City's plan review consultant.

RBF's structural engineers reviewed the City's comments and prepared a response to each one. On January 31, 2011, RBF and IRWD met with the City of Tustin and their consultant to

PLANNING ■ DESIGN ■ CONSTRUCTION

14725 Alton Parkway, Irvine, CA 92618-2027 ■ P.O. Box 57057, Irvine, CA 92619-7057 ■ 949.472.3505 ■ Fax 949.472.8373  
Offices located throughout California, Arizona & Nevada ■ www.RBF.com

review our responses to their comments. Although their structural engineering consultant appeared to be satisfied by RBF's structural engineers' responses, City staff was now not in favor of installing two pipelines in the bridge. City staff expressed their new preference of routing the Product Water Pipeline northeast of the bridge using a jack-and-bore.

During several phone conversations, City staff stated that the City owns a 40-foot wide parcel that is parallel to the channel. City staff thought that this would be a great location for a bore pit.

IRWD, RBF and City staff met on February 17, 2011 to discuss the Peters Canyon Channel crossing. The alternatives of hanging the pipe on the bridge and the jack-and-bore option were discussed. RBF stated that hanging the pipe on the bridge would be the least cost alternative, installing two pipelines within the bridge would be the second least cost alternative and using a jack-and-bore would be the most expensive. RBF estimated that the jack-and-bore would be approximately \$100,000 more than installing the pipelines in the bridge.

The City's expressed their concerns with structural modifications to their bridge and installing a waterline without a casing pipe. They also discussed design concerns with hanging the pipe on the side of the bridge. Based on their comments, it appeared as though the jack-and-bore installation would receive their approval in the shortest period. In order to meet the ARRA (American Recovery and Reinvestment Act of 2009) funding deadlines and the schedule for the design/build RO treatment plant, the jack-and-bore alternative was now the selected alternative, even with the higher costs.

Based on direction from IRWD, RBF redesigned the Product Water Pipeline in vicinity of Peters Canyon Channel to utilize the 40-foot wide parcel that will be a future bike path. After this design was completed, the City and IRWD determined that this parcel owned by the Tustin Redevelopment Agency (RDA) may require an easement with conditions. If an easement is required and if the conditions are not acceptable to IRWD, the pipeline should be routed to avoid the RDA property. Therefore, RBF was directed to redesign the jack-and-bore alignment to avoid the RDA property.

Since the 100% draft construction plans showed two pipelines being routed through the Peters Canyon Channel bridge, the horizontal and vertical alignments required complete revision in vicinity of the bridge. Since pipe length was added, the remainder of the pipeline had to be re-stationed with the stationing and all call-outs revised. With the additional length, the sheet layouts and match lines had to be modified. Appurtenance locations were moved. Construction notes were added, removed and modified. In addition to the plan and profile sheets, the detail sheets, pavement sheet and traffic control plans required modification.

After the construction plans modifications were completed, the potential issues related to the City of Tustin Redevelopment Agency surfaced. In anticipation of any issues, RBF was instructed to prepare a second jack-and-bore alignment that avoids the Tustin RDA right-of-way.

RBF modified the Project Manual for the jack-and-bore construction under Peters Canyon Channel. The Bid Form, the Special Provisions description of the work and the General

Requirements basis of measurement for payment were modified. In addition, the engineer's estimate of probable construction cost required modification.

B. Additional Coordination with Tustin

As described above, RBF has attended additional meetings with the City of Tustin and has had several additional phone conversations with City staff to discuss the City's desires to change the Peters Canyon Channel crossing alternative. In addition we provided additional coordination with the City and provided plans for review in excess of our reimbursable budget.

C. Additional Coordination with OCFCD

Currently RBF is requesting an encroachment permit from the Orange County Flood Control District for the option that shows both the bore and receiving pits in their maintenance roads. We are processing the encroachment permit with the City of Tustin for the option that shows the bore pit in the RDA right-of-way. RBF has scheduled a meeting with OCFCD and prepared a letter requesting the issuance on an encroachment permit from the County for the construction.

D. Additional Coordination with Orange County Sanitation District

The City of Tustin strongly recommended that the Orange County Sanitation District's (OCSD's) Contract No. 7-37, Gisler-Red Hill Trunk Sewer Improvements, Reach B Interconnections be combined with the IRWD pipeline project. OCSD has also stated that including their work with the IRWD pipeline work would be required for them to provide a trunk sewer connection permit and a discharge permit for the non-reclaimable waste pipeline. Therefore this work has been added to the construction project through bid Addendum No. 1. RBF has reviewed the OCSD plans and specifications, coordinated with OCSD and their consultant engineer and provided support in the incorporation of the OCSD project into the IRWD project.

E. Additional Coordination with BNSF and OCTA

Both the Product Water Pipeline and the Non-Reclaimable Waste Pipeline will be routed under a BNSF railroad track. While the license agreement process for the Product Water Pipeline went smoothly, BNSF and IRWD had difficulty with insurance requirements related to the Non-Reclaimable Waste Pipeline. RBF assisted BNSF and IRWD through this long process. While the engineering design portion of the processing was included in our budgeted scope, the additional coordination related to the insurance requirements was not.

The Untreated Water Pipeline will be routed under the SCRRA/Metrolink railroad. This right-of-way is owned by the Orange County Transportation Authority (OCTA). A license agreement is required between IRWD and OCTA. After processing the construction plans and Project Manual, RBF provided services related to negotiation of the terms of the license agreement that was not included in our engineering design budget.

F. Modifications to the Wells 21/22 Wellhead Facilities

RBF prepared mechanical and civil construction plans for Wells 21 and 22 well equipping. These plans included many details. With the objective of designing all future wellhead facilities to adhere to the same design standards, RBF was requested to modify our civil and mechanical plans and details to be consistent with other recently equipped wells. As part of

this additional work, the vaults were lengthened and air vacuum valves and sampling cans were raised to be above-grade. Although this additional work should be beneficial to IRWD over the years as the operators will realize efficiencies, RBF was required to revise the construction plans and structural design and calculations beyond our existing scope of work.

## **ADDITIONAL CONSTRUCTION PHASE SERVICES**

### Task 4.A Additional Project Meetings

RBF's Senior Engineer Steve Conner will attend / conduct a total of twenty (20) additional project meetings of two hours each during the construction and provide meeting minutes within one week of the meeting date.

### Task 4.C Additional Minor Plan Revisions

RBF will allocate an additional eighty (80) hours of staff time for minor plan revisions to construction drawings.

### Task 4.E Additional Shop Drawing Reviews

RBF will review shop drawings, fabrication drawings, product data sheets, catalog brochures, samples of performance data, test results, installation procedures, equipment, and all other types of submittals, which are technical in nature. This task assumes review of thirty (30) additional submittals with thirty (30) additional re-submittals.

All submittals will be stamped, dated, and initialed by the Engineer. All submittals will be marked "No Exceptions Taken", "Make Corrections Noted", "Revise and Resubmit", or "Submit Specified Item". RBF will provide reasons to support a "Revise and Resubmit" decision. The reasons will be supported by referring to appropriate specification sections and drawing sheet numbers of the contract drawings.

### Task 4.G Coordination with Other Agencies and Contractors

RBF's Senior Engineer Steve Conner and Project Engineer Barkev Meserlian will provide coordination with the City of Tustin, Orange County Sanitation District, Orange County Flood Control District, OCTA, BNSF, SCRRA/Metrolink, and the cities of Irvine and Santa Ana. In addition, RBF will assist with public relations coordination (including the preparation of a project notice letter for distribution in the construction area, determining the distribution area and mailing addresses, and coordinating with IRWD and City staff. We will also provide general permit coordination.

### Task 4.H Miscellaneous

An allowance of \$35,000 has been included for miscellaneous tasks that may be required for additional tasks related to construction issues, revisions to plans and traffic control and exhibit preparation as directed by the IRWD Project Manager. This miscellaneous fee will require separate authorization from IRWD.

**BUDGET IMPACT**

The total requested variance amount is summarized in the table below. If approved, the additional work would be billed on a time-and-materials not-to-exceed basis, like our existing agreement.

**Requested Variance Summary**

Task	Additional Budget Requested
<b>DESIGN PHASE SERVICES</b>	
A. Peters Canyon Channel Redesign	\$ 21,700
B. Additional Coordination – Tustin	\$ 7,250
C. Additional Coordination – OCFCD	\$4,900
D. Additional Coordination – OCSD	\$4,200
E. Additional Coordination - BNSF & OCTA	\$9,200
F. Modifications to Wellhead Facilities	\$12,000
<b>Subtotal Task 3 Design Phase</b>	<b>\$59,250</b>
<b>CONSTRUCTION PHASE SERVICES</b>	
4.A Project Meetings	\$11,450
4.C Minor Plan Revisions	\$12,800
4.E Shop Drawing Review	\$20,000
4.G Coordination with Agencies & Contractors	
City of Tustin	\$20,000
Orange County Flood Control District	\$ 7,000
Orange County Sanitation District	\$ 5,000
BNSF, OCTA/SCRRRA/Metrolink	\$ 5,000
Cities of Irvine and Santa Ana	\$ 3,000
IRWD Public Affairs	\$ 5,000
4.H Miscellaneous	\$35,000
<b>Subtotal Task 4 Construction Phase</b>	<b>\$124,250</b>
<b>Variance Request Total</b>	<b>\$183,500</b>

If you have any questions or comments, please do not hesitate to contact me at [rreid@rbf.com](mailto:rreid@rbf.com) or (949) 855-5763. We look forward to starting construction on these pipelines.

Sincerely,



Robert S. Reid, PE  
 Project Manager





# Exhibit "B"

## Wells 21 and 22 Desalter Project: Wellhead Facilities and Pipelines Geotechnical Services During Construction Consultant Selection Matrix

	Ninyo & Moore	NMG Geotechnical	GMU Geotechnical*
<b>SCOPE OF SERVICES</b>			
<b>Proposed Hours</b>			
Observation and Testing			
a. Pipelines	520	718	254
b. Wellhead Facilities	144	155	114
Meetings	28	28	28
Special Services	80	80	80
<b>TOTAL HOURS</b>	<b>772</b>	<b>981</b>	<b>476</b>
<b>FEE</b>			
1. Observation and Field Testing			
a. Pipelines	\$39,000	\$56,004	\$25,400
b. Wellhead Facilities	\$10,800	\$12,090	\$11,400
2. Laboratory Testing	\$5,024	\$9,605	\$6,800
3. Administration			
a. Meetings	\$3,444	\$2,184	\$3,640
b. Technical Support	\$0	\$3,360	\$1,300
c. Project Management	\$2,460	\$1,344	\$3,840
4. Final Report	\$1,626	\$5,500	\$4,500
<b>SUBTOTAL - BASE SERVICES</b>	<b>\$62,354</b>	<b>\$90,087</b>	<b>\$56,880</b>
5. Special Services			
a. Field Technician	\$3,000	\$3,120	\$4,000
b. Geologist/Engineer	\$4,920	\$4,480	\$6,400
<b>TOTAL FEE</b>	<b>\$70,274</b>	<b>\$97,687</b>	<b>\$67,280</b>
<b>APPROXIMATE FEE PER HOUR</b>			
	\$91.03	\$99.58	\$141.34
<b>STAFF ESTIMATE OF HOURS OF SERVICE FOR PROJECT DURATION (330 CALENDAR DAYS @ 3.5 HRS/DAY)</b>			
	825	825	825
<b>APPROXIMATE FEE WITH NORMALIZED HOURS</b>			
	\$75,099	\$82,153	\$116,609
<b>RANKINGS:</b>			
	1 - First	2 - Second	3 - Third

\* Total Hours appear to be insufficient for the proposed scope of work

# Exhibit "C"

Wells 21 and 22 Wellhead Facilities and Pipeline Project, PR 10286  
Tustin, California

April 12, 2011  
Proposal No. P-15000

**TABLE 1 – BREAKDOWN OF ESTIMATED FEE**

<b>PROJECT COORDINATION, MANAGEMENT AND MEETINGS</b>			
Project Engineer/Geologist	48 hours	@ \$ 123.00 /hour	\$ 5,904.00
<b>Subtotal</b>			<b>\$ 5,904.00</b>

<b>FIELD SERVICES</b>			
<b>Pipelines</b>			
Trench Backfill	360 hours	@ \$ 75.00 /hour	\$ 27,000.00
Subgrade and Aggregate Base	80 hours	@ \$ 75.00 /hour	\$ 6,000.00
Concrete Sampling	20 hours	@ \$ 75.00 /hour	\$ 1,500.00
Asphalt Concrete Field Density	80 hours	@ \$ 75.00 /hour	\$ 6,000.00
Sample Pick-up	20 hours	@ \$ 75.00 /hour	\$ 1,500.00
<b>Well Site</b>			
Trench and Structural Backfill	24 hours	@ \$ 75.00 /hour	\$ 1,800.00
Subgrade and Aggregate Base	16 hours	@ \$ 75.00 /hour	\$ 1,200.00
Concrete Sampling	32 hours	@ \$ 75.00 /hour	\$ 2,400.00
Asphalt Concrete Field Density	16 hours	@ \$ 75.00 /hour	\$ 1,200.00
Sample Pick-up	16 hours	@ \$ 75.00 /hour	\$ 1,200.00
<b>Subtotal</b>			<b>\$ 49,800.00</b>

<b>LABORATORY ANALYSES</b>			
Proctor Density	8 tests	@ \$ 180.00 /test	\$ 1,440.00
Sand Equivalent	4 tests	@ \$ 90.00 /test	\$ 360.00
Sieve Analysis	4 tests	@ \$ 110.00 /test	\$ 440.00
Concrete Compressive Strength	52 tests	@ \$ 22.00 /test	\$ 1,144.00
AC Extraction, % Asphalt, CT 310	4 tests	@ \$ 215.00 /test	\$ 860.00
AC Maximum Density, CT 366	4 tests	@ \$ 195.00 /test	\$ 780.00
<b>Subtotal</b>			<b>\$ 5,024.00</b>

<b>REPORT PREPARATION</b>			
Principal Engineer	2 hours	@ \$ 139.00 /hour	\$ 278.00
Project Engineer/Geologist	8 hours	@ \$ 123.00 /hour	\$ 984.00
CAD Illustrator	4 hours	@ \$ 69.00 /hour	\$ 276.00
Word Processing	2 hours	@ \$ 44.00 /hour	\$ 88.00
<b>Subtotal</b>			<b>\$ 1,626.00</b>

<b>TOTAL ESTIMATED FEE (NOT INCLUDING SPECIAL SERVICES)</b>	<b>\$ 62,354.00</b>
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<b>SPECIAL SERVICES</b>			
Project Engineer/Geologist	40 hours	@ \$ 123.00 /hour	\$ 4,920.00
Field Technician	40 hours	@ \$ 75.00 /hour	\$ 3,000.00
<b>Subtotal</b>			<b>\$ 7,920.00</b>

<b>TOTAL ESTIMATED FEE (INCLUDING SPECIAL SERVICES)</b>	<b>\$ 70,274.00</b>
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**Proposal Format and Requested Information**  
**Construction Phase Geotechnical Services**

**Wells 21 and 22 Wellhead Facilities and Pipelines Project**  
**PR 10286**

Submitted by: Ninyo and Moore

A. "Tino" Rodriguez, Principal/Construction Services

Signature:  , Date: 4-12-11

**WORK DELINEATION AND FEE PROPOSAL**

(State any assumptions for contractor production rates, number of days/hours, and cost for each task)

**1. Observation and Field Testing**

Pipelines

Untreated Water Pipeline – 28 work days at 4.0 hours / day.	Subtotal <u>\$8,400</u>
Product Water Pipeline – 50 work days at 4.0 hours / day.	Subtotal <u>\$15,000</u>
Pump-to-Waste Pipeline – 6 work days at 4.0 hours / day.	Subtotal <u>\$1,800</u>
Non-reclaimable Waste Pipeline – 6 work days at 4.0 hours / day.	Subtotal <u>\$1,800</u>
Tustin Replacement Water Pipelines – 5 work days at 4.0 hours / day.	Subtotal <u>\$1,500</u>
Storm drain and water services - 5 work days at 4.0 hours / day.	Subtotal <u>\$1,500</u>
Concrete materials testing - 5 work days at 4.0 hours / day.	Subtotal <u>\$1,500</u>
Roads and paving - 10 work days at 8.0 hours / day.	Subtotal <u>\$6,000</u>
Misc. appurtenances, facilities, & structures - 5 work days at 4.0 hours / day.	Subtotal <u>\$1,500</u>

Well Sites

Buried Vaults - 4 work days at 8.0 hours / day.	Subtotal <u>\$2,400</u>
Yard Piping - 4 work days at 8.0 hours / day.	Subtotal <u>\$2,400</u>
Concrete Materials Testing - 8 work days at 4.0 hours / day.	Subtotal <u>\$2,400</u>
Site Paving - 4 work days at 8.0 hours / day.	Subtotal <u>\$2,400</u>
Misc. Appurtenances, Facilities, & Structures - 4 work days at 4.0 hours / day.	Subtotal <u>\$1,200</u>

**2. Laboratory Testing**

(Total for all laboratory testing, list specific tests and quantities, as required by the specifications – See Table 1)

	Subtotal <u>\$5,024</u>
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**3. Geologist / Engineer / Office Support / Administration**

A. <b>Meetings</b> (2 hours each) (pre-construction [1], one progress meeting per month for duration of project [12], final report presentation [1] = [14] total)	Subtotal <u>\$3,444</u>
B. <b>Technical Support</b> (Specify)	Subtotal \$0

Request for Proposals for Construction Phase Geotechnical Services for the Wells 21 and 22  
Wellhead Facilities and Pipelines Project  
March 15, 2011

C.	<b>Project Management and Administration</b> (Specify)	Subtotal <u>\$2,460</u>
4.	<b>Final Report</b> (3 hard copies and 1 Color PDF file on CD)	Subtotal <u>\$1,626</u>
		<b>Subtotal Base Services \$62,354</b> (Tasks 1 – 4)
5.	<b>Special Services</b> (Work under this task will only be performed as requested and authorized by IRWD, provide a budget for the following stipulated tasks and time allowances)	
A.	<b>Field Technician</b> – 10 working days at 4 hours per day	Subtotal <u>\$3,000</u>
B.	<b>Geologist/Engineer</b> – 10 working days at 4 hours per day	Subtotal <u>\$4,920</u>
		<b>Subtotal Special Services \$7,920</b> (Task 5)
		<b>TOTAL PROPOSED FEE \$70,274</b> (Tasks 1 – 5)

# EXHIBIT "D"

## Wells 21 and 22 Desalter Project: Wellhead Facilities and Pipelines Surveying Services During Construction Consultant Selection Matrix

	Borchard	Bush & Associates	Guida*
<b>SCOPE OF SERVICES</b>			
Pipelines	360	320	182
Wellhead Facilities	68	40	40
Special Services	80	80	80
<b>TOTAL HOURS</b>	<b>508</b>	<b>440</b>	<b>302</b>
<b>FEE</b>			
Pipelines	\$71,080	\$56,320	\$44,640
Wellhead Facilities	\$12,540	\$7,040	\$9,600
Office Support / Administration	\$13,465	\$35,568	\$18,160
<b>SUBTOTAL - BASE SERVICES</b>	<b>\$97,085</b>	<b>\$98,928</b>	<b>\$72,400</b>
Special Services	12,800	11,600	15,200
<b>TOTAL FEE</b>	<b>\$109,885</b>	<b>\$110,528</b>	<b>\$87,600</b>
<b>APPROXIMATE FEE PER HOUR</b>	<b>\$216.31</b>	<b>\$251.20</b>	<b>\$290.07</b>
<b>STAFF ESTIMATE OF HOURS OF SERVICE FOR PROJECT DURATION (330 CALENDAR DAYS @ 2 HRS/DAY)</b>	470	470	470
<b>APPROXIMATE FEE WITH NORMALIZED HOURS</b>	<b>\$101,665</b>	<b>\$118,064</b>	<b>\$136,331</b>
<b>RANKINGS:</b>	<b>1 - First</b>	<b>2 - Second</b>	<b>3 - Third</b>

\* Total Hours appear to be insufficient for the proposed scope of work

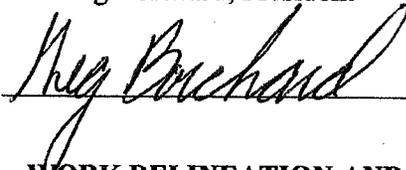
# EXHIBIT "E"



## Construction Phase Surveying Services

### Wells 21 and 22 Wellhead Facilities and Pipelines Project PR 10286

Submitted by: Borchard Surveying & Mapping, Inc.  
Greg Borchard, President

 4/15/11  
Date

### WORK DELINEATION AND FEE PROPOSAL

#### 1. Pipelines

Potholing of Untreated Water Pipeline – 2 work days at 8 hours / day.	Subtotal \$3,440.00
Staking of Untreated Water Pipeline – 4.5 work days at 8 hours / day.	Subtotal \$7,740.00
Potholing of Product Water Pipeline – 3 work days at 8 hours / day.	Subtotal \$5,160.00
Staking of Product Water Pipeline – 9 work days at 8 hours / day.	Subtotal \$15,480.00
Potholing of Pump-to-Waste Pipeline – 1 work day at 8 hours / day.	Subtotal \$1,740.00
Staking of Pump-to-Waste Pipeline – 1 work day at 8 hours / day.	Subtotal \$1,740.00
Potholing of Non-reclaimable Waste Pipeline – 1 work day at 4 hours / day.	Subtotal \$870.00
Staking of Non-reclaimable Waste Pipeline – 1.5 work days at 8 hours / day.	Subtotal \$2,610.00
Staking of Storm Drain and Water Services – 1 work day at 4 hours / day.	Subtotal \$870.00
Staking of Appurtenances – 4.5 work days at 8 hours / day.	Subtotal \$7,830.00
Potholing of Ex. Utilities and Infrastructure – 4 work days at 8 hours / day.	Subtotal \$6,960.00
Misc. facilities, & structures - 1 work day at 8 hours / day.	Subtotal \$1,740.00
Office Survey Calculations/field support – 7.5 work days at 8 hours / day	Subtotal \$6,300.00
Verify existing aerial control / establish construction control - 5 work days at 8 hours/day	Subtotal \$8,600.00

#### 2. Well Sites

Staking of Buried Vaults - 2 work days at 4 hours / day.	Subtotal \$1,740.00
Staking of Yard piping - 2 work days at 4 hours / day.	Subtotal \$1,740.00
Staking of Block Wall - 2 work days at 4 hours / day.	Subtotal \$1,740.00
Misc. appurtenances, facilities, & structures – 2 work days at 4 hours / day.	Subtotal \$1,740.00
Misc. potholing - 1 work day at 8 hours / day.	Subtotal \$1,740.00
Office Survey Calculations/field support – 2.5 work days at 8 hours / day	Subtotal \$2,100.00
Establish local construction control network – 2 work days at 4 hours/day	Subtotal \$1740.00



**Assumption: Survey Control & Digital design files**

An accurate survey control network is essential for facilitating the construction of the proposed pipelines, appurtenances and well facilities. This proposal assumes that aerial control, AutoCad design files and topographic maps used by RBF Consulting in the design phase of this project will be provided to our firm to be used for the basis of our field construction control & construction calculations. It is also assumed that said aerial control meets accuracy standards which allow it to be used for project construction control. Standard hourly rates will apply to establish construction control if aerial control is not provided, or if new construction control needs to be established.

**3. Office Support / Administration**

**A. Meetings (2 hours each)**

(pre-construction [1], one progress meeting per month for duration of project [12], report presentation [1] = [14] total)

Subtotal \$2,940.00

**B. Technical Support**

1) Cad drafting of field exhibits, cut sheets & field notes for IRWD construction & engineering staff and project contractors 35 hours

Subtotal \$3,675.00

2) Quality assurance & control, daily verification of field shots  
With digital staking plan to confirm accurate field staking 30 hours

Subtotal \$3,150.00

**C. Project Management and Administration**

1) Monthly Billing, Certified prevailing wage payroll processing & site visits

Subtotal \$3,700.00

**Subtotal Base Services \$97,085.00**

(Tasks 1 – 3)



**4. Special Services**

(Work under this task will only be performed as requested and authorized by IRWD, provide a budget for the following stipulated tasks and time allowances)

A.	<b>Field Crew</b> – 10 working days at 4 hours per day	Subtotal \$8,600.00
B.	<b>Surveyor</b> – 10 working days at 4 hours per day	Subtotal \$4,200.00
	<b>Subtotal Special Services</b>	<b>\$12,800.00</b>

**TOTAL PROPOSED FEE** **\$109,885.00**  
(Tasks 1 – 4)

Please read assumptions & exclusions

Fees will be based on hours spent at the following rates:

Office Time: \$ 105.00 per hour

2 person survey crew: \$215.00 per hour

# EXHIBIT "F"

## IRVINE RANCH WATER DISTRICT

### Expenditure Authorization

**Project Name:** WELLS 21 & 22 WELLHEAD PIPELINE & TREATMENT PLANT

**Project No:** 10286 EA No: 9

**ID Split:** Regional Potable Water Splits (11/08)

**Improvement District (ID) Allocations**

**Project Manager:** UEMATSU, PATRICIA

**Project Engineer:** MORI, RICHARD

**Request Date:** May 9, 2011

**ID No. Allocation % Source of Funds**

ID No.	Allocation %	Source of Funds
112	4.3	BONDS YET TO BE SOLD**
113	5.2	BONDS YET TO BE SOLD**
115	7.3	CAPITAL FUND
121	15.3	BONDS YET TO BE SOLD**
130	11.8	BONDS YET TO BE SOLD**
140	4.2	BONDS YET TO BE SOLD**
150	31.2	BONDS YET TO BE SOLD**
153	3.4	BONDS YET TO BE SOLD**
154	1.5	BONDS YET TO BE SOLD**
161	8.0	BONDS YET TO BE SOLD**
182	3.0	BONDS YET TO BE SOLD**
184	2.8	BONDS YET TO BE SOLD**
186	1.0	BONDS YET TO BE SOLD**
188	1.0	BONDS YET TO BE SOLD**
<b>Total</b>	<b>100.0%</b>	

**Summary of Direct Cost Authorizations**

<b>Previously Approved EA Requests:</b>	\$30,962,600
<b>This Request:</b>	\$388,500
<b>Total EA Requests:</b>	\$31,351,100
<b>Previously Approved Budget:</b>	\$39,921,200
<b>Budget Adjustment Requested this EA:</b>	\$100
<b>Updated Budget:</b>	\$39,921,300
<b>Budget Remaining After This EA</b>	\$8,570,200

**Comments:**

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING - PLANNING OUTSIDE	0	0	0	0	0	0	2/10	4/12
ENGINEERING DESIGN - IRWD	0	250,000	250,000	0	250,000	250,000	11/09	6/11
ENGINEERING DESIGN - OUTSIDE	0	2,919,900	2,919,900	0	3,200,000	3,200,000	11/09	6/11
DESIGN STAFF FIELD SUPPORT	0	50,000	50,000	0	50,000	50,000	11/09	6/11
ENGINEERING - CA&I IRWD	0	250,000	250,000	0	250,000	250,000	5/10	6/13
ENGINEERING - CA&I OUTSIDE	370,000	1,055,000	1,425,000	125,000	1,300,000	1,425,000	5/10	6/13
CONSTRUCTION FIELD SUPPORT	0	10,000	10,000	0	10,000	10,000	5/10	6/13
CONSTRUCTION	0	20,493,000	20,493,000	(125,000)	28,500,000	28,375,000	5/10	6/13
LEGAL	0	10,000	10,000	0	10,000	10,000	11/09	6/13
LAND	0	4,325,100	4,325,100	0	4,325,100	4,325,100	1/10	6/10
WATER QUALITY	0	50,000	50,000	0	50,000	50,000	11/09	4/12
ENGINEERING ENVIRONMENTAL-OUTS	0	75,000	75,000	0	75,000	75,000	6/09	6/10
Contingency - 5.00% Subtotal	\$18,500	\$1,474,600	\$1,493,100	\$100	\$1,901,100	\$1,901,200		
<b>Subtotal (Direct Costs)</b>	<b>\$388,500</b>	<b>\$30,962,600</b>	<b>\$31,351,100</b>	<b>\$100</b>	<b>\$39,921,200</b>	<b>\$39,921,300</b>		
Estimated G/A - 195.00% of direct labor*	\$0	\$1,189,500	\$1,189,500	\$0	\$1,189,500	\$1,189,500		
<b>Total</b>	<b>\$388,500</b>	<b>\$32,152,100</b>	<b>\$32,540,600</b>	<b>\$100</b>	<b>\$41,110,700</b>	<b>\$41,110,800</b>		
Direct Labor	\$0	\$610,000	\$610,000	\$0	\$610,000	\$610,000		

\*EA includes estimated G&A. Actual G&A will be applied based on the current ratio of direct labor to general and administrative costs.

**EA Originator:** \_\_\_\_\_ 5/9/11

**Department Director:** \_\_\_\_\_ 5/9/11

**Finance:** \_\_\_\_\_

**Board/General Manager:** \_\_\_\_\_

\*\* IRWD hereby declares that it reasonably expects those expenditures marked with two asterisks to be reimbursed with proceeds of future debt to be incurred by IRWD in a maximum principal amount of \$41,934,000. The above-captioned project is further described in the attached staff report and additional documents, if any, which are hereby incorporated by reference. This declaration of official intent to reimburse costs of the above-captioned project is made under Treasury Regulation Section 1.150-2.

May 23, 2011

Prepared by: K. Welch/M. Hoolihan

Submitted by: G. Heiertz

Approved by: Paul Jones

## ACTION CALENDAR

### WATER SUPPLY ASSESSMENT FOR HERITAGE FIELDS (PLANNING AREAS 30 AND 51) AND VERIFICATION OF SUFFICIENT WATER SUPPLIES FOR TENTATIVE TRACT NOS. 17283, 17364, 17366, 17368 AND 17202 (PLANNING AREA 51)

#### SUMMARY:

In March 2011, staff approved a request by the City of Irvine to complete a Water Supply Assessment (WSA) and Verification of Sufficient Water Supplies (WSV) for the Heritage Fields proposed project located within the former Marine Corps Air Station (MCAS) El Toro Base. Staff has completed the WSA for Planning Areas 30 and 51 and the WSV for Tentative Tract Nos. 17283, 17364, 17366, 17368 and 17202 in Planning Area 51. Staff is recommending Board approval of both the WSA and WSV.

#### BACKGROUND:

The City of Irvine's proposed Heritage Fields project is the current designation of the former Orange County Great Park proposed development. This project is located within Planning Areas 30 and 51 on the former MCAS El Toro Base. A WSA for the Orange County Great Park project was completed on January 27, 2003. This prior WSA included 3,625 dwelling units within the Planning Areas 30 and 51. The current WSA request includes an additional 1,269 units for a total of 4,894 units. The proposed changes also include the addition of one 1,000-student school. As a result of the proposed changes in dwelling units and increase in water demand, a new WSA has been completed and the document is provided as Exhibit "A"

The WSA for the proposed project is based on information from the IRWD Water Resources Master Plan (WRMP) and the Sub Area Master Plan for the Great Park. Preliminary estimates show an increase in potable water demands for this project of 975 AFY and a decrease of 936 AFY in non-potable demands associated with this revised land use plan.

The WSV for the requested tract maps is based on the WSA and contains IRWD's determination that a sufficient water supply is available. This reflects IRWD's confirmation that the project water demands, together with demands from any other developments that have previously received a WSV, will-serves or other approvals by IRWD, are in the aggregate within the demands identified by the WSA. In addition to reliance on this WSA, the WSV law requires several elements not covered or required in water supply assessments. These elements are primarily covered in Sections 1(b)(ii), 1(b)(iii), and 1(b)(iv) of the "Detailed Verification" section of the WSV. The completed WSV is attached as Exhibit "B".

#### FISCAL IMPACTS:

None.

Action Calendar: Water Supply Assessment for Heritage Fields (Planning Areas 30 and 51) and Verification of Sufficient Water Supplies for Tentative Tract Nos. 17283, 17364, 17366, 17368 and 17202 (Planning Area 51)

May 23, 2011

Page 2

ENVIRONMENTAL COMPLIANCE:

This study is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15262 which provides exemption for planning studies.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on May 17, 2011.

RECOMMENDATION:

THAT THE BOARD APPROVE THE WATER SUPPLY ASSESSMENT FOR PLANNING AREAS 30 AND 51 AND VERIFICATION OF SUFFICIENT WATER SUPPLIES FOR TENTATIVE TRACT NOS. 17283, 17364, 17366, 17368 AND 17202 IN PLANNING AREA 51.

LIST OF EXHIBITS:

Exhibit "A" – Water Supply Assessment for Heritage Fields Planning Areas 30 and 51  
Exhibit "B" – Verification of Sufficient Water Supplies for Tentative Tract Nos. 17283, 17364, 17366, 17368 and 17202 in Planning Area 51

# Exhibit "A"

## IRVINE RANCH WATER DISTRICT ASSESSMENT OF WATER SUPPLY Water Code §10910 *et seq.*

To: (Lead Agency)

City of Irvine  
P.O. Box 19575  
Irvine, CA 92623-9575

(Applicant)  
Heritage Fields El Toro, LLC  
25 Enterprise, Suite 400  
Aliso Viejo, CA 92656

### Project Information

Project Title: Heritage Fields Planning Areas 30 and 51 (Exhibit A)

- Residential: No. of dwelling units: \_\_\_\_\_
- Shopping center or business: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_
- Commercial office: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_
- Hotel or motel: No. of rooms \_\_\_\_\_
- Industrial, manufacturing or processing: No. of employees \_\_\_\_\_ No. of acres \_\_\_\_\_  
Sq. ft. of floor space \_\_\_\_\_
- Mixed use (check and complete all above that apply) (see Exhibit B)
- Other: \_\_\_\_\_

### Assessment of Availability of Water Supply

On \_\_\_\_\_, 2011 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

- The projected water demand for the Project  was  was not included in IRWD's most recently adopted urban water management plan.
- A sufficient water supply is available for the Project.  
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project. [Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

\_\_\_\_\_  
Signature Date Title

## Water Supply Assessment Information

### Purpose of Assessment

Irvine Ranch Water District (“IRWD”) has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the “Project”). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability (“assessment”) for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the “Assessment Law”) contains the requirements for the information to be set forth in the assessment.

### Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD’s aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects’ water demands will be included in the baseline. A newly assessed project’s water demand will have been included in previous water supply assessments for other projects (as part of IRWD’s “full build-out” demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project’s water demand was included (as part of IRWD’s “full build-out” demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the “with project” demand.

### Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD’s principal planning document is IRWD’s “Water Resources Master Plan” (“WRMP”). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan (“UWMP”), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. (The UWMP is required to be updated in years ending with “five” and “zero,” and IRWD’s next update of that document is anticipated in June 2011.<sup>1</sup>)

In addition to the WRMP and the 2005 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

<sup>1</sup> Extended to July 1, 2011 (Water Code Section 10608.20)

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

### Assessment Methodology

**Water use factors; dry-year increases.** IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2005 UWMP and historical regional demand variation as documented in the Metropolitan Water District of Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

**Planning horizon.** For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2031, which is considered to represent build-out or "ultimate development".

**Assessment of demands.** Water demands are reviewed in this assessment for three development projections (to 2031):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.
- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.
- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

**Assessment of supplies.** For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County (“MWD OC”). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

***Comparison of demand and supply.*** The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).
- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).
- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system’s ability to meet the highest day’s demand of the fluctuating demands that will be experienced in a year’s time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

### Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

- Figure 1: Normal Year Supply and Demand – Potable Water
- Figure 2: Single Dry-Year Supply and Demand – Potable Water
- Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
- Figure 4: Maximum-Day Supply and Demand – Potable Water
- Figure 5: Normal Year Supply and Demand – Nonpotable Water
- Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
- Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
- Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD's potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD’s nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if

overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2010 Regional Urban Water Management Plan (RUWMP) shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods through 2035, including a repeat of the 1990-1992 multiple dry-year hydrology and the 1977 single dry-year hydrology. (See Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2015. (Figures 1, 2 and 3.)
- Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of *under-development* supplies. (Figures 2 and 3.)
- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2031. (Figure 4.)
- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2020. (Figures 5, 6, 7 and 8). IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

**Margins of safety.** The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.
- The potential exists for the treatment and conversion of some reserve nonpotable supplies to potable water.
- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and

information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.
- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

**Recent Actions on Delta Pumping.** The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cut back on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by

implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2010) and MWD's RUWMP (November 2010), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2010 through 2035.<sup>2</sup> For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,752,000 acre-feet and Colorado average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 385,400 acre-feet which is 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels.

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<sup>2</sup> MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. Assuming this estimated SWP reduction amount is included in the final RUWMP adopted by MWD, that amount in acre feet would be equivalent to about 12% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.<sup>3</sup> In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

- Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
- Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
- Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2031 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

**Climate Change.** The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

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<sup>3</sup> In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2008-2009 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "an accumulated overdraft of 500,000 AF is only acceptable for short durations due to drought conditions...and an optimal basin management target of 100,000 AF of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also providing enough water in storage to offset decreased supplies during a two- to three-year drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply and 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

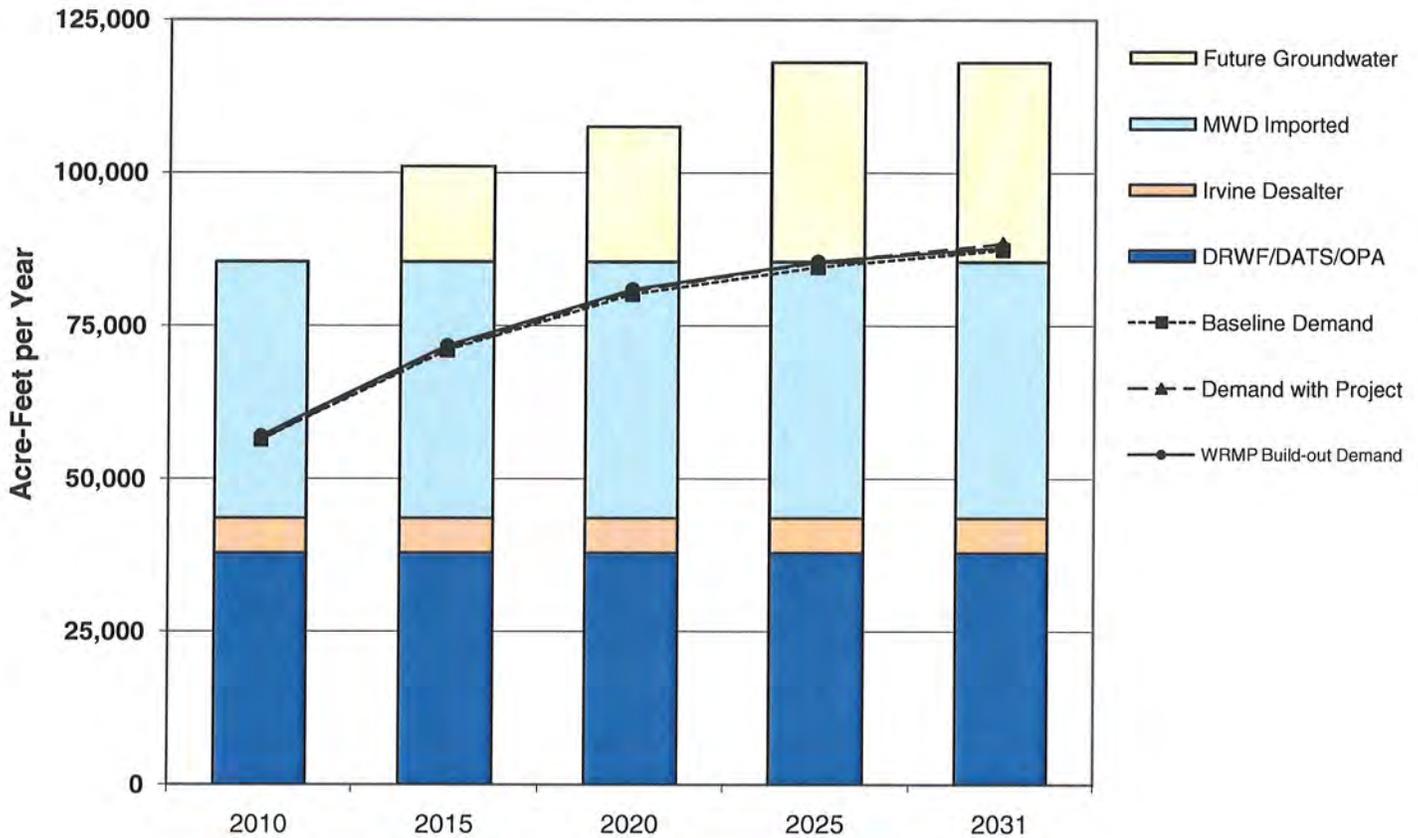
***Catastrophic Supply Interruption Planning.*** MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and MWD has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has addressed supply interruption planning in its WRMP and UWMP.

## **Detailed Assessment**

### **1. Supply and demand comparison**

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Recent Actions on Delta Pumping" above.

**Figure 1  
IRWD Normal-Year Supply & Demand - Potable Water**

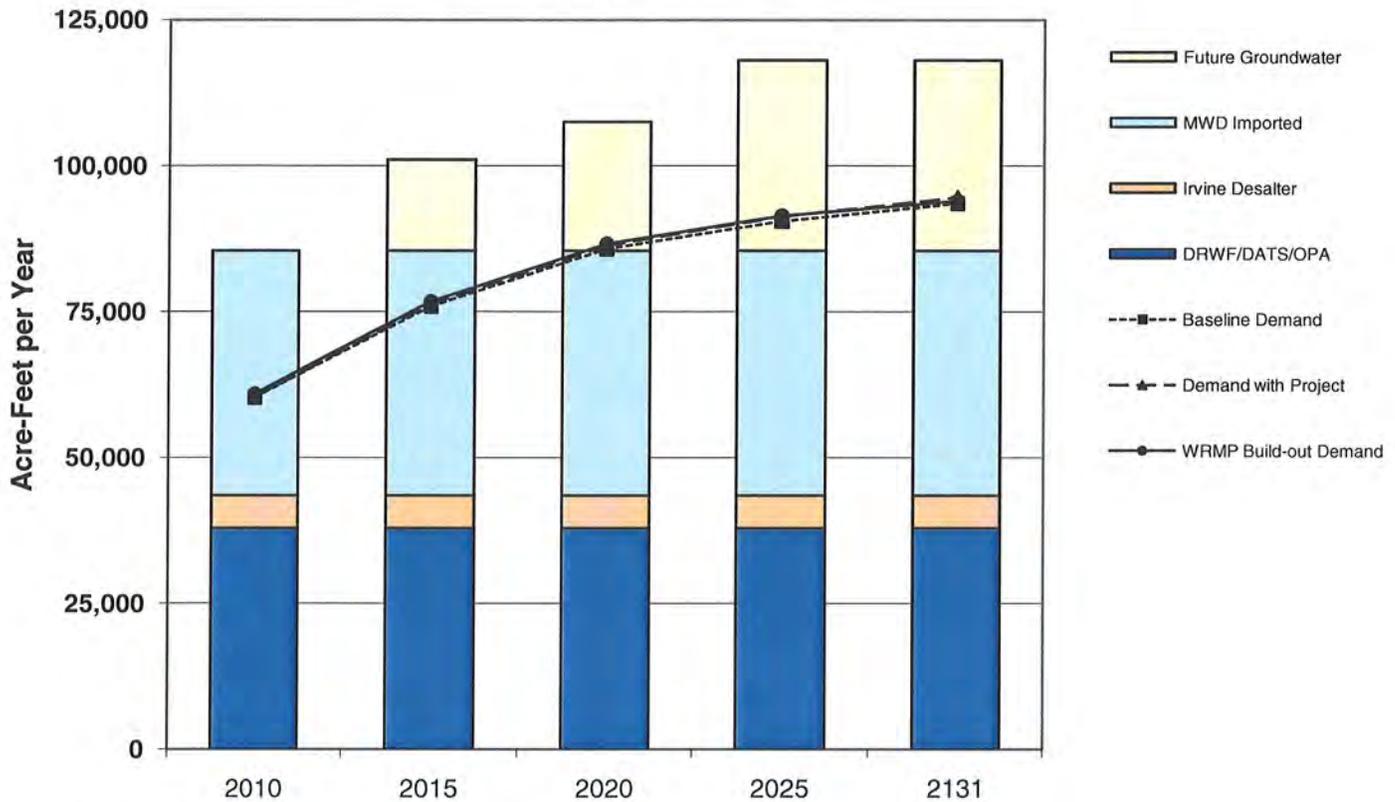


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
<b>Maximum Supply Capability</b>	<b>85,469</b>	<b>101,069</b>	<b>107,569</b>	<b>118,069</b>	<b>118,069</b>
<b>Baseline Demand</b>	<b>56,353</b>	<b>70,989</b>	<b>80,140</b>	<b>84,575</b>	<b>87,440</b>
<b>Demand with Project</b>	<b>56,402</b>	<b>71,281</b>	<b>80,677</b>	<b>85,355</b>	<b>88,415</b>
<b>WRMP Build-out Demand</b>	<b>56,933</b>	<b>71,725</b>	<b>80,961</b>	<b>85,445</b>	<b>87,836</b>
<b>Reserve Supply with Project</b>	<b>29,067</b>	<b>29,788</b>	<b>26,893</b>	<b>32,714</b>	<b>29,654</b>

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 2  
IRWD Single Dry-Year Supply & Demand - Potable Water**

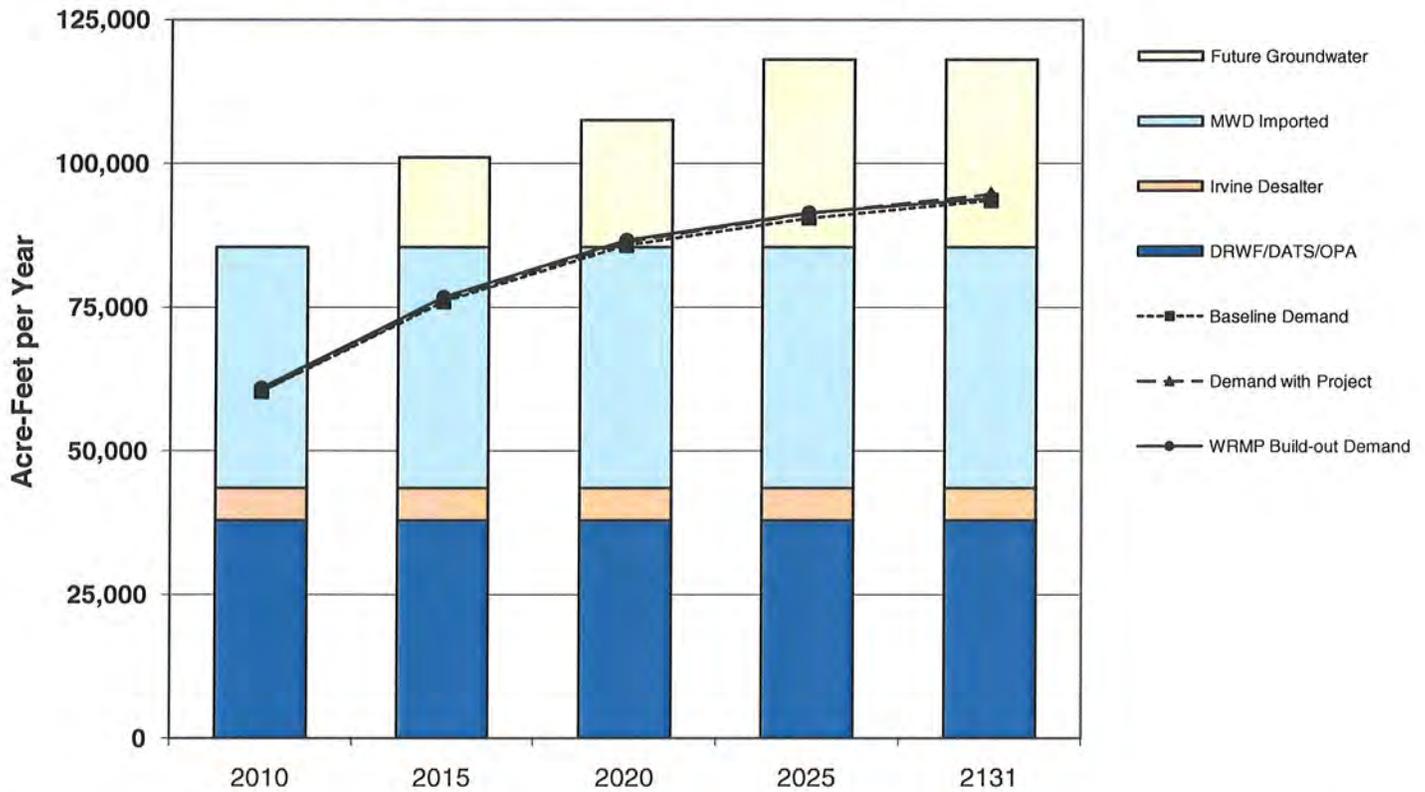


(in acre-feet per year)	2010	2015	2020	2025	2131
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<u>Supplies Under Development</u>					
Future Groundwater	-	15,600	22,100	32,600	32,600
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	60,298	75,958	85,750	90,495	93,561
Demand with Project	60,350	76,271	86,324	91,330	94,604
WRMP Build-out Demand	60,919	76,746	86,629	91,426	93,985
Reserve Supply with Project	24,550	24,323	20,940	26,643	24,084

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 3  
IRWD Multiple Dry-Year Supply & Demand - Potable Water**

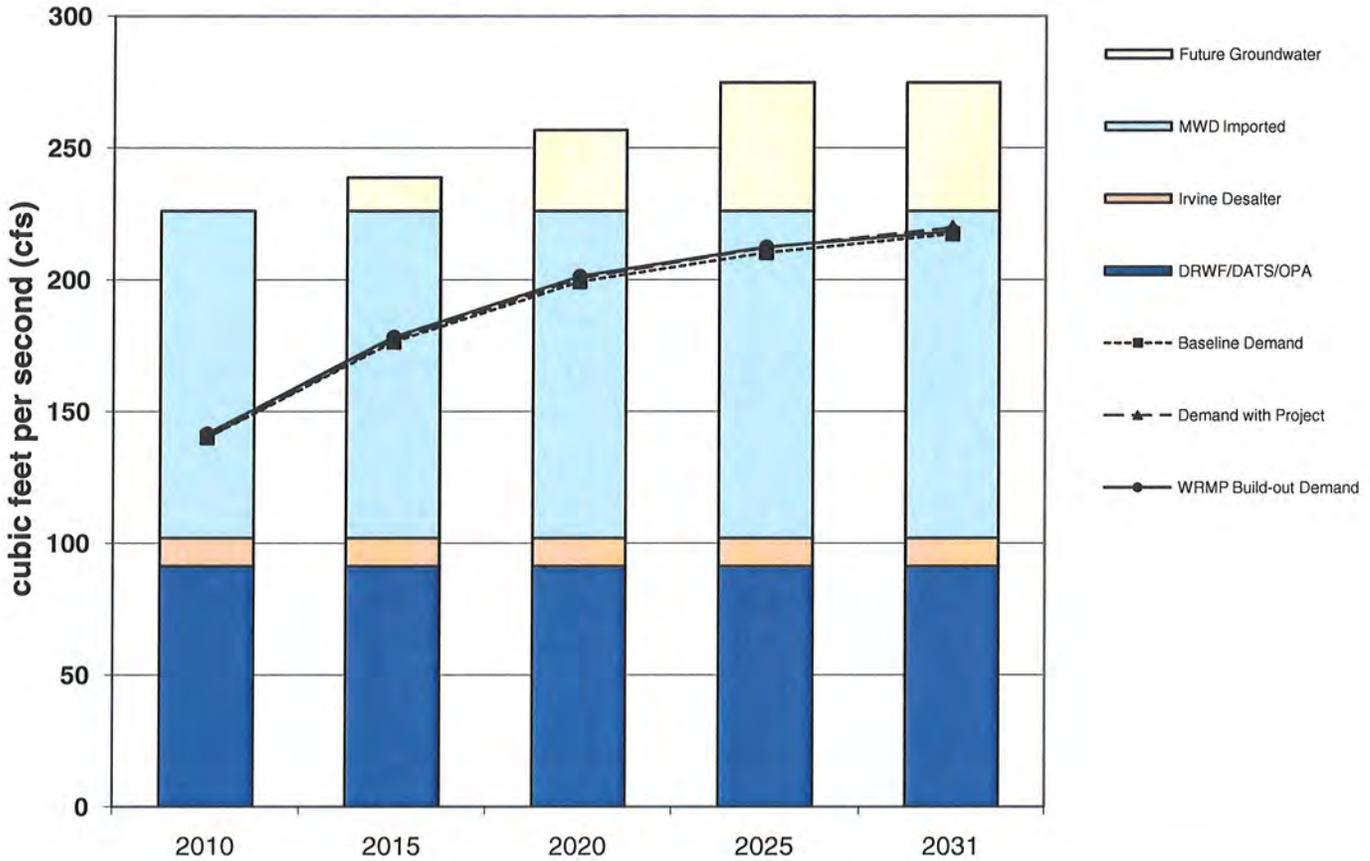


(in acre-feet per year)	2010	2015	2020	2025	2131
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	60,298	75,958	85,750	90,495	93,561
Demand with Project	60,350	76,271	86,324	91,330	94,604
WRMP Build-out Demand	60,919	76,746	86,629	91,426	93,985
Reserve Supply with Project	25,119	24,798	21,245	26,739	23,465

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

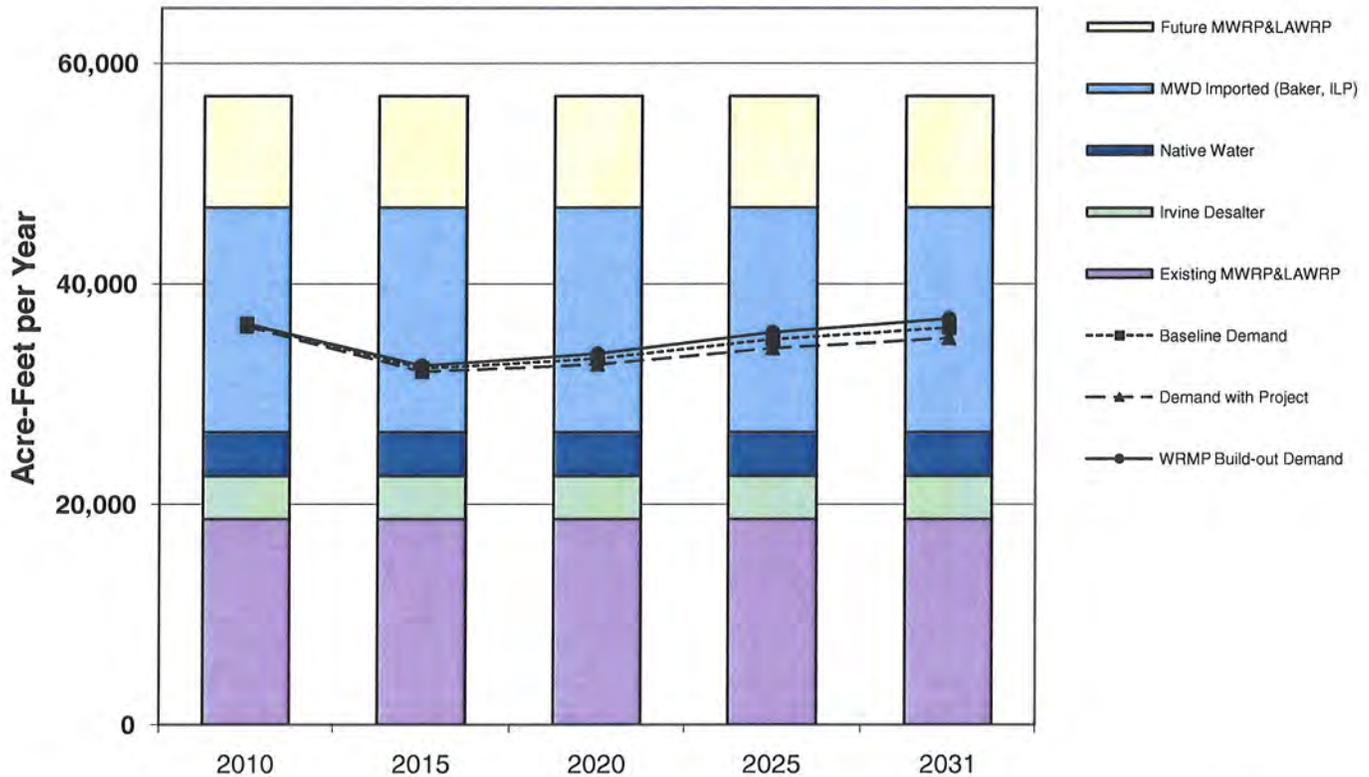
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 4  
IRWD Maximum-Day Supply & Demand - Potable Water**



(in cfs)	2010	2015	2020	2025	2031
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	91.4	91.4	91.4	91.4	91.4
Irvine Desalter	10.6	10.6	10.6	10.6	10.6
<u>Supplies Under Development</u>					
Future Groundwater	-	12.7	30.7	48.7	48.7
Maximum Supply Capability	226.1	238.8	256.8	274.8	274.8
Baseline Demand	140.1	176.5	199.2	210.3	217.4
Demand with Project	140.2	177.2	200.6	212.2	219.8
WRMP Build-out Demand	141.5	178.3	201.3	212.4	218.4
Reserve Supply with Project	84.6	60.5	55.5	62.4	56.4

**Figure 5  
IRWD Normal-Year Supply & Demand - Nonpotable Water**

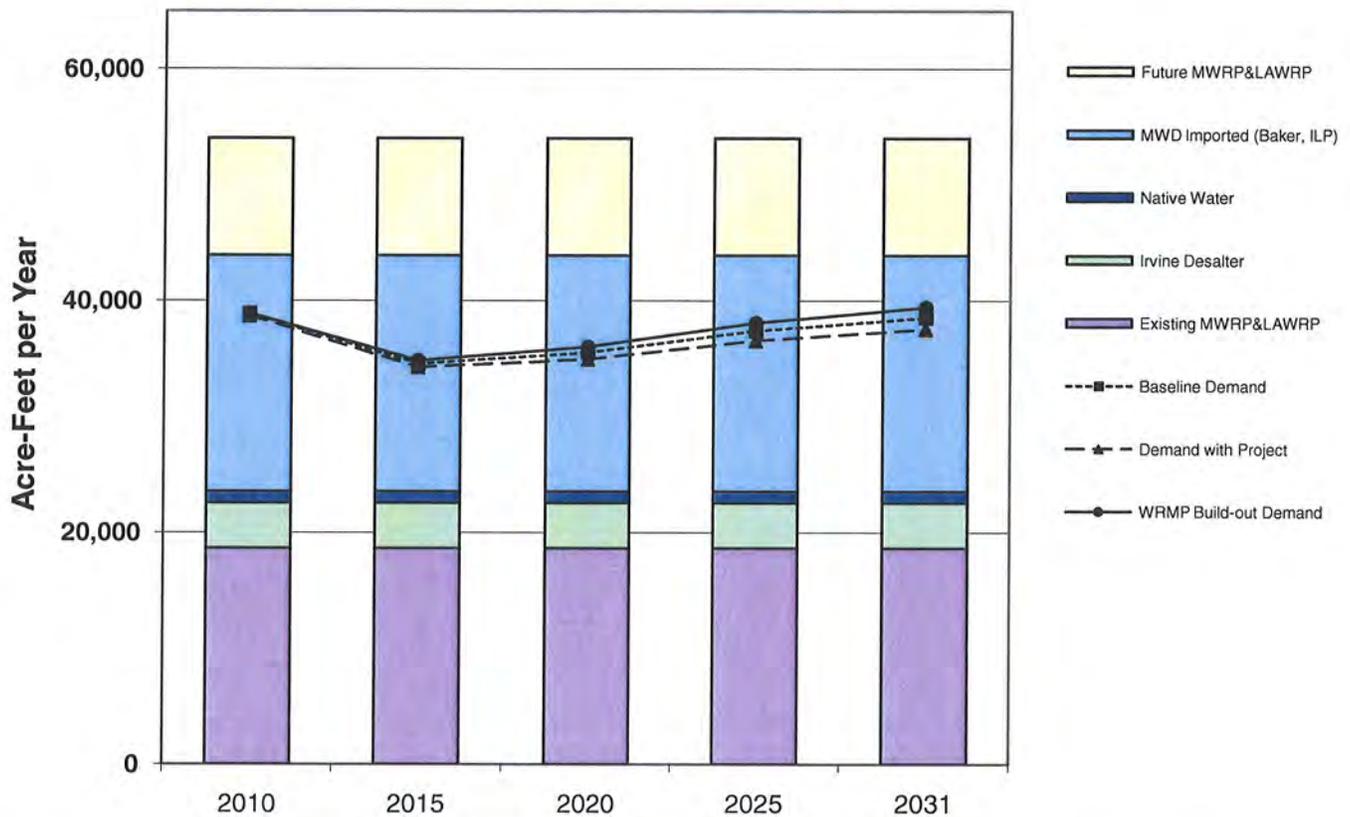


(in acre-feet per year)	2010	2015	2020	2025	2031
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	4,000	4,000	4,000	4,000	4,000
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	57,035	57,035	57,035	57,035	57,035
Baseline Demand	36,335	32,303	33,198	34,948	36,019
Demand with Project	36,152	32,023	32,670	34,158	35,083
WRMP Build-out Demand	36,376	32,560	33,661	35,608	36,845
Reserve Supply with Project	20,659	20,659	24,475	23,374	20,190

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 6**  
**IRWD Single Dry-Year Supply & Demand - Nonpotable Water**

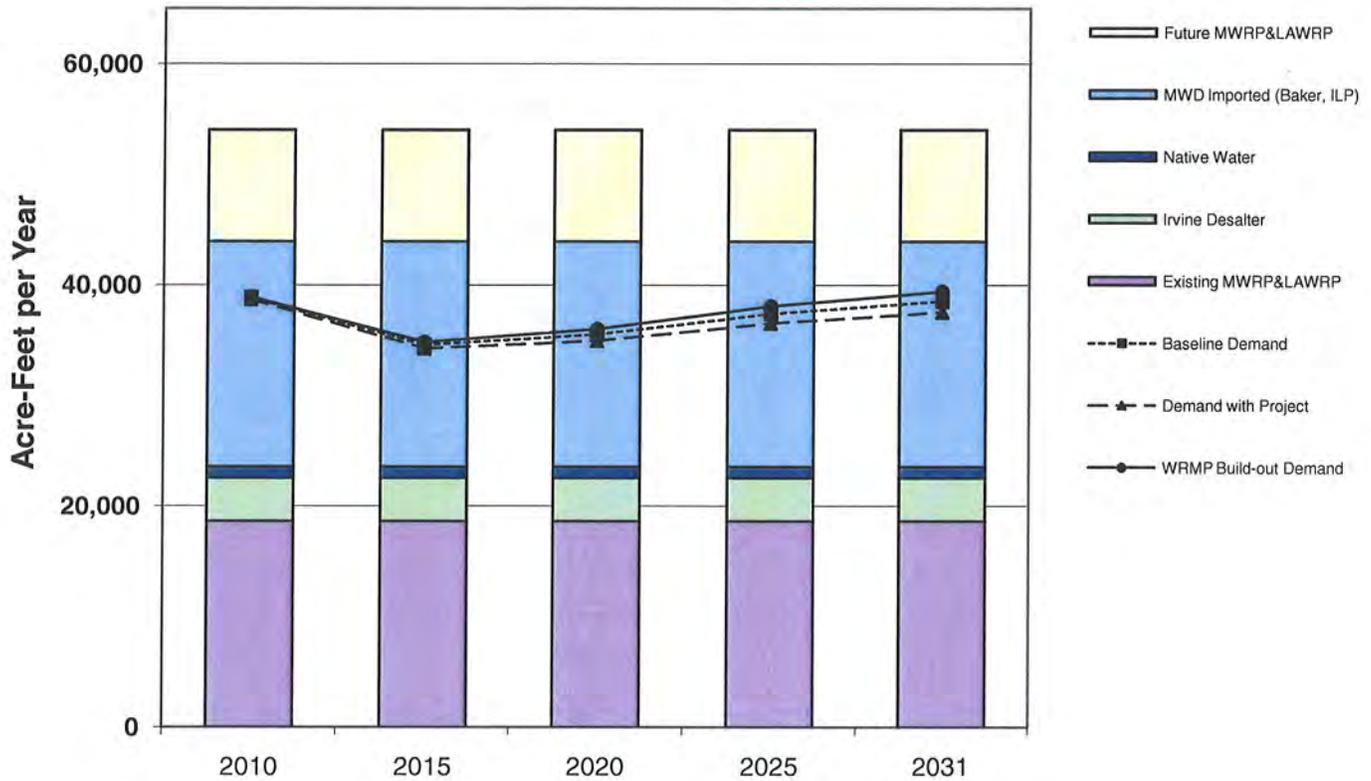


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Nonpotable Supplies</b>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
<b>Supplies Under Development</b>					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	38,878	34,565	35,521	37,394	38,541
Demand with Project	38,683	34,264	34,957	36,549	37,539
WRMP Build-out Demand	38,922	34,839	36,017	38,101	39,424
Reserve Supply with Project	15,352	19,771	19,078	17,486	16,496

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 7  
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water**

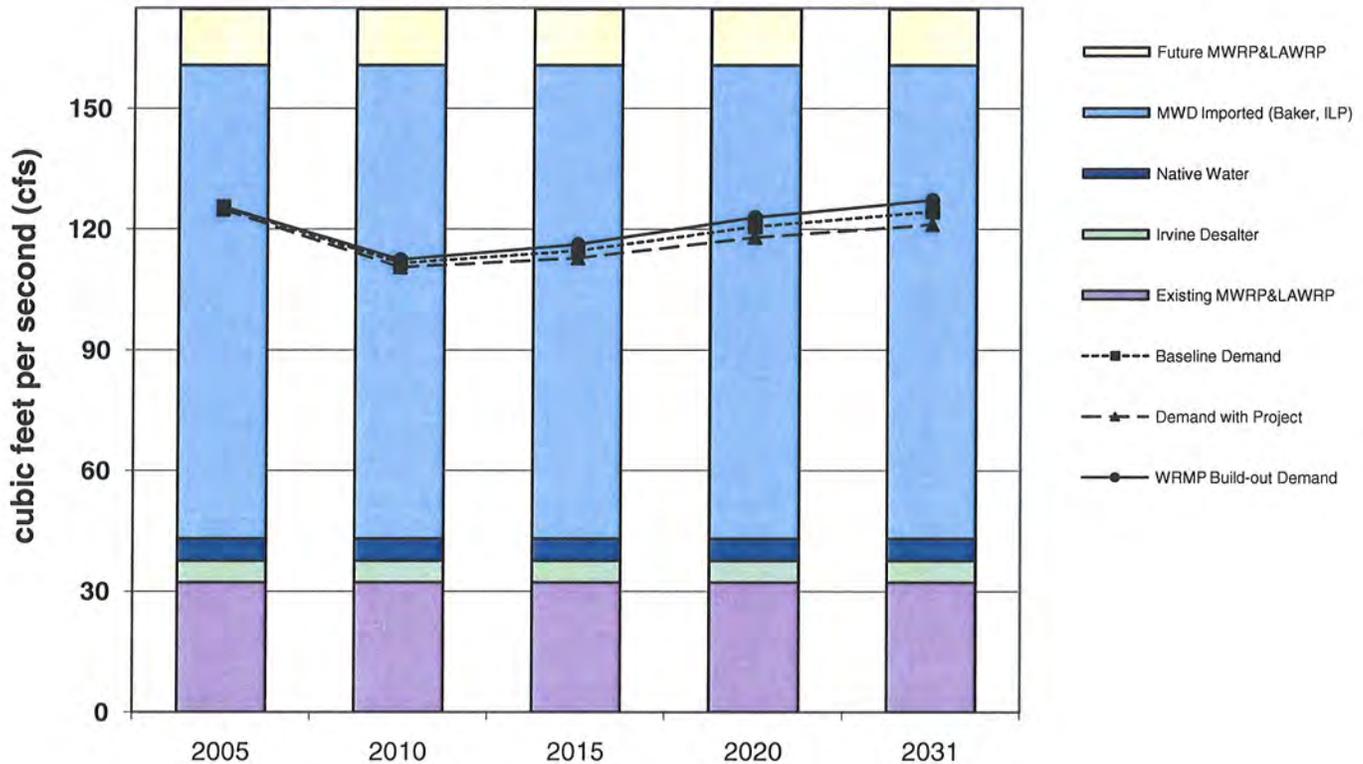


(in acre-feet per year)	2010	2015	2020	2025	2031
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	38,878	34,565	35,521	37,394	38,541
Demand with Project	38,683	34,264	34,957	36,549	37,539
WRMP Build-out Demand	38,922	34,839	36,017	38,101	39,424
Reserve Supply with Project	15,352	19,771	19,078	17,486	16,496

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

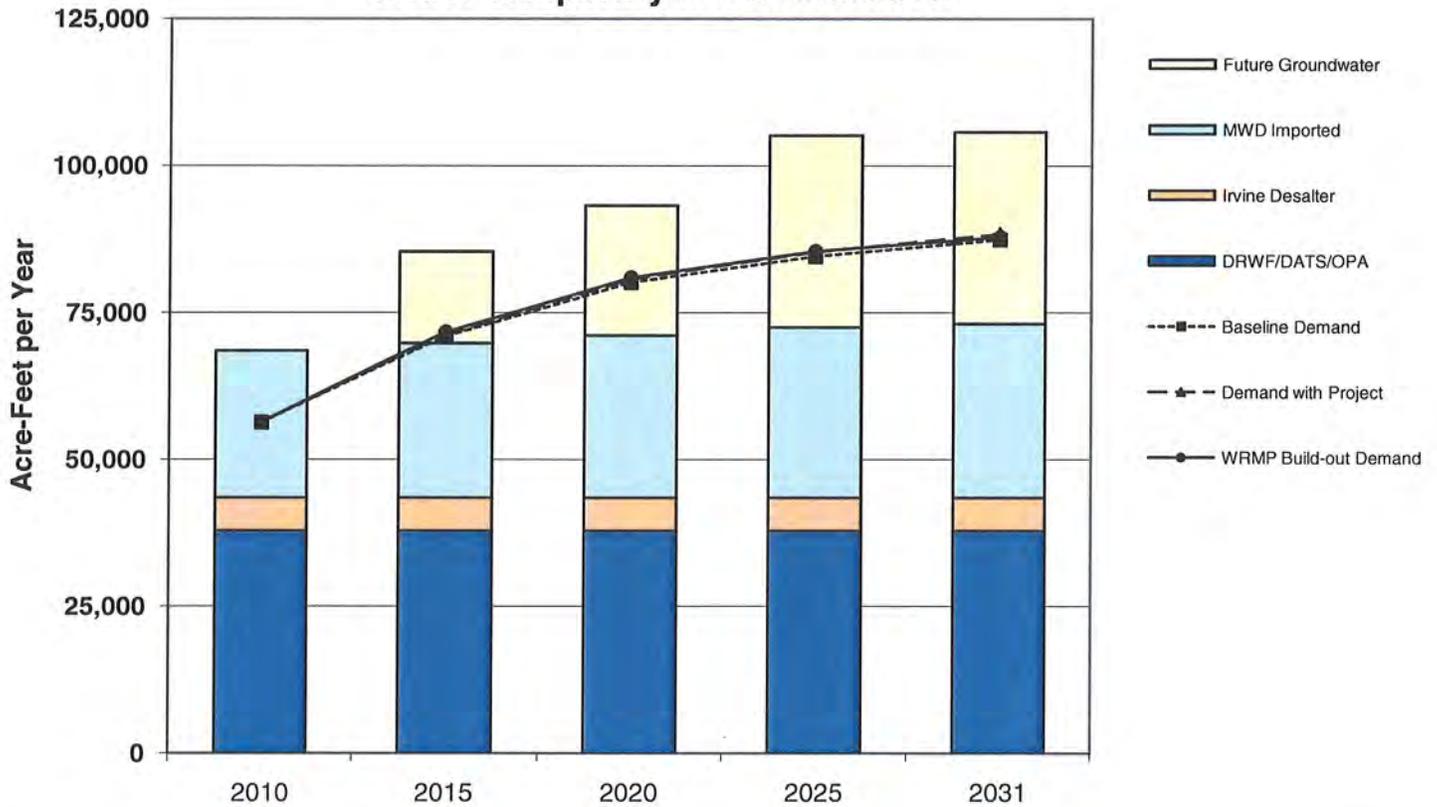
**Figure 8**  
**IRWD Maximum-Dry Supply & Demand - Nonpotable Water**



(in cfs)	2005	2010	2015	2020	2031
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	5.5	5.5	5.5	5.5	5.5
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	14.0	14.0	14.0	14.0	14.0
Maximum Supply Capability	174.7	174.7	174.7	174.7	174.7
Baseline Demand	125.5	111.5	114.6	120.7	124.4
Demand with Project	124.8	110.6	112.8	117.9	121.1
WRMP Build-out Demand	125.6	112.4	116.2	123.0	127.2
Reserve Supply with Project	49.1	62.3	58.5	51.8	47.5

Note: Downward trend reflects reduction in agricultural use over time.

**Figure 1a**  
**IRWD Normal-Year Supply & Demand - Potable Water**  
**Under Temporary MWD Allocation\***

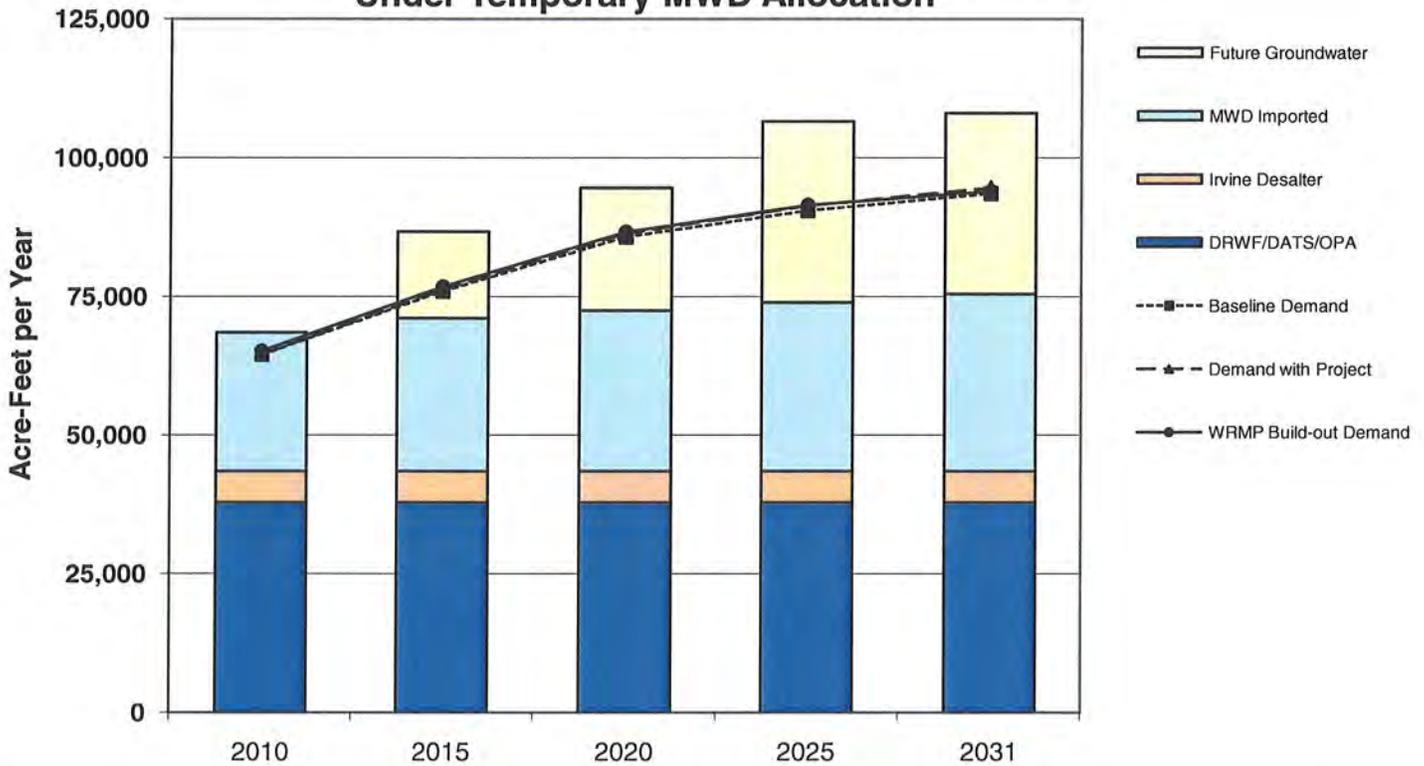


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	25,000	26,275	27,616	29,024	29,608
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
Maximum Supply Capability	68,540	85,415	93,256	105,164	105,748
Baseline Demand	56,353	70,989	80,140	84,575	87,440
Demand with Project	56,402	71,281	80,677	85,355	88,415
WRMP Build-out Demand	56,402	71,725	80,961	85,445	87,836
Reserve Supply with Project	12,138	14,134	12,579	19,809	17,332

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

\*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

**Figure 2a**  
**IRWD Single Dry-Year Supply & Demand - Potable Water**  
**Under Temporary MWD Allocation\***

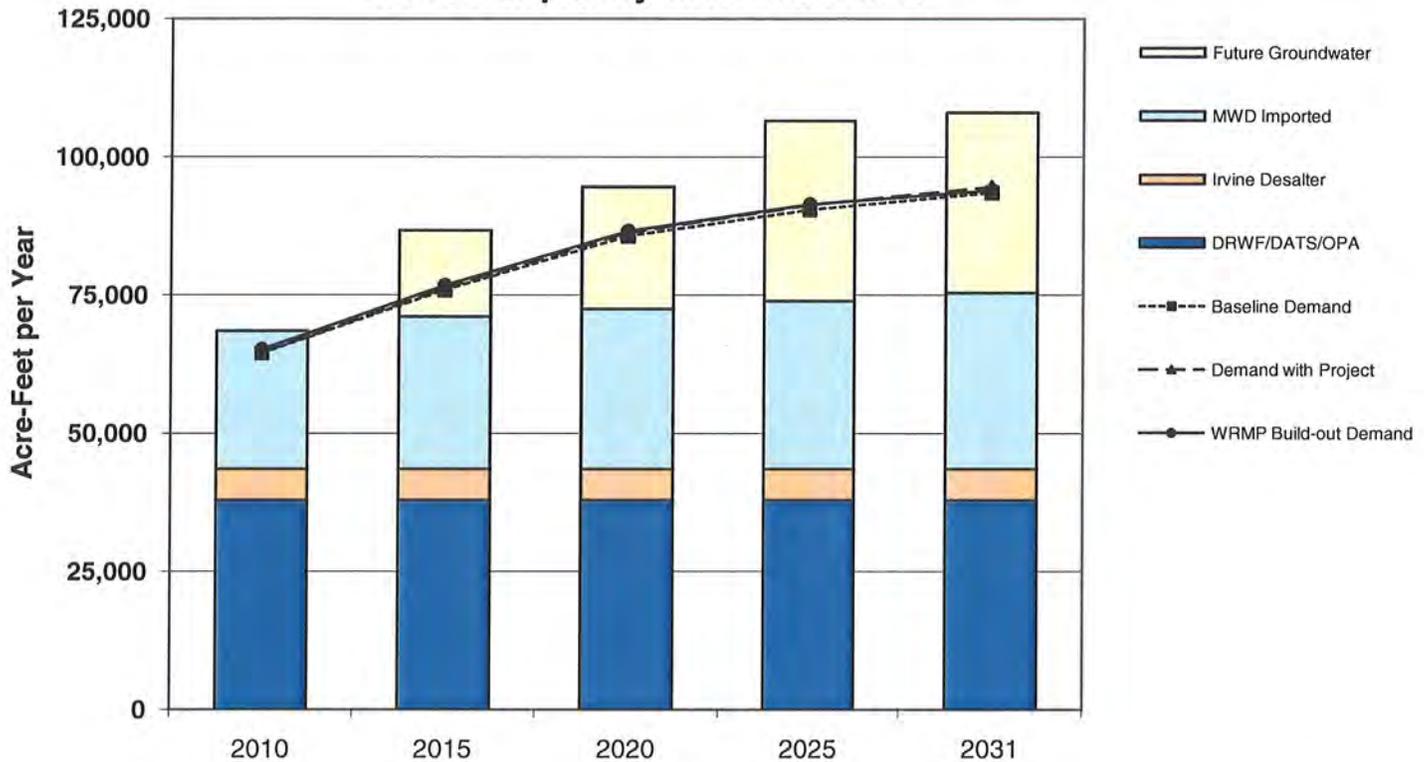


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	64,519	75,958	85,750	90,495	93,561
Demand with Project	64,575	76,271	86,324	91,330	94,604
WRMP Build-out Demand	65,183	76,746	86,629	91,426	93,985
Reserve Supply with Project	3,357	9,983	7,980	15,131	14,093

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

\*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

**Figure 3a  
IRWD Multiple Dry-Year Supply & Demand - Potable Water  
Under Temporary MWD Allocation\***



(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	64,519	75,958	85,750	90,495	93,561
Demand with Project	64,575	76,271	86,324	91,330	94,604
WRMP Build-out Demand	65,183	76,746	86,629	91,426	93,985
Reserve Supply with Project	3,357	10,458	8,284	15,227	13,473

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

\*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

## 2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

	Max Day (cfs)	Avg. Annual (AFY)	Annual by Category (AFY)
<b>Current Supplies</b>			
<b>Potable - Imported</b>			
East Orange County Feeder No. 2	41.4	16,652	1
Allen-McColloch Pipeline*	64.7	26,024	1
Orange County Feeder	18.0	7,240	1
			49,916
<b>Potable - Groundwater</b>			
Dyer Road Wellfield	80.0	28,000	2
OPA Well	1.4	1,000	
Deep Aquifer Treatment System-DATS	10.0	8,900	2
Irvine Desalter	10.6	5,640	3
			43,540
Total Potable Current Supplies	226.1		93,456
<b>Nonpotable - Reclaimed Water</b>			
MWRP (18 mgd)	23.9	17,340	4
LAWRP (5.5 mgd)	8.3	5,975	4
			23,315
<b>Nonpotable - Imported</b>			
Baker Aqueduct	52.7	15,262	5
Irvine Lake Pipeline	65.0	9,000	6
			24,262
<b>Nonpotable - Groundwater</b>			
Irvine Desalter-Nonpotable	5.4	3,898	7
			3,898
<b>Nonpotable Native</b>			
Irvine Lake	5.5	4,000	8
			4,000
Total Nonpotable Current Supplies	160.8		55,475
Total Combined Current Supplies	386.9		148,931
<b>Supplies Under Development</b>			
<b>Potable Supplies</b>			
Wells 21 & 22	6.0	6,300	
Well 106	2.2	1,300	
Well 53	4.5	3,000	
Future OPA Wells	8.0	5,000	
Anaheim wellfield	10.0	6,500	
Wells 51 & 52	9.0	5,500	
Tustin Legacy wells	9.0	5,000	9
			32,600
Total Potable Under Development Supplies	48.7	32,600	
Nonpotable Supplies: Future MWRP&LAWRP Reclaimed	20.0	14,450	10
			14,450
Total Under Development	117.4		47,050
<b>Total Supplies</b>			
Potable Supplies	274.8		126,056
Nonpotable Supplies	180.7		69,925
Total Supplies (Current and Under Development)	455.6		195,981

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 3, page 22).

2 Contract amount - See Potable Supply-Groundwater(iii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 3, page 22).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70 years historical average of Santiago Creek Inflow into Irvine Lake.

9 Estimated combined capacity of wells.

10 Future estimated MWRP & LAWRP reclaimed water production.

\*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.<sup>4 5</sup>

• POTABLE SUPPLY - IMPORTED<sup>6</sup>

***Potable imported water service connections (currently available).***

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California (“MWD”): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD’s entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County (“MWDOC”), a member agency of MWD.

***Allen-McColloch Pipeline (“AMP”) (currently available).***

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) (“AMP Sale Agreement”). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the “Diemer Intertie”) from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District (“LAWD”),<sup>7</sup> identified as “Participants” therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD’s and the other Participants’ requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD

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<sup>4</sup> In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second (“cfs”). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

<sup>5</sup> In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, IRWD has no current plans to do so.

<sup>6</sup> See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

<sup>7</sup> IRWD has succeeded to LAWD’s interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a “utility basis,” meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD’s capacity along the AMP, at MWD’s expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

**(iii)** Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 (“AMP Allocation Agreement”). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD’s capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD’s first four AMP connections, 49.69 cfs at IRWD’s next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD’s remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant’s peak flow exceeds its capacity, the Participant shall “purchase” additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD’s obligation under the AMP Sale Agreement to meet all Participants’ demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

**(iv)** Improvement Subleases (or “FAP” Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

***East Orange County Feeder No. 2 (“EOCF#2”) (currently available).***

**(v)** Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 (“IRWD MWDOC Assignment Agreement”); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 (“IRWD Coastal Assignment Agreement”). East Orange County Feeder No. 2 (“EOCF#2”), a feeder linking Orange County

with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

***Orange County Feeder (currently available)***

**(vi)** Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

**(vii)** Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

**POTABLE SUPPLY - GROUNDWATER**

**(i)** Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of

municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999. OCWD's analysis has been expanded and updated through 2025 in its Final Draft Long-Term Facilities Plan (January, 2006).

*(ii) Irvine Ranch Water District v. Orange County Water District*, OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

***Dyer Road Wellfield (DRWF) / Deep Aquifer Treatment System (DATS)  
(currently available)***

*(iii) Agreement For Water Production and Transmission Facilities*, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System (CATS), IRWD has increased the yield of DATS.

***Irvine Subbasin / Irvine Desalter (currently available)***

*(iv) First Amended and Restated Agreement*, dated March 11, 2002, as

amended June 15, 2006, restating May 5, 1988 agreement (“Irvine Subbasin Agreement”). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC’s commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

**(v)** Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD’s entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

#### ***Orange Park Acres (currently available)***

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin.

#### ***Irvine Wells (under development)***

**(vi)** IRWD is pursuing the installation of production facilities in the west Irvine, Anaheim, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, a site for an additional well and treatment facility has been acquired by IRWD. The

production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. An agreement with the City of Anaheim would be developed for production within Anaheim. Appropriate environmental review would be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECLAIMED

***Water Reclamation Plants (currently available)***

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP). MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

***Water Reclamation Plant Expansion (under development)***

IRWD has prepared a Final Environmental Impact Report for the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project (February, 2006) and the expansion project is under construction. With this expansion, IRWD plans to increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2031. (Initial upgrades that are within existing permit authorizations and CEQA compliance are completed) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED<sup>8</sup>

***Baker Pipeline (currently available)***

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker

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<sup>8</sup> See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

***Irvine Lake (currently available)***

(i) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriate rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally

yield three-fourths of the amount over 1,000 AF.<sup>9</sup> The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

#### •NONPOTABLE SUPPLY - GROUNDWATER

##### ***Irvine Subbasin / Irvine Desalter (currently available)***

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

#### •IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply; MWD has provided information concerning the availability of the supplies to its entire service area. In its most recently adopted RUWMP, MWD has extended its planning timeframe out through 2035 to ensure that MWD's 2010 RUWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the RUWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The RUWMP summarizes MWD's planning initiatives over the past ten years, which includes the Integrated Resources Plan (IRP), the IRP Update, the Water Surplus and Drought Management Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's IRP Update (October 2010) showed that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2015 through 2035. The RUWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2035. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

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<sup>9</sup> The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

It is anticipated that MWD will revise its regional supply availability analysis periodically to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD RUWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - **Recent Actions on Delta Pumping**, MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater wells (PR Nos. 10285, 15423, 15427, 15428, 15051 and 15052) and the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), IRWD adopted its fiscal year 2010/11 capital budget on June 14, 2010 (Resolution No. 2010-16), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately \$673 million (water) and \$867 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

**3. Other users and contractholders (identified supply not previously used).**

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

**4. Information concerning groundwater included in the supply identified for the Project:**

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2005 UWMP, section III-3.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin (“Basin”) is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 (“MPR”) and in the more recent Groundwater Management Plan (“GMP”) at pages 2-1 through 6-33<sup>10</sup>. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 366,000 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan (“LTFP”) which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin.

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of “long-term overdraft,” overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD’s Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over \$250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an “overdraft” condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin

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<sup>10</sup> OCWD has also prepared a Long Term Facilities Plan which provides updated information which was received and filed by its Board in July 2009.

management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term “mining” overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (Source: 2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District; OCWD MPR, *supra*.)

OCWD’s efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD’s management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2 and LTFP, section 6)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD <sup>11</sup>
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

<sup>11</sup> The water produced from IRWD’s Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC’s historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD’s and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD’s main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

<b>Year (ending 6/30)</b>	<b>DRWF<sup>12</sup></b>	<b>Future GW<sup>13</sup></b>	<b>IDP (Potable)</b>	<b>IDP (Nonpotable)</b>
2015	37,900	15,600	5,640	3,898
2020	37,900	22,100	5,640	3,898
2025	37,900	32,600	5,640	3,898
2031	37,900	32,600	5,640	3,898

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD’s preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage (“BPP”) that OCWD sets based on these factors.<sup>14</sup>

<sup>12</sup> See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 1,000 AFY for the OPA well.

<sup>13</sup> Under development.

<sup>14</sup> OCWD has adopted a basin production percentage of 62% for 2010-11. In prior years OCWD has

Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD is moving forward with a number of replenishment supply projects, including the Groundwater Replenishment System project ("GWRS"). The OCWD MPR indicates that the GWRS will produce over 100,000 afy of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

**5.  This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Date of prior assessment: January 27, 2003. Check all of the following that apply:**

- Changes in the Project have substantially increased water demand.
- Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

**6. References**

*Water Resources Master Plan*, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

*2005 Urban Water Management Plan*, Irvine Ranch Water District, November, 2005

*Integrated Water Resources Plan Update*, Metropolitan Water District of Southern California, July, 2004

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maintained a basin production percentage that is higher than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

*Proposed Framework for Metropolitan Water District's Delta Action Plan*, Metropolitan Water District of Southern California, May 8, 2007

*Board Information Report*, Metropolitan Water District of Southern California, October 9, 2007

*2007 IRP Implementation Report*, Metropolitan Water District of Southern California, October, 2007

*Master Plan Report*, Orange County Water District, April, 1999

*Groundwater Management Plan*, Orange County Water District, March, 2004

*Final Draft Long-Term Facilities Plan*, Orange County Water District, January 2006

*2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*, Orange County Water District

*Progress on Incorporating Climate Change into Management of California's Water Resources*, California Department of Water Resources, July 2006

*Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program*, Irvine Ranch Water District, February 2009

*Water Shortage Contingency Plan*, Irvine Ranch Water District, February 2009

*2010 Integrated Resources Plan Update*, Metropolitan Water District of Southern California, October 2010

*Regional Urban Water Management Plan*, Metropolitan Water District of Southern California, November 2010

**Exhibit A**

Depiction of Project Area



**Exhibit B**

Uses Included in Project

February 18, 2011

Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*)

The City of Irvine hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that a supplemental environmental impact report is required for the project.

**Proposed Project Information**

Project Title: Heritage Fields Planning Areas 30 & 51, inclusion of Density Bonus residential units granted pursuant to state law, Section 2-3, and Resolution 08-2926

Location of project: Former MCAS El Toro Base, Planning Areas 30 and 51. The boundaries of Planning Area 51 generally include the Eastern Transportation Corridor to the west, the Foothill Transportation Corridor to the east, the Southern California Regional Rail Authority (SCRRA) rail lines to the south, and Irvine Boulevard and the storm channel near Alton Parkway to the north. Planning Area 51 abuts Planning Areas 30 and 32 to the south, Irvine Spectrum 2 – Planning Area 35 to the east, and Planning Areas 9 and 40 to the west, and Planning Area 6 to the north. The boundaries of Planning Area 30 generally include Interstate 5 (Santa Ana Freeway) to the south, the SCRRA rail lines to the north, and the Irvine Spectrum to the east and west (Irvine Spectrum 2- Planning Area 35 and Irvine Spectrum 3 - Planning Area 32). See attached Vicinity Map

- Previous Water Supply Assessment including this project was prepared on: 1/27/03. This application requests a new Water Supply Assessment, due to the following (check all that apply):
- Changes in the project have substantially increased water demand
- Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment

(Enclose maps and exhibits of the project)

Type of Development:

Residential: No. of dwelling units: 3,625 (in prior assessment), 1,269 new (total 4,894)

Shopping center or business: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Commercial office: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Hotel or motel: No. of rooms \_\_\_\_\_

Industrial, manufacturing, processing or industrial park: No. of employees \_\_\_\_\_  
No. of acres \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Mixed use (check and complete all above that apply)

Other: Non-Residential existing entitlement per original Water Supply Assessment with addition of (1) 1,000 student school.

Total acreage of project: per original Water Supply Assessment

Acreage devoted to landscape: (per original Water Supply Assessment)

Greenbelt \_\_\_\_\_ golf course \_\_\_\_\_ parks \_\_\_\_\_

Agriculture \_\_\_\_\_ other landscaped areas \_\_\_\_\_

Number of schools addition of (1) 1,000 student school Number of public facilities \_\_\_\_\_

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:

Landscaped areas will be irrigated via reclaimed water

What is the current land use of the area subject to a land use change under the project?

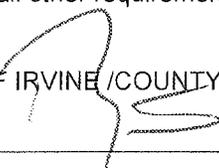
Per original Water Supply Assessment

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation \_\_\_\_\_

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

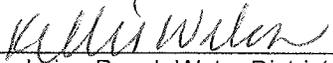
The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF IRVINE / COUNTY OF ORANGE

By: 

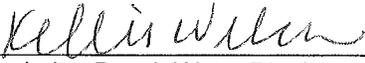
REQUEST RECEIVED:

Date: July 24, 2011

By:   
Irvine Ranch Water District

REQUEST COMPLETE:

Date: March 9, 2011

By:   
Irvine Ranch Water District

# Exhibit "B"

## IRVINE RANCH WATER DISTRICT VERIFICATION OF SUFFICIENT WATER SUPPLY Government Code §66473.7

To: (Lead Agency)  
City of Irvine  
P.O. Box 19575  
Irvine, CA 92623-9575

(Applicant)  
Heritage Fields El Toro, LLC  
25 Enterprise, Suite 400  
Aliso Viejo, CA 92656

### Project Information

Project Title: Heritage Fields Vesting Tentative Tract Maps 17283, 17364, 17366, 17368, and 17202 in Planning Area 51 (see Exhibit A)

Tentative Map Application No. 00516277-PTT, 00516246-PTT, 00516252-PTT, 00516269-PTT, 00516254-PTT  Verification requested prior to tentative map application

Number of residential units in Project: 4,894

Non-residential uses in Project (type, no. of employees, sq. ft. of floor space, acreage): (see Exhibit B)

Acreage to be devoted to landscape (excluding individual residence yards): (see Exhibit B)

The projected water demand for the Project was included in IRWD's most recently adopted urban water management plan.

A water supply assessment that included the Project was adopted by IRWD on \_\_\_\_\_, 2011. A copy is attached hereto and incorporated herein by this reference (see Exhibit C).

### Verification of Availability of Sufficient Water Supply

On \_\_\_\_\_, 2011, the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within Verification and made the following determination regarding the above-described Project:

- A sufficient water supply is available for the Project.  
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project.

The foregoing determination is based on the following Water Supply Verification Information and supporting information in the records of IRWD.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

## **WATER SUPPLY VERIFICATION INFORMATION**

### Purpose of Verification

Irvine Ranch Water District (“IRWD”) is the public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this verification (the “Project”). As a public water system, IRWD is required by Section 66473.7 of the Government Code (the “Verification Law”) to provide the City with a verification of the availability of a sufficient water supply for non-exempt subdivisions of more than 500 residential units in conjunction with (or prior to) the City’s approval of a tentative map. The City has found the Project to include a subdivision that is subject to verification and not exempt under the Verification Law.

The Verification Law provides that a verification shall be supported by substantial evidence, which may include, but is not limited to, any of the following (i) IRWD’s most recently adopted urban water management plan; (ii) a water supply assessment previously adopted for the project under Water Code 10910, *et seq.*; or (iii) other analytical information substantially similar to the assessment of service reliability required by Water Code Section 10635 to be included in the urban water management plan. The Verification Law also specifies the elements to be contained in a verification with respect to (i) supplies relied upon that are not currently available; (ii) reasonably foreseeable impacts of the subdivision on the availability of water resources for agricultural and industrial uses within IRWD’s service area that are not currently receiving water; and (iii) rights to extract additional groundwater needed to supply the subdivision.

A verification does not entitle the Project to service or to any right, priority or allocation in any supply, capacity or facility, or affect IRWD’s obligation to provide service to its existing customers or any potential future customers. In order to receive service, the Project applicant is required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD’s forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirements as specified therein.

### Methodology of Verification for Project With Prior Water Supply Assessment

As referenced on the cover page of this verification (the “Verification”), the Project was included within an assessment of water supply approved by IRWD. The Assessment contained IRWD’s determination that a sufficient water supply is available for the Project. As described in the Assessment, IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. However, upon approval of each assessment containing a determination of a sufficient supply, IRWD attributes the demands identified by that assessment to IRWD’s existing and committed demand. Thereafter, each verification approved by IRWD for a subdivision covered by that assessment is based on the assessment, and reflects IRWD’s confirmation that the water demands of the subdivision, together with any other subdivisions or developments that have previously received verifications, will-serves or other approval by IRWD under the same assessment, are, in the aggregate, within the demand identified by that assessment. In accordance with that procedure, this Verification is based on the Assessment. The Assessment’s determination of sufficiency extends through 2031, and is supplemented herein to include the full 20-year projection required in this Verification.

In addition, this Verification includes the elements required by the Verification Law that are not included within the required contents of assessments.

### Supporting Documentation

As noted above, the principal supporting document for this Verification is the Assessment. Other documentation supports the Assessment and this Verification: IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. (The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's next update of that document is anticipated in 2010.<sup>1</sup>)

In addition to the Assessment, the most recent WRMP and the 2005 UWMP mentioned above, other supporting documentation referenced herein is found in Section 5 of this Verification. This includes the Metropolitan Water District of Southern California's Regional Urban Water Management Plan (RUWMP) detailing an evaluation by Metropolitan Water District of Southern California (MWD), the wholesaler of IRWD's imported water supplies, of the reliability of MWD's supplies.

The Verification Law requires written proof of entitlement for "not currently available" (referred to herein as "under development") supplies. The Assessment includes such information for both currently available and under development supplies. Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2 of the Assessment. Copies of the summarized items have been provided to the City and can be obtained from IRWD.

### Sufficiency Calculation Methodology

The methodology for IRWD's comparison of its demands and supplies is set forth in the Assessment, in the section entitled "Assessment Methodology" and subsections thereof entitled "water use factors; dry-year increases;" "planning horizon;" "assessment of demands;" "assessment of supplies;" and "comparison of demand and supply."

---

<sup>1</sup> Extended to July 1, 2011 (Water Code Section 10608.20)

## Detailed Verification

### 1. **Determination of sufficiency of water supply**

#### **(a) Supply and demand comparison**

See the Assessment, Section 1, incorporated herein by reference.

#### **(b) Factors considered in determining the sufficiency of the water supply:**

##### **(i) The availability of water supplies over a historical record of at least 20 years.**

See the Assessment, Section 1, incorporated herein by reference.

##### **(ii) The applicability of a water shortage contingency analysis prepared pursuant to Water Code Section 10632 that includes actions to be undertaken by IRWD in response to water supply shortages.**

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect the implementation of water shortage emergency measures. IRWD's water shortage contingency plan (see UWMP, Section VIII-1) and IRWD's Rules and Regulations, Section 15, provide for four levels of water shortage emergency that may be declared by IRWD, with voluntary or mandatory measures that could be invoked in the respective levels. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for any water savings that could be achieved by these measures.

##### **(iii) Reduction by IRWD in water supply allocated to a specific water use sector, pursuant to a resolution, ordinance or contract uses.**

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect any allocated reductions by IRWD. As noted under the preceding item (ii), IRWD's water shortage contingency plan and Rules and Regulations provide for voluntary and mandatory water conservation measures that could be invoked in declared water shortage emergencies. These include reductions to certain water uses. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for water savings that could be achieved by any allocated reductions.

With respect to items (ii) and (iii) above, it is noted that MWD has in effect a management plan for dealing with periodic surplus and shortage conditions, known as Metropolitan Report No. 1150, *Water Surplus and Drought Management Plan (RUWMP, II-15)*. MWD's demand projections account for the effects of long-term conservation best management practices.

**(iv) The amount of water that IRWD can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state and local water initiatives such as CALFED and Colorado River tentative agreements, based on the inclusion of information with respect to such supplies in Section 2, below.**

Local. IRWD directly relies (for a portion of its full build-out annual demand in single and multiple dry-year projections) on the following under development supplies (see 1(a), above): the Irvine Wells (see the Assessment, Section 2(b)(1)(vi) – “POTABLE SUPPLY – GROUNDWATER”). In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan (“LTFP”) which provides updated information and is expected to be considered for adoption in 2008. The LTFP Chapters 3, 5 and 6 describe the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft which provides sufficient storage space to accommodate increased supplies from one wet year while also provides enough water in storage to offset decreased supplies during a two- to three year drought. (Source: 2008-09 Engineer’s Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District).

With the implementation of OCWD’s preferred projects, the Basin yield in the year 2030 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage (“BPP”) that OCWD sets based on these factors.

IRWD’s own reclaimed water expansion program is also shown as an under development supply. IRWD also has a currently available reclaimed water supply from its own existing reclamation program. The reclaimed water supplies are discussed in Section 2 below (see the Assessment, Section 1 – Figures 5, 6, 7 and 8 (supplies denominated “MWRP” and “LAWRP”), Section 2(a), and Section 2(b)(1) - “NONPOTABLE SUPPLY – RECLAIMED”), IRWD has prepared a Final Environmental Impact Report for the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project (February, 2006). With this expansion, IRWD plans to increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2031. (Initial upgrades that are within existing permit authorizations and CEQA compliance are completed.) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

As noted in the Assessment, IRWD’s demand projections reflect the effect of IRWD’s water conservation pricing and other conservation practices; in particular, IRWD’s water use factors used to derive its demand projections are based on average water use and incorporate the effect of IRWD’s tiered-rate conservation pricing and its other long-term water conservation programs. As discussed above, IRWD’s supply and demand projections do not take into account water savings that could be achieved by water shortage emergency measures.

Imported. MWD, the supplier of IRWD’s imported supplies, relies upon several of the listed projects and programs. MWD supports and provides financial incentives to water reclamation, groundwater recovery, water conservation, ocean desalination and other local resource development programs. MWD calculates its demand forecast by first estimating total retail demand for the region and then factoring in impacts of conservation. Next, it derives projections of local supplies using data on current and expected local supply programs and

Integrated Resource Planning (IRP) Local Resource Program Target. The difference between the resulting local demands is the expected regional demand on MWD. These estimates of demands on MWD were developed for a single dry year, multiple dry years and average years. (2010 *RUWMP*, 2-15)

MWD also relies upon the implementation of the CALFED Bay-Delta Program, as an under development supply, to attain an increase in its existing Bay-Delta deliveries. Other under development programs relied upon by MWD are: additional transfers and storage agreements (San Bernardino Valley Municipal Water District Conjunctive-use Program, Westside Valley Transfers, Eastside Valley Transfers); IID/MWD Conservation Program; Interim Surplus Guidelines; San Diego County Water Authority/Imperial Irrigation District Transfer; Palo Verde Irrigation District Land Management Program; and Off-Aqueduct Storage/Transfer Programs. (2010 *RUWMP*, Sections 3.1, 3.2, and 3.3)

In addition to MWD's existing regional supply assessments, the water supply verification has considered MWD information concerning recent events. See the above "Recent Actions on Delta Pumping."

## **2. Required information concerning *under-development* supplies**

### **(a) Written contracts or other proof of valid rights to the identified supplies**

See the Assessment, Section 2(b)(1), incorporated herein by reference. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to written contracts and other proof related to MWD's supplies.

### **(b) Adopted capital outlay program to finance delivery of the supplies**

See the Assessment, Section 2(b)(2), incorporated herein by reference. With respect to future groundwater wells (PR Nos. 10285, 15423, 15427, 15428, 15051 and 15052) and the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), IRWD adopted its fiscal year 2010-11 capital budget on June 14, 2010 (Resolution No. 2010-16), budgeting portions of the funds for such projects. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

### **(c) Federal, state and local permits to construct of delivery infrastructure**

See the Assessment, Section 2(b)(3), incorporated herein by reference. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

### **(d) Regulatory approvals for conveyance or delivery of the supplies**

See the Assessment, Section 2(b)(4), incorporated herein by reference. In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

### **3. Foreseeable impacts of the Project on the availability of water for agricultural and industrial uses in IRWD's service area not currently receiving water**

Based on city planning and other information known to IRWD, there are no agricultural or industrial uses in IRWD's service area that are not within either existing and committed demand or future demand, both of which are included within the supply and demand comparison and determination of sufficiency (see 1(a)).

### **4. Information concerning the right to extract additional groundwater included in the supply identified for the Project:**

Where the water supply for the Project includes groundwater, the verification is required to include an evaluation of the extent to which IRWD or the landowner has the right to extract the additional groundwater needed to supply the Project. See the Assessment, Section 2(b)(1), "POTABLE SUPPLY – GROUNDWATER" and "NONPOTABLE SUPPLY – GROUNDWATER," and Section 4, incorporated herein by reference.

### **5. References**

*Water Resources Master Plan*, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

*2005 Urban Water Management Plan*, Irvine Ranch Water District, November, 2005

*The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California*, November, 2005

*Integrated Water Resources Plan Update*, Metropolitan Water District of Southern California, July, 2004

*Proposed Framework for Metropolitan Water District's Delta Action Plan*, Metropolitan Water District of Southern California, May 8, 2007

*Board Information Report*, Metropolitan Water District of Southern California, October 9, 2007

*2007 IRP Implementation Report*, Metropolitan Water District of Southern California, October, 2007

*Master Plan Report*, Orange County Water District, April, 1999

*Groundwater Management Plan*, Orange County Water District, March, 2004

*Final Draft Long-Term Facilities Plan*, Orange County Water District, January 2006

*2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*, Orange County Water District

*Progress on Incorporating Climate Change into Management of California's Water Resources*, California Department of Water Resources, July 2006

*Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program*, Irvine Ranch Water District, February 2009

*Water Shortage Contingency Plan*, Irvine Ranch Water District, February 2009

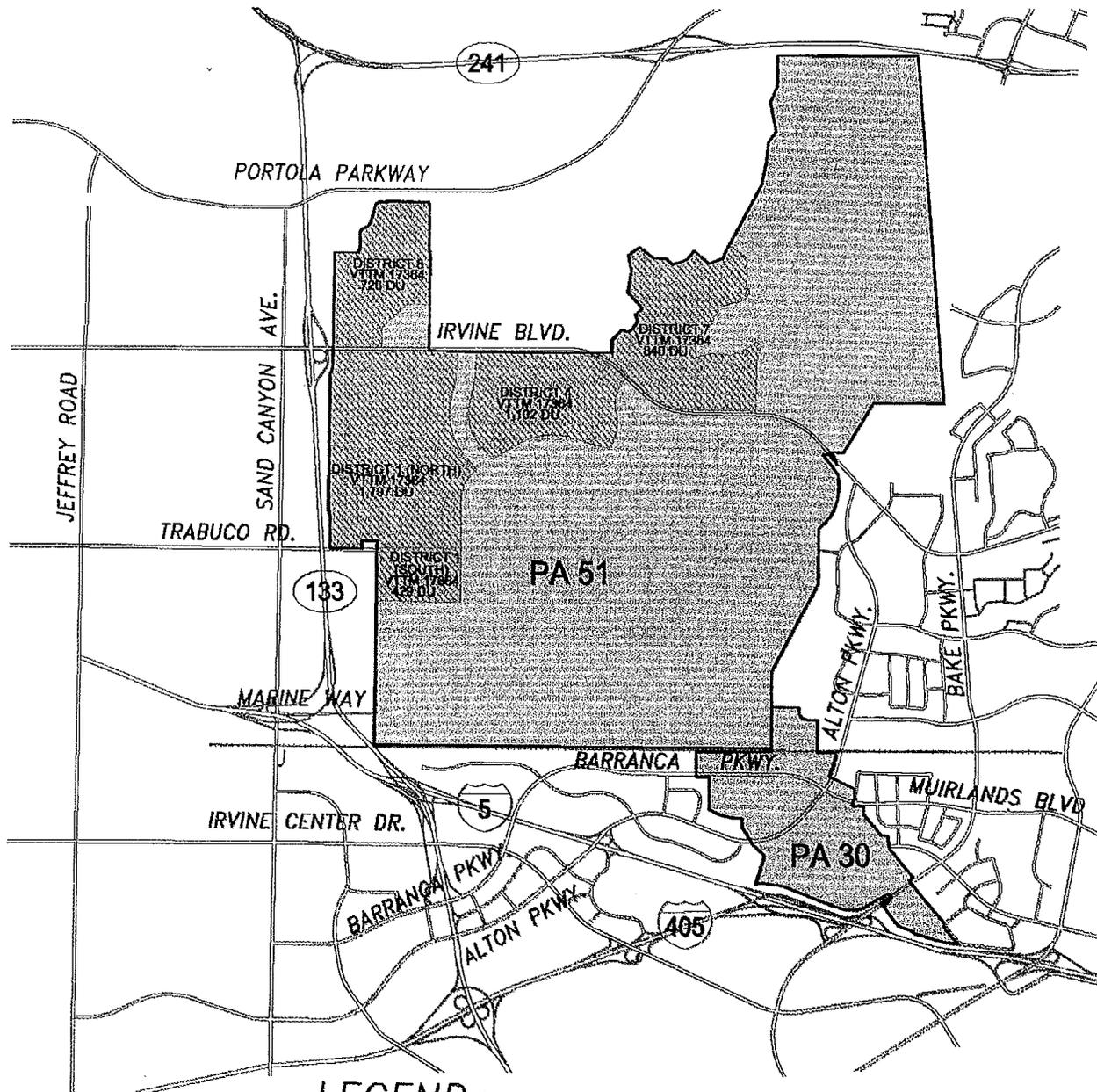
*2010 Integrated Resources Plan Update*, Metropolitan Water District of Southern California, October 2010

*2010 Regional Urban Water Management Plan*, Metropolitan Water District of Southern California, November 2010

**Exhibit A**

Depiction of Project Area

Location Map



**LEGEND:**

 PROPOSED VESTING TENTATIVE TRACT MAPS

**Exhibit B**

Non-residential Uses Included in Project

February 18, 2011

Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine, CA 92619-7000

Re: Request for Verification of Sufficient Water Supplies (Government Code §66473.7(b)(1))

The City of Irvine/County of Orange hereby requests verification of the availability of a sufficient water supply for the below-described project. Under Government Code §66473.7(b)(1), written verification of the availability of a sufficient water supply is required in conjunction with or prior to the approval of any tentative map that includes a residential subdivision of more than 500 dwelling units, subject to certain exemptions.

The City has determined that the subject project (1) includes a subdivision meeting the criteria requiring verification of availability of sufficient water supply and (2) does not fall within one of the statutory exemptions for previously developed urban sites, sites surrounded by urban use, or low-income housing sites.

**Proposed Project Information**

Project Title: Heritage Fields VTTM's 17283, 17364, 17366, 17368 and 17202 in Planning Area 51

Location of project: Former MCAS El Toro Base, Planning Area 51, in and around Irvine Boulevard, SR-133 and Trabuco Road. See attached Location Map.

Planning Area(s): 51. See attached Vicinity Map  
(Enclose a project map and exhibits)

Was the project included as part of a previously completed Water Supply Assessment (Water Code §10910)? x yes  no (3,625 units subject to prior WSA 1,269 units are new)

If yes, date and project title of Water Supply Assessment 1/27/03 Orange County Great Park Water Supply Assessment

If no, state reason:  CEQA documentation not requiring a Water Supply Assessment was completed prior to January 1, 2002  other: \_\_\_\_\_

Was a Water Supply Verification previously completed for the project? x yes  no (3,625 units subject to prior verification, 1,269 units are new)

If yes, indicate reason for reverification:  tract map expiration x new Water Supply Assessment required due to project revisions, changed circumstances or new information

- x Tentative Map Application No.\*00516277-PTT, 00516246-PTT, 00516252-PTT, 00516269-PTT, 00516254-PTT\_\_\_  Tentative Tract No.\* 17283, 17368, 17366, 17202, 17364
- Verification is being requested prior to tentative map application (Government Code §66473.7(1) (Indicate next project approval sought: \_\_\_\_\_))

(\*A copy of the tentative map application including the proposed subdivision was sent to IRWD on: 2/8/11 \_\_\_\_\_, (Government Code §66455.3))

Type of development included in the project:

- x *Residential*: No. of dwelling units: 3,625 (in prior assessment), 1,269 new (total 4,894)
- Shopping center or business*: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_
- Commercial office*: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_
- Hotel or motel*: No. of rooms \_\_\_\_\_
- Industrial, manufacturing, processing or industrial park*: No. of employees \_\_\_\_\_

No. of acres \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Mixed use (check and complete all above that apply)

Other: 775,000 square feet of Institutional (Edu), 48,700 square feet of Medical Science (R&D), 220,000 square feet of Community Commercial (Retail), 75,000 Office, 25,000 square feet of Public Facility, 11,000 square feet of Child Care and 1,000 student school.

Total acreage of project: 1,133

Acreage devoted to landscape: (per VTTM Application)

Greenbelt \_\_\_\_\_ golf course \_\_\_\_\_ parks \_\_\_\_\_

Agriculture \_\_\_\_\_ other landscaped areas \_\_\_\_\_

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements:

Landscaped areas will be irrigated via reclaimed water

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation \_\_\_\_\_

The City acknowledges that IRWD's verification will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the verification, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project changes or the tentative map approval expires after the issuance of a Water Supply Verification, the City will request a new Water Supply Verification if required. In the event of changes in the project, circumstances or conditions of the availability of new information, it will be necessary for the City to request a new Water Supply Assessment prior to completion of the new Water Supply Verification.

The City acknowledges that the Water Supply Verification shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Verification shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF IRVINE /COUNTY OF ORANGE

By: [Signature]

REQUEST RECEIVED:

Date: July 24, 2011

By: [Signature]  
Irvine Ranch Water District

REQUEST COMPLETE:

Date: March 9, 2011

By: [Signature]  
Irvine Ranch Water District

**Exhibit C**

Water Supply Assessment

**IRVINE RANCH WATER DISTRICT  
ASSESSMENT OF WATER SUPPLY**  
Water Code §10910 *et seq.*

To: (Lead Agency)

City of Irvine  
P.O. Box 19575  
Irvine, CA 92623-9575

(Applicant)  
Heritage Fields El Toro, LLC  
25 Enterprise, Suite 400  
Aliso Viejo, CA 92656

**Project Information**

Project Title: Heritage Fields Planning Areas 30 and 51 (Exhibit A)

- Residential: No. of dwelling units: \_\_\_\_\_
- Shopping center or business: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_
- Commercial office: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_
- Hotel or motel: No. of rooms \_\_\_\_\_
- Industrial, manufacturing or processing: No. of employees \_\_\_\_\_ No. of acres \_\_\_\_\_  
Sq. ft. of floor space \_\_\_\_\_
- Mixed use (check and complete all above that apply) (see Exhibit B)
- Other: \_\_\_\_\_

**Assessment of Availability of Water Supply**

On \_\_\_\_\_, 2011 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

- The projected water demand for the Project  was  was not included in IRWD's most recently adopted urban water management plan.
- A sufficient water supply is available for the Project.  
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- A sufficient water supply is not available for the Project. [Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

---

Signature \_\_\_\_\_ Date \_\_\_\_\_ Title \_\_\_\_\_

## Water Supply Assessment Information

### Purpose of Assessment

Irvine Ranch Water District (“IRWD”) has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the “Project”). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability (“assessment”) for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the “Assessment Law”) contains the requirements for the information to be set forth in the assessment.

### Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD’s aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects’ water demands will be included in the baseline. A newly assessed project’s water demand will have been included in previous water supply assessments for other projects (as part of IRWD’s “full build-out” demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project’s water demand was included (as part of IRWD’s “full build-out” demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the “with project” demand.

### Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD’s principal planning document is IRWD’s “Water Resources Master Plan” (“WRMP”). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan (“UWMP”), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. (The UWMP is required to be updated in years ending with “five” and “zero,” and IRWD’s next update of that document is anticipated in June 2011.<sup>1</sup>)

In addition to the WRMP and the 2005 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

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<sup>1</sup> Extended to July 1, 2011 (Water Code Section 10608.20)

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

### Assessment Methodology

**Water use factors; dry-year increases.** IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2005 UWMP and historical regional demand variation as documented in the Metropolitan Water District of Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

**Planning horizon.** For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2031, which is considered to represent build-out or "ultimate development".

**Assessment of demands.** Water demands are reviewed in this assessment for three development projections (to 2031):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.
- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.
- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

**Assessment of supplies.** For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County (“MWDOC”). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

***Comparison of demand and supply.*** The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).
- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).
- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system’s ability to meet the highest day’s demand of the fluctuating demands that will be experienced in a year’s time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

### Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

- Figure 1: Normal Year Supply and Demand – Potable Water
- Figure 2: Single Dry-Year Supply and Demand – Potable Water
- Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
- Figure 4: Maximum-Day Supply and Demand – Potable Water
- Figure 5: Normal Year Supply and Demand – Nonpotable Water
- Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
- Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
- Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD’s *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD’s potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD’s nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if

overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2010 Regional Urban Water Management Plan (RUWMP) shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods through 2035, including a repeat of the 1990-1992 multiple dry-year hydrology and the 1977 single dry-year hydrology. (See Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2015. (Figures 1, 2 and 3.)
- Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of *under-development* supplies. (Figures 2 and 3.)
- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2031. (Figure 4.)
- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2020. (Figures 5, 6, 7 and 8). IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

***Margins of safety.*** The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.
- The potential exists for the treatment and conversion of some reserve nonpotable supplies to potable water.
- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and

information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.

- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

**Recent Actions on Delta Pumping.** The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cut back on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by

implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2010) and MWD's RUWMP (November 2010), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2010 through 2035.<sup>2</sup> For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,752,000 acre-feet and Colorado average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 385,400 acre-feet which is 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels.

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<sup>2</sup> MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. Assuming this estimated SWP reduction amount is included in the final RUWMP adopted by MWD, that amount in acre feet would be equivalent to about 12% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.<sup>3</sup> In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

- Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
- Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
- Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2031 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

**Climate Change.** The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

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<sup>3</sup> In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2008-2009 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "an accumulated overdraft of 500,000 AF is only acceptable for short durations due to drought conditions...and an optimal basin management target of 100,000 AF of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also providing enough water in storage to offset decreased supplies during a two- to three-year drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply and 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

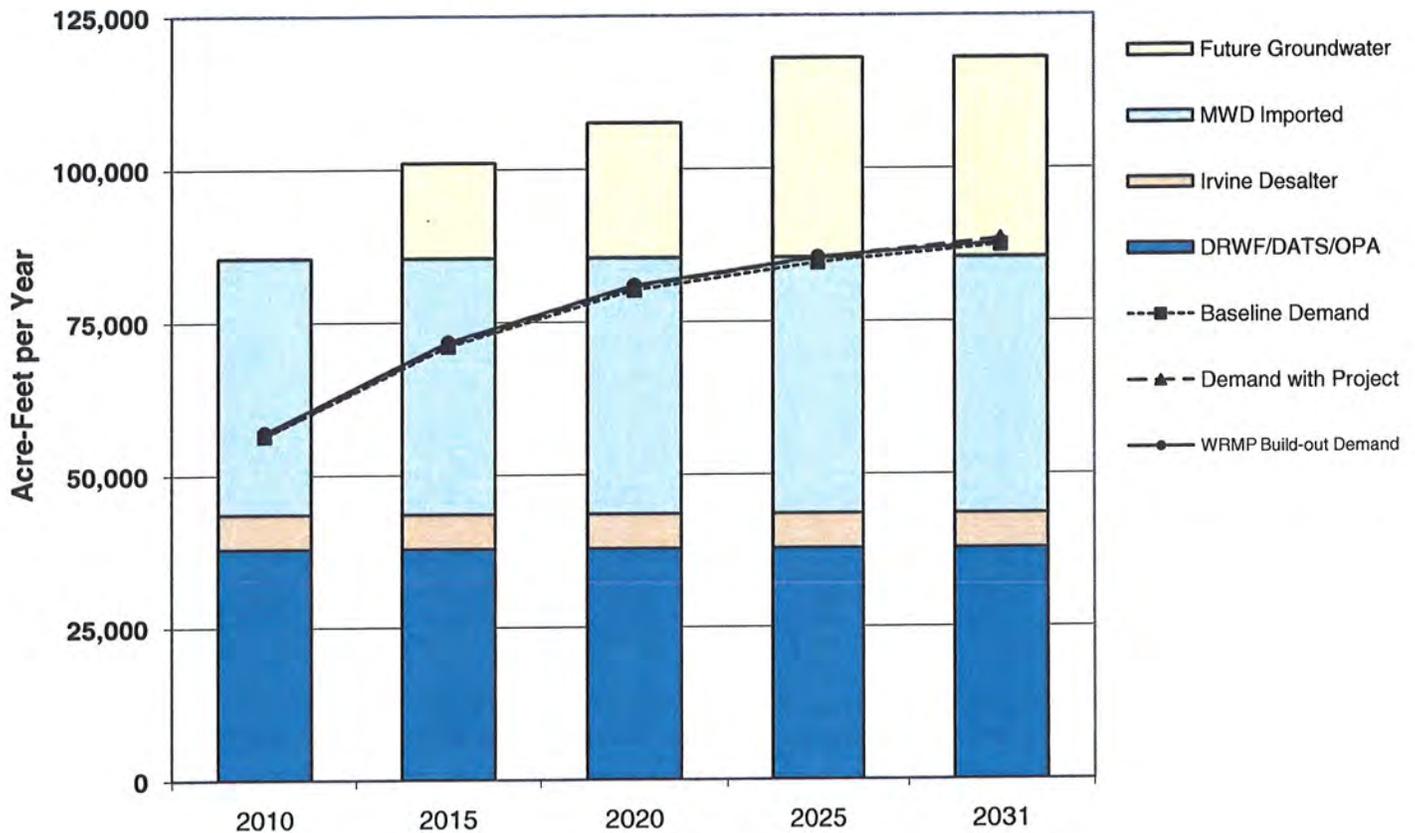
***Catastrophic Supply Interruption Planning.*** MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and MWD has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has addressed supply interruption planning in its WRMP and UWMP.

### **Detailed Assessment**

#### **1. Supply and demand comparison**

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Recent Actions on Delta Pumping" above.

**Figure 1  
IRWD Normal-Year Supply & Demand - Potable Water**

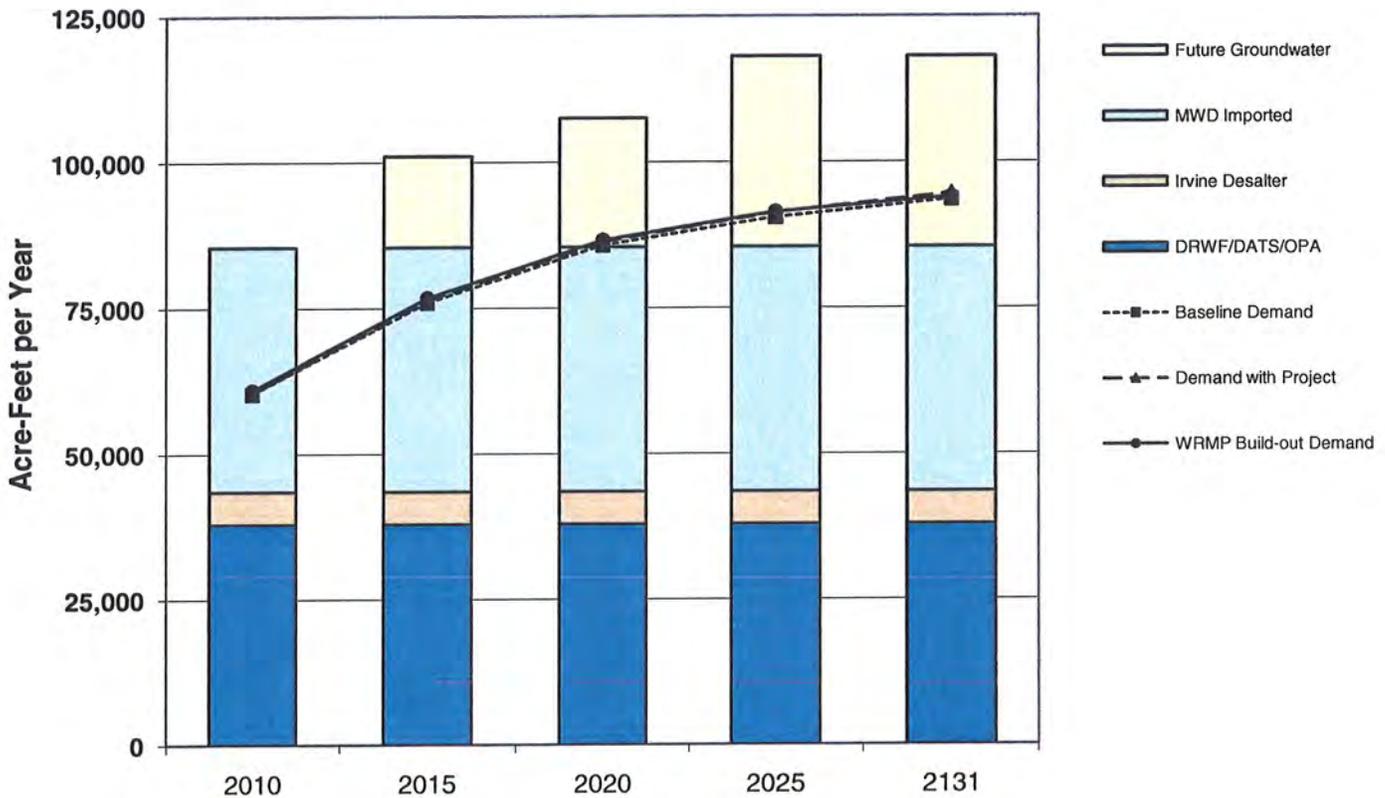


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
<b>Maximum Supply Capability</b>	<b>85,469</b>	<b>101,069</b>	<b>107,569</b>	<b>118,069</b>	<b>118,069</b>
<b>Baseline Demand</b>	<b>56,353</b>	<b>70,989</b>	<b>80,140</b>	<b>84,575</b>	<b>87,440</b>
<b>Demand with Project</b>	<b>56,402</b>	<b>71,281</b>	<b>80,677</b>	<b>85,355</b>	<b>88,415</b>
<b>WRMP Build-out Demand</b>	<b>56,933</b>	<b>71,725</b>	<b>80,961</b>	<b>85,445</b>	<b>87,836</b>
<b>Reserve Supply with Project</b>	<b>29,067</b>	<b>29,788</b>	<b>26,893</b>	<b>32,714</b>	<b>29,654</b>

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 2**  
**IRWD Single Dry-Year Supply & Demand - Potable Water**

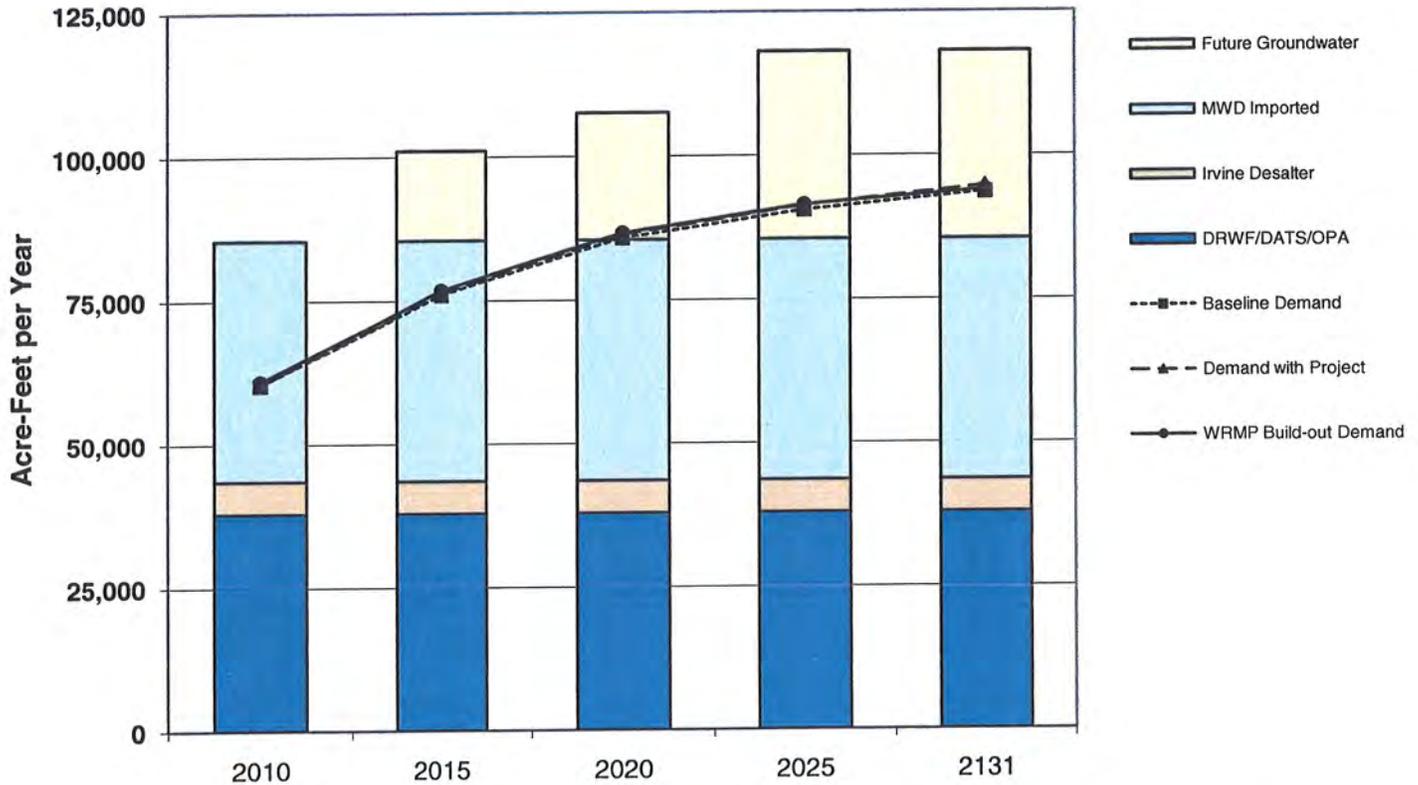


(in acre-feet per year)	2010	2015	2020	2025	2131
<u>Current Potable Supplies</u>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<u>Supplies Under Development</u>					
Future Groundwater	-	15,600	22,100	32,600	32,600
<b>Maximum Supply Capability</b>	<b>85,469</b>	<b>101,069</b>	<b>107,569</b>	<b>118,069</b>	<b>118,069</b>
<b>Baseline Demand</b>	<b>60,298</b>	<b>75,958</b>	<b>85,750</b>	<b>90,495</b>	<b>93,561</b>
<b>Demand with Project</b>	<b>60,350</b>	<b>76,271</b>	<b>86,324</b>	<b>91,330</b>	<b>94,604</b>
<b>WRMP Build-out Demand</b>	<b>60,919</b>	<b>76,746</b>	<b>86,629</b>	<b>91,426</b>	<b>93,985</b>
<b>Reserve Supply with Project</b>	<b>24,550</b>	<b>24,323</b>	<b>20,940</b>	<b>26,643</b>	<b>24,084</b>

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 3  
IRWD Multiple Dry-Year Supply & Demand - Potable Water**

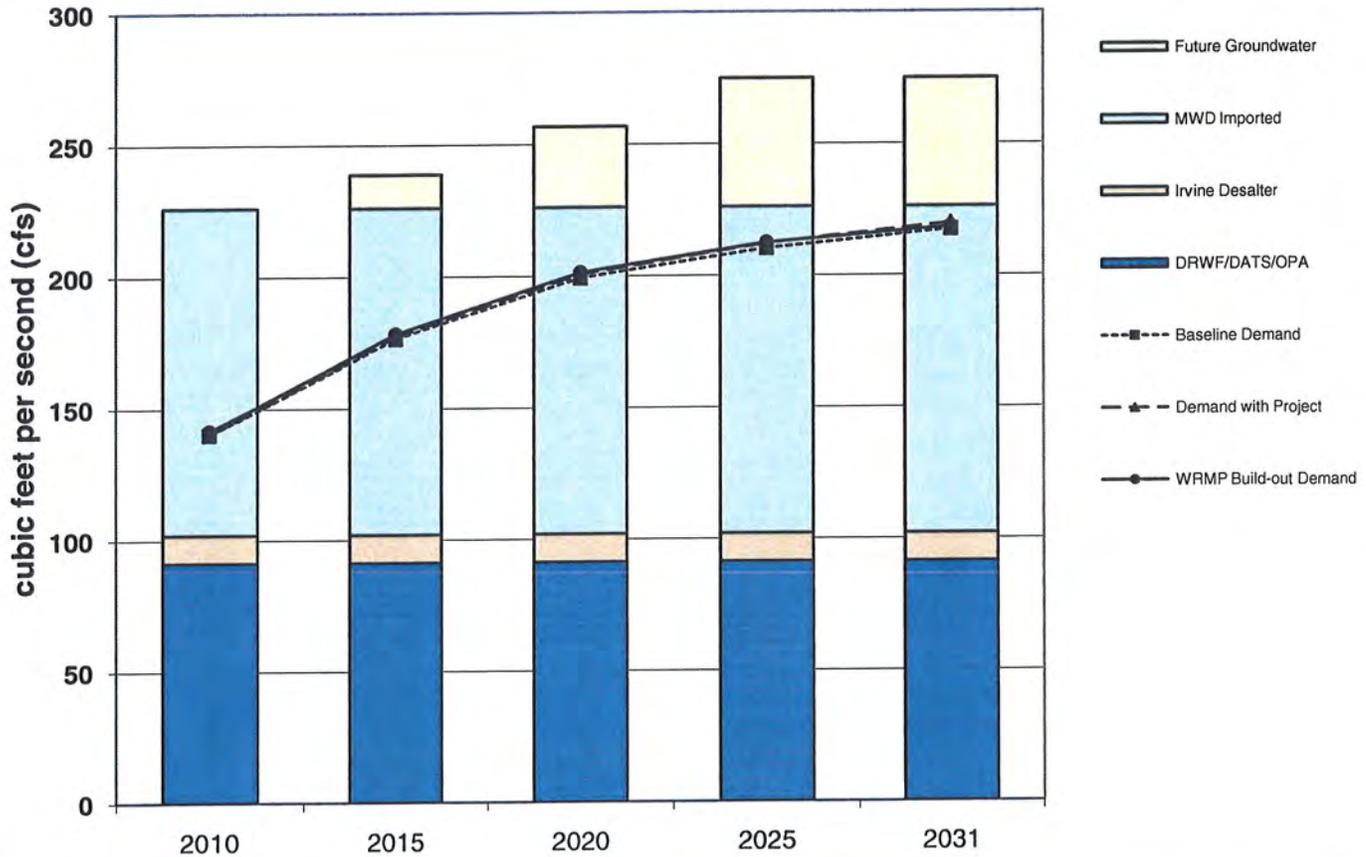


(in acre-feet per year)	2010	2015	2020	2025	2131
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
<b>Maximum Supply Capability</b>	<b>85,469</b>	<b>101,069</b>	<b>107,569</b>	<b>118,069</b>	<b>118,069</b>
<b>Baseline Demand</b>	<b>60,298</b>	<b>75,958</b>	<b>85,750</b>	<b>90,495</b>	<b>93,561</b>
<b>Demand with Project</b>	<b>60,350</b>	<b>76,271</b>	<b>86,324</b>	<b>91,330</b>	<b>94,604</b>
<b>WRMP Build-out Demand</b>	<b>60,919</b>	<b>76,746</b>	<b>86,629</b>	<b>91,426</b>	<b>93,985</b>
<b>Reserve Supply with Project</b>	<b>25,119</b>	<b>24,798</b>	<b>21,245</b>	<b>26,739</b>	<b>23,465</b>

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

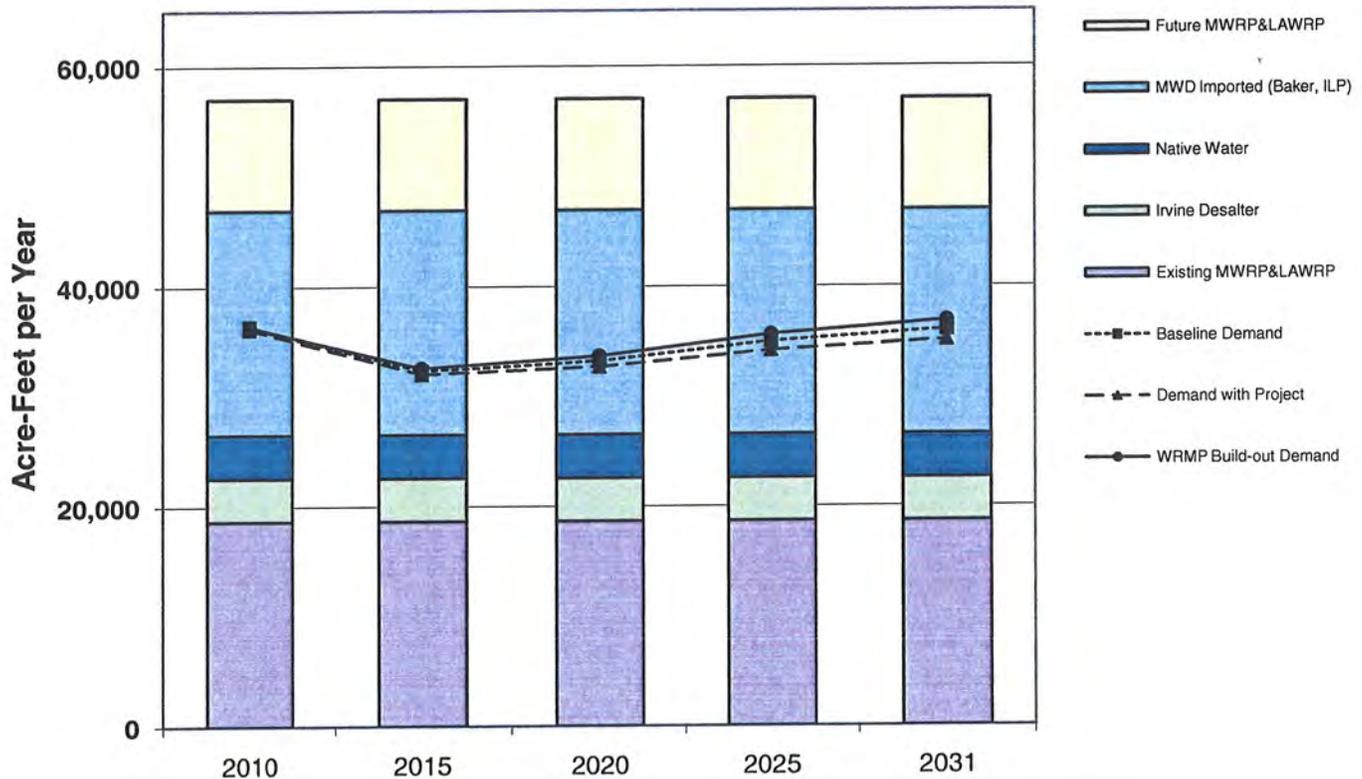
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 4  
IRWD Maximum-Day Supply & Demand - Potable Water**



(in cfs)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	91.4	91.4	91.4	91.4	91.4
Irvine Desalter	10.6	10.6	10.6	10.6	10.6
<b>Supplies Under Development</b>					
Future Groundwater	-	12.7	30.7	48.7	48.7
Maximum Supply Capability	226.1	238.8	256.8	274.8	274.8
Baseline Demand	140.1	176.5	199.2	210.3	217.4
Demand with Project	140.2	177.2	200.6	212.2	219.8
WRMP Build-out Demand	141.5	178.3	201.3	212.4	218.4
Reserve Supply with Project	84.6	60.5	55.5	62.4	56.4

**Figure 5  
IRWD Normal-Year Supply & Demand - Nonpotable Water**

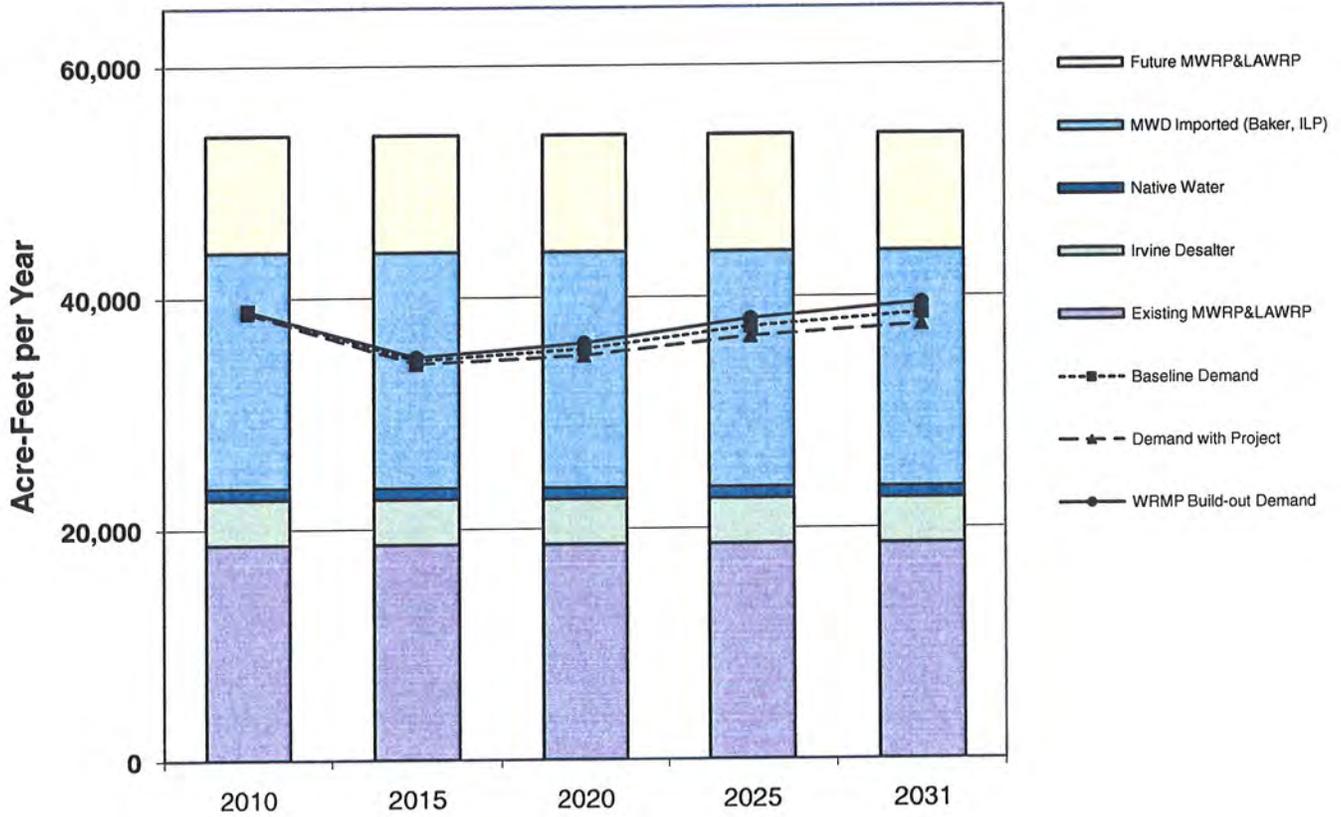


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Nonpotable Supplies</b>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	4,000	4,000	4,000	4,000	4,000
<b>Supplies Under Development</b>					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
<b>Maximum Supply Capability</b>	<b>57,035</b>	<b>57,035</b>	<b>57,035</b>	<b>57,035</b>	<b>57,035</b>
Baseline Demand	36,335	32,303	33,198	34,948	36,019
Demand with Project	36,152	32,023	32,670	34,158	35,083
WRMP Build-out Demand	36,376	32,560	33,661	35,608	36,845
<b>Reserve Supply with Project</b>	<b>20,659</b>	<b>20,659</b>	<b>24,475</b>	<b>23,374</b>	<b>20,190</b>

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 6  
IRWD Single Dry-Year Supply & Demand - Nonpotable Water**

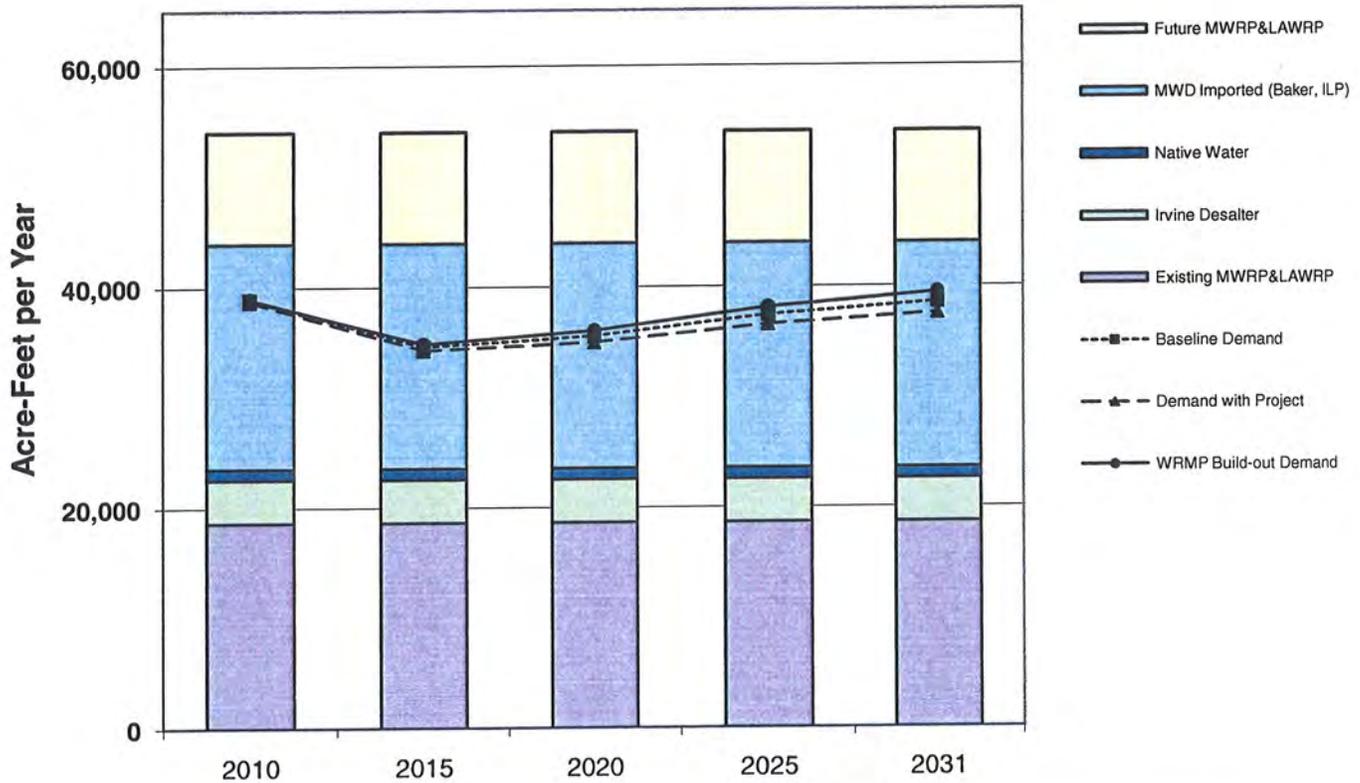


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Nonpotable Supplies</b>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
<b>Supplies Under Development</b>					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	38,878	34,565	35,521	37,394	38,541
Demand with Project	38,683	34,264	34,957	36,549	37,539
WRMP Build-out Demand	38,922	34,839	36,017	38,101	39,424
Reserve Supply with Project	15,352	19,771	19,078	17,486	16,496

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

**Figure 7**  
**IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water**

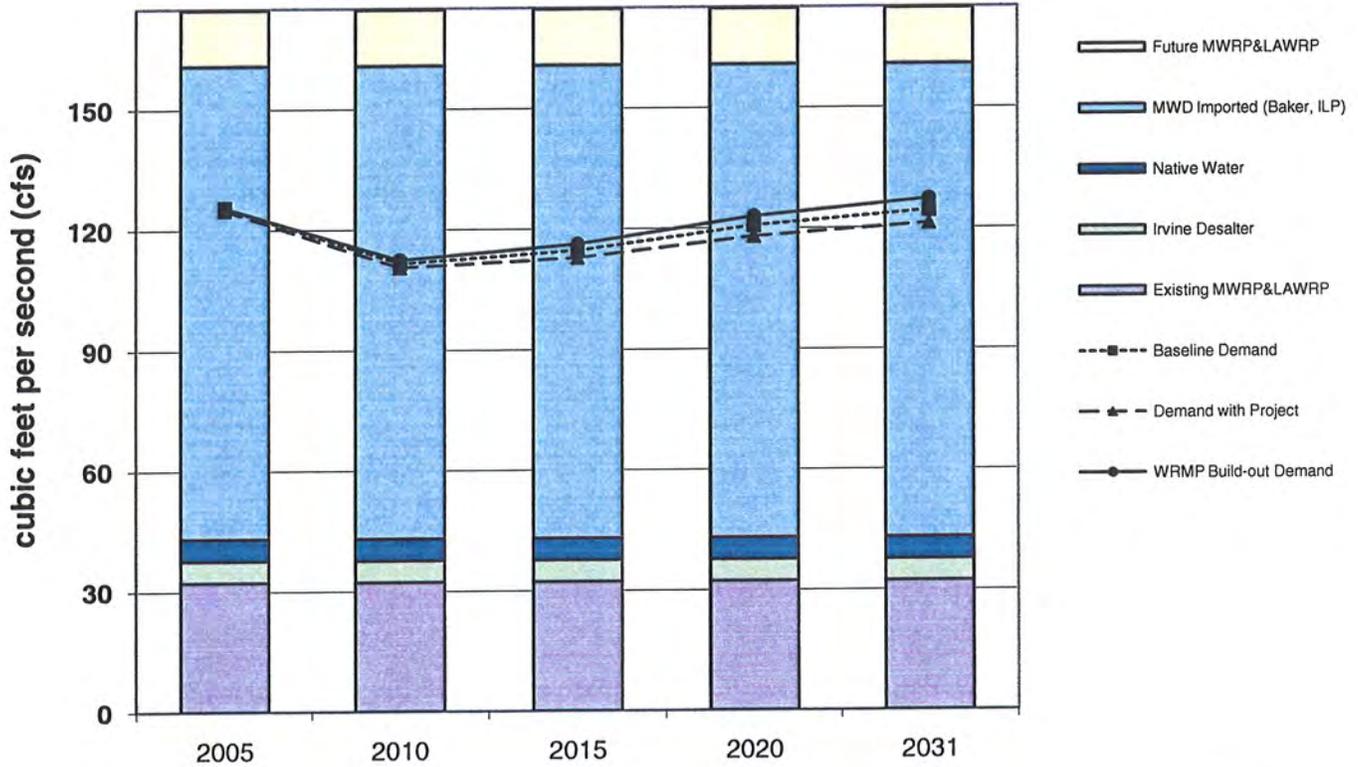


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Nonpotable Supplies</b>					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
<b>Supplies Under Development</b>					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
<b>Maximum Supply Capability</b>	<b>54,035</b>	<b>54,035</b>	<b>54,035</b>	<b>54,035</b>	<b>54,035</b>
Baseline Demand	38,878	34,565	35,521	37,394	38,541
Demand with Project	38,683	34,264	34,957	36,549	37,539
WRMP Build-out Demand	38,922	34,839	36,017	38,101	39,424
<b>Reserve Supply with Project</b>	<b>15,352</b>	<b>19,771</b>	<b>19,078</b>	<b>17,486</b>	<b>16,496</b>

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

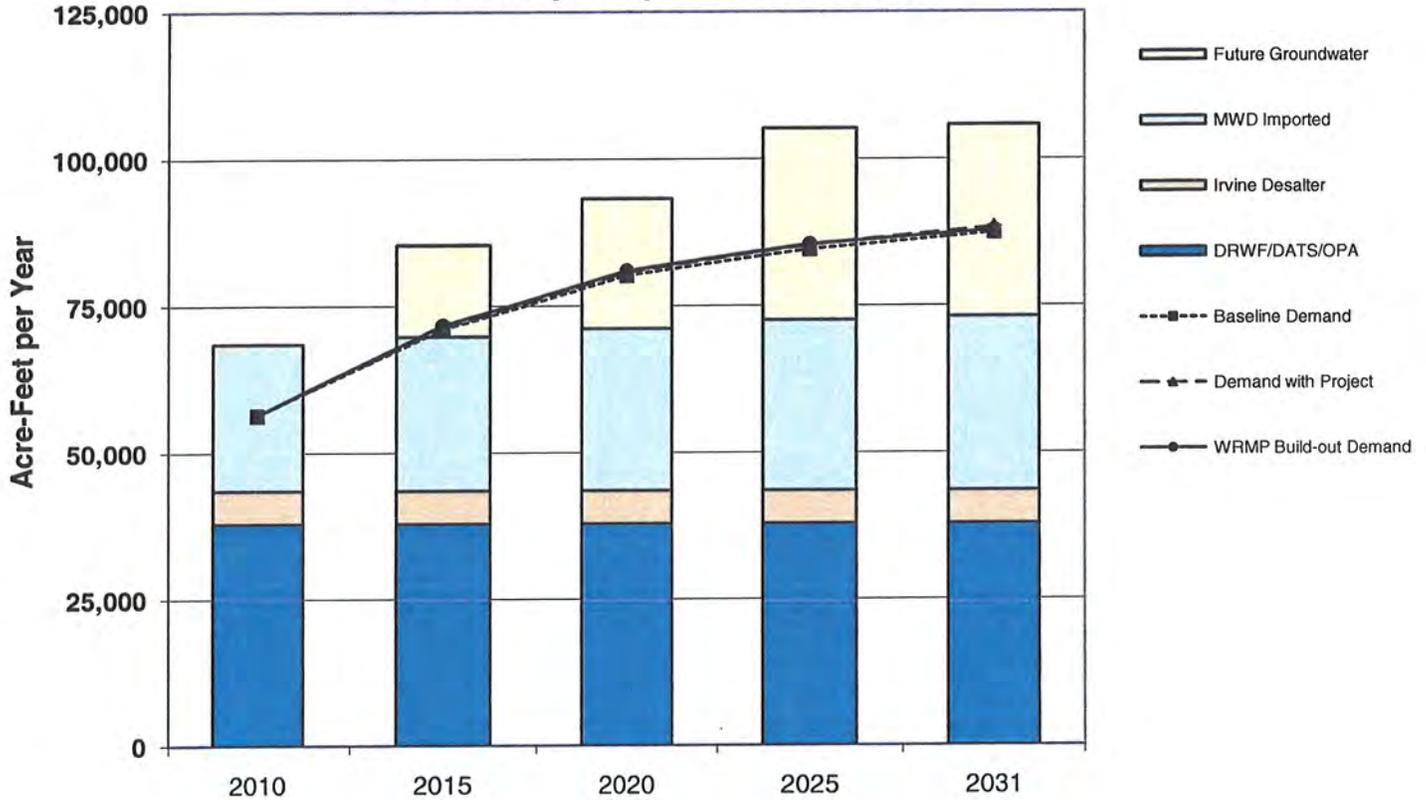
**Figure 8**  
**IRWD Maximum-Dry Supply & Demand - Nonpotable Water**



(in cfs)	2005	2010	2015	2020	2031
<u>Current Nonpotable Supplies</u>					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	5.5	5.5	5.5	5.5	5.5
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
<u>Supplies Under Development</u>					
Future MWRP&LAWRP	14.0	14.0	14.0	14.0	14.0
Maximum Supply Capability	174.7	174.7	174.7	174.7	174.7
Baseline Demand	125.5	111.5	114.6	120.7	124.4
Demand with Project	124.8	110.6	112.8	117.9	121.1
WRMP Build-out Demand	125.6	112.4	116.2	123.0	127.2
Reserve Supply with Project	49.1	62.3	58.5	51.8	47.5

Note: Downward trend reflects reduction in agricultural use over time.

**Figure 1a  
IRWD Normal-Year Supply & Demand - Potable Water  
Under Temporary MWD Allocation\***

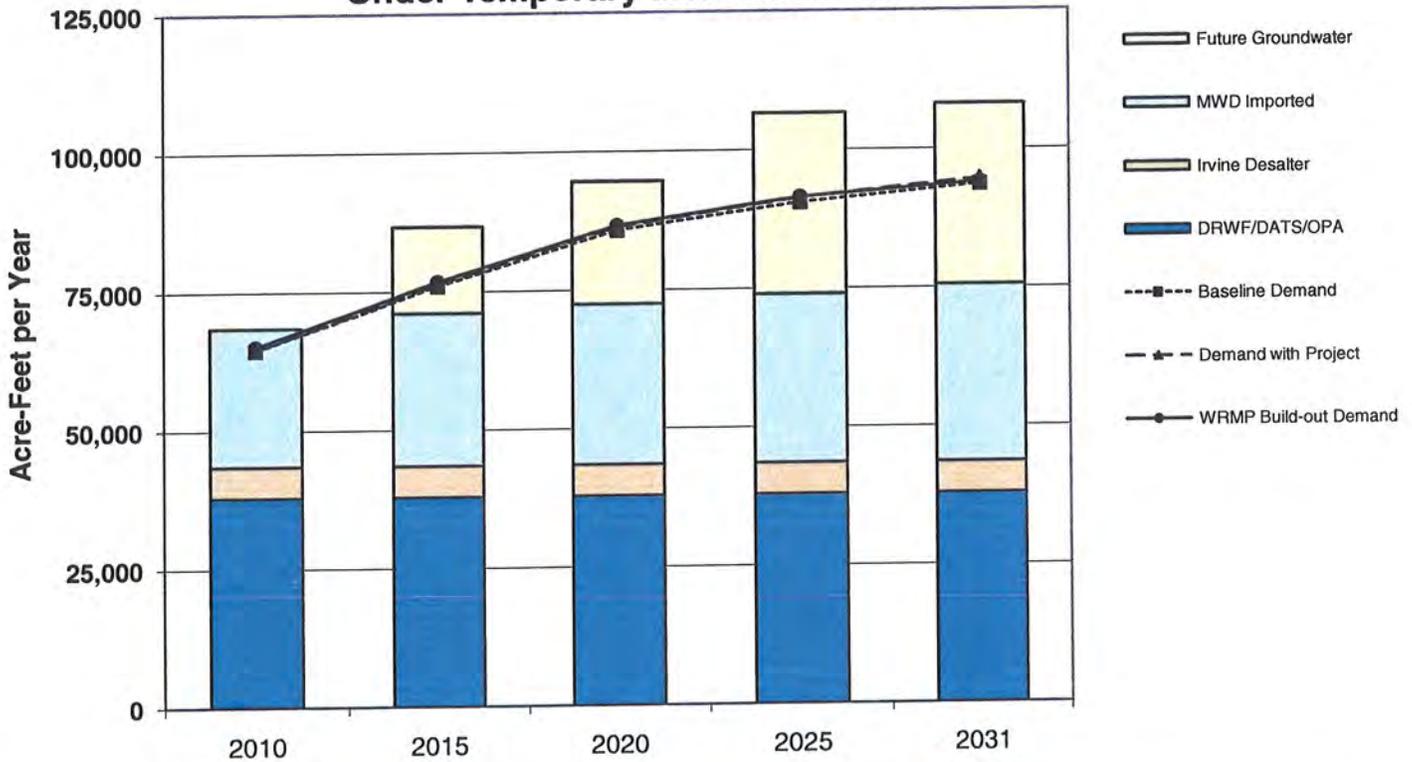


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	25,000	26,275	27,616	29,024	29,608
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
<b>Maximum Supply Capability</b>	<b>68,540</b>	<b>85,415</b>	<b>93,256</b>	<b>105,164</b>	<b>105,748</b>
<b>Baseline Demand</b>	<b>56,353</b>	<b>70,989</b>	<b>80,140</b>	<b>84,575</b>	<b>87,440</b>
<b>Demand with Project</b>	<b>56,402</b>	<b>71,281</b>	<b>80,677</b>	<b>85,355</b>	<b>88,415</b>
<b>WRMP Build-out Demand</b>	<b>56,402</b>	<b>71,725</b>	<b>80,961</b>	<b>85,445</b>	<b>87,836</b>
<b>Reserve Supply with Project</b>	<b>12,138</b>	<b>14,134</b>	<b>12,579</b>	<b>19,809</b>	<b>17,332</b>

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

\*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

**Figure 2a**  
**IRWD Single Dry-Year Supply & Demand - Potable Water**  
**Under Temporary MWD Allocation\***

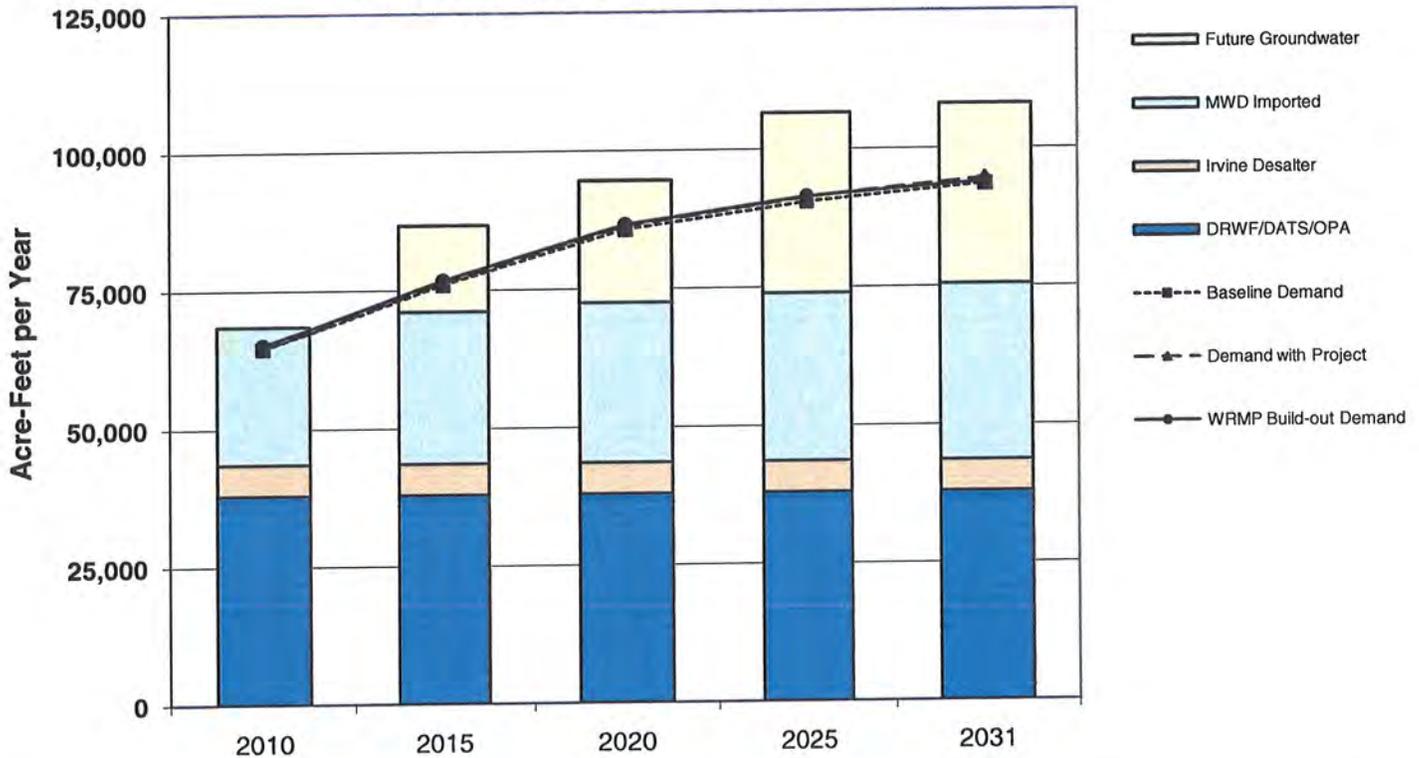


(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
<b>Maximum Supply Capability</b>	<b>68,540</b>	<b>86,729</b>	<b>94,608</b>	<b>106,557</b>	<b>108,078</b>
<b>Baseline Demand</b>	<b>64,519</b>	<b>75,958</b>	<b>85,750</b>	<b>90,495</b>	<b>93,561</b>
<b>Demand with Project</b>	<b>64,575</b>	<b>76,271</b>	<b>86,324</b>	<b>91,330</b>	<b>94,604</b>
<b>WRMP Build-out Demand</b>	<b>65,183</b>	<b>76,746</b>	<b>86,629</b>	<b>91,426</b>	<b>93,985</b>
<b>Reserve Supply with Project</b>	<b>3,357</b>	<b>9,983</b>	<b>7,980</b>	<b>15,131</b>	<b>14,093</b>

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

\*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

**Figure 3a**  
**IRWD Multiple Dry-Year Supply & Demand - Potable Water**  
**Under Temporary MWD Allocation\***



(in acre-feet per year)	2010	2015	2020	2025	2031
<b>Current Potable Supplies</b>					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
<b>Supplies Under Development</b>					
Future Groundwater	-	15,600	22,100	32,600	32,600
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	64,519	75,958	85,750	90,495	93,561
Demand with Project	64,575	76,271	86,324	91,330	94,604
WRMP Build-out Demand	65,183	76,746	86,629	91,426	93,985
Reserve Supply with Project	3,357	10,458	8,284	15,227	13,473

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

\*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

**2. Information concerning supplies**

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

	Max Day (cfs)	Avg. Annual (AFY)	Annual by Category (AFY)
<b>Current Supplies</b>			
<b>Potable - Imported</b>			
East Orange County Feeder No. 2	41.4	16,652	1
Allen-McColloch Pipeline*	64.7	26,024	1
Orange County Feeder	18.0	7,240	1
			49,916
<b>Potable - Groundwater</b>			
Dyer Road Wellfield	80.0	28,000	2
OPA Well	1.4	1,000	
Deep Aquifer Treatment System-DATS	10.0	8,900	2
Irvine Desalter	10.6	5,640	3
			43,540
Total Potable Current Supplies	226.1		93,456
<b>Nonpotable - Reclaimed Water</b>			
MWRP (18 mgd)	23.9	17,340	4
LAWRP (5.5 mgd)	8.3	5,975	4
			23,315
<b>Nonpotable - Imported</b>			
Baker Aqueduct	52.7	15,262	5
Irvine Lake Pipeline	65.0	9,000	6
			24,262
<b>Nonpotable - Groundwater</b>			
Irvine Desalter-Nonpotable	5.4	3,898	7
			3,898
<b>Nonpotable Native</b>			
Irvine Lake	5.5	4,000	8
			4,000
Total Nonpotable Current Supplies	160.8		55,475
Total Combined Current Supplies	386.9		148,931
<b>Supplies Under Development</b>			
<b>Potable Supplies</b>			
Wells 21 & 22	6.0	6,300	
Well 106	2.2	1,300	
Well 53	4.5	3,000	
Future OPA Wells	8.0	5,000	
Anaheim wellfield	10.0	6,500	
Wells 51 & 52	9.0	5,500	
Tustin Legacy wells	9.0	5,000	9
			32,600
Total Potable Under Development Supplies	48.7	32,600	
Nonpotable Supplies: Future MWRP&LAWRP Reclaimed	20.0	14,450	10
			14,450
Total Under Development	117.4		47,050
<b>Total Supplies</b>			
Potable Supplies	274.8		126,056
Nonpotable Supplies	180.7		69,925
Total Supplies (Current and Under Development)	455.6		195,981

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 3, page 22).

2 Contract amount - See Potable Supply-Groundwater(iii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 3, page 22).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70 years historical average of Santiago Creek Inflow into Irvine Lake.

9 Estimated combined capacity of wells.

10 Future estimated MWRP & LAWRP reclaimed water production.

\*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.<sup>4 5</sup>

• POTABLE SUPPLY - IMPORTED<sup>6</sup>

***Potable imported water service connections (currently available).***

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California (“MWD”): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD’s entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County (“MWDOC”), a member agency of MWD.

***Allen-McColloch Pipeline (“AMP”) (currently available).***

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) (“AMP Sale Agreement”). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the “Diemer Intertie”) from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District (“LAWD”),<sup>7</sup> identified as “Participants” therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD’s and the other Participants’ requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD

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<sup>4</sup> In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second (“cfs”). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

<sup>5</sup> In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, IRWD has no current plans to do so.

<sup>6</sup> See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

<sup>7</sup> IRWD has succeeded to LAWD’s interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a “utility basis,” meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD’s capacity along the AMP, at MWD’s expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

**(iii)** Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 (“AMP Allocation Agreement”). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD’s capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD’s first four AMP connections, 49.69 cfs at IRWD’s next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD’s remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant’s peak flow exceeds its capacity, the Participant shall “purchase” additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD’s obligation under the AMP Sale Agreement to meet all Participants’ demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

**(iv)** Improvement Subleases (or “FAP” Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

***East Orange County Feeder No. 2 (“EOCF#2”) (currently available).***

**(v)** Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 (“IRWD MWDOC Assignment Agreement”); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 (“IRWD Coastal Assignment Agreement”). East Orange County Feeder No. 2 (“EOCF#2”), a feeder linking Orange County

with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

***Orange County Feeder (currently available)***

**(vi)** Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

**(vii)** Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

**•POTABLE SUPPLY - GROUNDWATER**

**(i)** Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of

municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999. OCWD's analysis has been expanded and updated through 2025 in its Final Draft Long-Term Facilities Plan (January, 2006).

*(ii) Irvine Ranch Water District v. Orange County Water District*, OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

***Dyer Road Wellfield (DRWF) / Deep Aquifer Treatment System (DATS)  
(currently available)***

*(iii) Agreement For Water Production and Transmission Facilities*, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System (CATS), IRWD has increased the yield of DATS.

***Irvine Subbasin / Irvine Desalter (currently available)***

*(iv) First Amended and Restated Agreement*, dated March 11, 2002, as

amended June 15, 2006, restating May 5, 1988 agreement (“Irvine Subbasin Agreement”). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC’s commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

**(v)** Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD’s entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

#### ***Orange Park Acres (currently available)***

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin.

#### ***Irvine Wells (under development)***

**(vi)** IRWD is pursuing the installation of production facilities in the west Irvine, Anaheim, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, a site for an additional well and treatment facility has been acquired by IRWD. The

production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. An agreement with the City of Anaheim would be developed for production within Anaheim. Appropriate environmental review would be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECLAIMED

***Water Reclamation Plants (currently available)***

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP). MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

***Water Reclamation Plant Expansion (under development)***

IRWD has prepared a Final Environmental Impact Report for the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project (February, 2006) and the expansion project is under construction. With this expansion, IRWD plans to increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2031. (Initial upgrades that are within existing permit authorizations and CEQA compliance are completed) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED<sup>8</sup>

***Baker Pipeline (currently available)***

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker

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<sup>8</sup> See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

***Irvine Lake (currently available)***

(i) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriative rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally

yield three-fourths of the amount over 1,000 AF.<sup>9</sup> The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

• NONPOTABLE SUPPLY - GROUNDWATER

***Irvine Subbasin / Irvine Desalter (currently available)***

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

• IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply; MWD has provided information concerning the availability of the supplies to its entire service area. In its most recently adopted RUWMP, MWD has extended its planning timeframe out through 2035 to ensure that MWD's 2010 RUWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the RUWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The RUWMP summarizes MWD's planning initiatives over the past ten years, which includes the Integrated Resources Plan (IRP), the IRP Update, the Water Surplus and Drought Management Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's IRP Update (October 2010) showed that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2015 through 2035. The RUWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2035. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

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<sup>9</sup> The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

It is anticipated that MWD will revise its regional supply availability analysis periodically to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD RUWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - **Recent Actions on Delta Pumping**, MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater wells (PR Nos. 10285, 15423, 15427, 15428, 15051 and 15052) and the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), IRWD adopted its fiscal year 2010/11 capital budget on June 14, 2010 (Resolution No. 2010-16), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately \$673 million (water) and \$867 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

### **3. Other users and contractholders (identified supply not previously used).**

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

**4. Information concerning groundwater included in the supply identified for the Project:**

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2005 UWMP, section III-3.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin (“Basin”) is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 (“MPR”) and in the more recent Groundwater Management Plan (“GMP”) at pages 2-1 through 6-33<sup>10</sup>. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 366,000 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan (“LTFP”) which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin.

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of “long-term overdraft,” overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD’s Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over \$250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an “overdraft” condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin

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<sup>10</sup> OCWD has also prepared a Long Term Facilities Plan which provides updated information which was received and filed by its Board in July 2009.

management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term “mining” overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (Source: 2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District; OCWD MPR, *supra*.)

OCWD's efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD's management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2 and LTFP, section 6)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

<b>Year (ending 6/30)</b>	<b>DRWF/DATS/OPA</b>	<b>Irvine Subbasin (IRWD)</b>	<b>Irvine Subbasin (TIC)</b>	<b>LAWD<sup>11</sup></b>
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

<sup>11</sup> The water produced from IRWD's Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC’s historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD’s and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD’s main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

<b>Year (ending 6/30)</b>	<b>DRWF<sup>12</sup></b>	<b>Future GW<sup>13</sup></b>	<b>IDP (Potable)</b>	<b>IDP (Nonpotable)</b>
2015	37,900	15,600	5,640	3,898
2020	37,900	22,100	5,640	3,898
2025	37,900	32,600	5,640	3,898
2031	37,900	32,600	5,640	3,898

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD’s preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage (“BPP”) that OCWD sets based on these factors.<sup>14</sup>

<sup>12</sup> See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 1,000 AFY for the OPA well.

<sup>13</sup> Under development.

<sup>14</sup> OCWD has adopted a basin production percentage of 62% for 2010-11. In prior years OCWD has

Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD is moving forward with a number of replenishment supply projects, including the Groundwater Replenishment System project (“GWRS”). The OCWD MPR indicates that the GWRS will produce over 100,000 afy of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is “mined” in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

**5.  This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Date of prior assessment: January 27, 2003. Check all of the following that apply:**

- Changes in the Project have substantially increased water demand.
- Changes in circumstances or conditions have substantially affected IRWD’s ability to provide a sufficient water supply for the Project.
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

**6. References**

*Water Resources Master Plan*, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

*2005 Urban Water Management Plan*, Irvine Ranch Water District, November, 2005

*Integrated Water Resources Plan Update*, Metropolitan Water District of Southern California, July, 2004

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maintained a basin production percentage that is higher than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD’s currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

*Proposed Framework for Metropolitan Water District's Delta Action Plan*, Metropolitan Water District of Southern California, May 8, 2007

*Board Information Report*, Metropolitan Water District of Southern California, October 9, 2007

*2007 IRP Implementation Report*, Metropolitan Water District of Southern California, October, 2007

*Master Plan Report*, Orange County Water District, April, 1999

*Groundwater Management Plan*, Orange County Water District, March, 2004

*Final Draft Long-Term Facilities Plan*, Orange County Water District, January 2006

*2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District*, Orange County Water District

*Progress on Incorporating Climate Change into Management of California's Water Resources*, California Department of Water Resources, July 2006

*Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program*, Irvine Ranch Water District, February 2009

*Water Shortage Contingency Plan*, Irvine Ranch Water District, February 2009

*2010 Integrated Resources Plan Update*, Metropolitan Water District of Southern California, October 2010

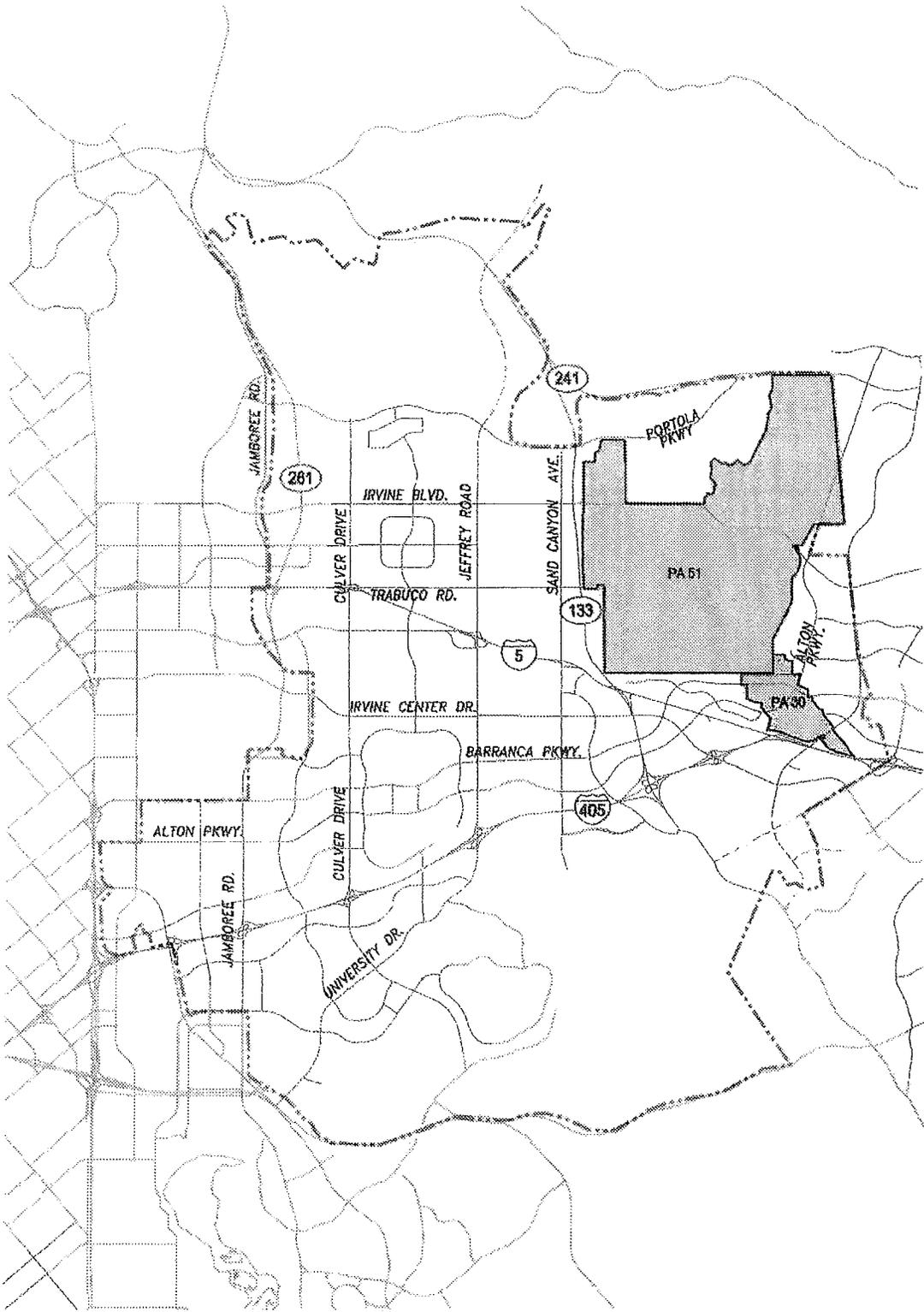
*Regional Urban Water Management Plan*, Metropolitan Water District of Southern California, November 2010

**Exhibit A**

Depiction of Project Area

**B-51**

Vicinity Map



**Exhibit B**

Uses Included in Project

February 18, 2011

Irvine Ranch Water District  
15600 Sand Canyon Avenue  
P.O. Box 57000  
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*)

The City of Irvine hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that a supplemental environmental impact report is required for the project.

**Proposed Project Information**

Project Title: Heritage Fields Planning Areas 30 & 51, inclusion of Density Bonus residential units granted pursuant to state law, Section 2-3, and Resolution 08-2926

Location of project: Former MCAS El Toro Base, Planning Areas 30 and 51. The boundaries of Planning Area 51 generally include the Eastern Transportation Corridor to the west, the Foothill Transportation Corridor to the east, the Southern California Regional Rail Authority (SCRRA) rail lines to the south, and Irvine Boulevard and the storm channel near Alton Parkway to the north. Planning Area 51 abuts Planning Areas 30 and 32 to the south, Irvine Spectrum 2 – Planning Area 35 to the east, and Planning Areas 9 and 40 to the west, and Planning Area 6 to the north. The boundaries of Planning Area 30 generally include Interstate 5 (Santa Ana Freeway) to the south, the SCRRA rail lines to the north, and the Irvine Spectrum to the east and west (Irvine Spectrum 2- Planning Area 35 and Irvine Spectrum 3 - Planning Area 32). See attached Vicinity Map

- Previous Water Supply Assessment including this project was prepared on: 1/27/03. This application requests a new Water Supply Assessment, due to the following (check all that apply):
- Changes in the project have substantially increased water demand
- Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project
- Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment

(Enclose maps and exhibits of the project)

Type of Development:

Residential: No. of dwelling units: 3,625 (in prior assessment), 1,269 new (total 4,894)

Shopping center or business: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Commercial office: No. of employees \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Hotel or motel: No. of rooms \_\_\_\_\_

Industrial, manufacturing, processing or industrial park: No. of employees \_\_\_\_\_  
No. of acres \_\_\_\_\_ Sq. ft. of floor space \_\_\_\_\_

Mixed use (check and complete all above that apply)

Other: Non-Residential existing entitlement per original Water Supply Assessment with addition of (1) 1,000 student school.

Total acreage of project: per original Water Supply Assessment

Acreage devoted to landscape: (per original Water Supply Assessment)

Greenbelt \_\_\_\_\_ golf course \_\_\_\_\_ parks \_\_\_\_\_

Agriculture \_\_\_\_\_ other landscaped areas \_\_\_\_\_

Number of schools addition of (1) 1,000 student school Number of public facilities \_\_\_\_\_

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:

Landscaped areas will be irrigated via reclaimed water

What is the current land use of the area subject to a land use change under the project?

Per original Water Supply Assessment

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation \_\_\_\_\_

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

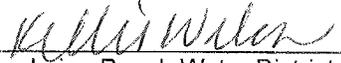
The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF IRVINE / COUNTY OF ORANGE

By: 

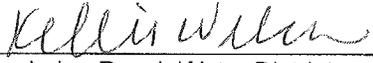
REQUEST RECEIVED:

Date: July 24, 2011

By:   
Irvine Ranch Water District

REQUEST COMPLETE:

Date: March 9, 2011

By:   
Irvine Ranch Water District

20. RECONSIDERATION OF THE AGREEMENT BETWEEN MUNICIPAL WATER DISTRICT OF ORANGE COUNTY (MWDOC) AND ITS MEMBER AGENCIES ON BUDGET, ACTIVITIES, CHARGES AND OTHER SERVICES AS APPROVED BY THE IRWD BOARD ON JANUARY 24, 2011

Recommendation: Background: in light of the recent actions at MWDOC, Director Swan has requested the Board discuss reconsideration of the subject agreement.