

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

**October 22, 2012**

**PLEDGE OF ALLEGIANCE**

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

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

**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.     **CALIFORNIA NEVADA SECTION AMERICAN WATER WORKS ASSOCIATION – 2012 OUTSTANDING ENERGY MANAGEMENT AWARD**

Mr. Ray Bennett will present to the Board an Energy Management Award from American Water Works Association recognizing the District for its project to implement an energy plan specifying cost-effective energy projects and reducing greenhouse gas emissions.

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**CONSENT CALENDAR**

**Resolution No. 2012-42**

**Items 4-11**

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4.     **MINUTES OF REGULAR BOARD MEETING**

Recommendation: That the minutes of the October 8, 2012 Regular Board Meeting be approved as presented.

| CONSENT CALENDAR - Continued   | Resolution No. 2012-42  | Items 4-11 |
|--|---|------------|
| 5. <u>RATIFY/APPROVE BOARD OF DIRECTORS' ATTENDANCE AT MEETINGS AND EVENTS</u>             | Recommendation: That the Board ratify/approve the meetings and events for Steven LaMar, Mary Aileen Matheis, Peer Swan and John Withers.  |            |
| 6. <u>DISTRICT STRATEGIC MEASURES DASHBOARD</u>  | Recommendation: That the Board receive and file the Strategic Measures Dashboard and Information items.   |            |
| 7. <u>SEPTEMBER 2012 FINANCIAL REPORTS</u>   | Recommendation: That the Board receive and file the Treasurer's Investment Summary Report and the Monthly Interest Rate Swap Summary for September 2012; approve the September 2012 Summary of Payroll ACH payments in the total amount of \$1,337,985.14, and approve the September 2012 accounts payable disbursement summary of Warrants Nos. 332972 through 333640, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$11,380,050.35.  |            |
| 8. <u>UPDATES TO EXPENDITURE AUTHORIZATIONS SOURCE OF FUNDS</u>                            | Recommendation: That the Board approve updates to the Expenditure Authorizations for projects 20910 (1149), 20957 (1221), 21004 (1265), and 11485 (1646) from Regional allocations with enhancement to the capital replacement funds.   |            |
| 9. <u>MICHELSON WATER RECYCLING PLANT PROTECTIVE COATINGS EXPENDITURE AUTHORIZATION</u>    | Recommendation: That the Board approve an Expenditure Authorization in the amount of \$350,000 for the MWRP Protective Coatings, project 21123 (3799).  |            |
| 10. <u>HERITAGE FIELDS DISTRICT 8 IRVINE BOULEVARD AND RIDGE VALLEY CAPITAL FACILITIES</u> | Recommendation: That the Board authorize the addition of projects 11664 (4094), 21664 (4095), 31664 (4096), and 30386 (4097) to the FY 2012-13 capital budget in the amounts of \$453,200, \$171,600, \$276,100, and \$431,200, respectively; approve Expenditure Authorizations for projects 11664 (4094), 21664 (4095), 31664 (4096), and 30386 (4097) in the amounts of \$453,200, \$171,600, \$276,100, and \$431,200, respectively; and authorize the General Manager to execute a supplemental reimbursement agreement with Heritage Fields El Toro LLC for the design and construction of the IRWD facilities within Planning Area 51 District 8, projects 11664 (4094), 21664 (4095), 31664 (4096), and 30386 (4097). |            |

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**CONSENT CALENDAR - Continued**

**Resolution No. 2012-42**

**Items 4-11**

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11. CITY OF LAKE FOREST SPORTS PARK CAPITAL FACILITIES BUDGET ADJUSTMENTS AND EXPENDITURE AUTHORIZATIONS

Recommendation: That the Board authorize the addition of project 11663 (4033) in the amount of \$354,200 to the FY 2012-13 capital budget; authorize a budget reduction to the FY 2012-13 capital budget for project 30352 (1732) in the amount of \$614,700, from \$1,186,200 to \$571,500; approve an Expenditure Authorization for project 11663 (4033) in the amount of \$354,200; and approve an Expenditure Authorization reduction for project 30352 (1732) in the amount of \$614,700 for the City of Lake Forest Sports Park Capital Facilities project.

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**ACTION CALENDAR**

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12. SAN JOAQUIN MARSH OUTLET PIPE VALVE REPLACEMENT BUDGET REDUCTION, EXPENDITURE AUTHORIZATION AND CONSTRUCTION AWARD

Recommendation: That the Board approve a budget reduction in the amount of \$1,067,000 for project 10835 (1853); approve an Expenditure Authorization in the amount of \$374,000 for project 10835 (1853); and authorize the General Manager to execute a contract with GCI Construction, Inc. in the amount of \$134,200 for the San Joaquin Marsh Outlet Pipe Valve Replacement project.

13. AUTOMATION SUPPORT CONSULTANT SERVICES

Recommendation: That the Board approve Variance No. 1 to the Professional Services Agreement with HDR Engineering in the amount of \$132,100; approve Variance No. 1 to the Professional Services Agreement with Malcolm Pirnie/Arcadis in the amount of \$142,300; authorize the General Manager to execute a Professional Services Agreement with Westin Engineering in the amount of \$90,000; and authorize the General Manager to execute a Professional Services Agreement with Vertech Industrial Systems in the amount of \$86,360.

14. ORANGE PARK ACRES WELL NO. 1 WELLHEAD DESIGN CONSULTANT SELECTION

Recommendation: That the Board approve an Expenditure Authorization for project 11405 (1250) in the amount of \$399,000, and authorize the General Manager to execute a Professional Services Agreement in the amount of \$492,866 with URS Corporation for engineering services for the OPA-1 Wellhead Design, project 11405 (1250).

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**ACTION CALENDAR - Continued**

**Resolution No. 2012-42**

15. APPROVAL OF SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE MWRP PHASES 2 AND 3 CAPACITY EXPANSION PROJECT BIOSOLIDS HANDLING COMPONENT

Recommendation: That the Board direct staff to incorporate into the draft findings as presented such revisions as may be necessary to conform the findings to any information that may be received after preparation of said draft and prior to this action, including any changes made in the findings by IRWD in certifying the Final Supplemental Environmental Impact Report and any comments from the Board; direct that the findings, as so revised, and the mitigation, monitoring and reporting program be incorporated into the Resolution and adopt a Resolution certifying the Final Supplemental Environmental Impact Report for the Michelson Water Recycling Plant Phase 2 and 3 Capacity Expansion Project, (adding biosolids handling component); adopting written findings pursuant to the California Environmental Quality Act; adopting a Mitigation, monitoring and reporting program; approving the project; and authorizing the filing of a Notice of Determination to proceed with the project.

Reso No. 2012-

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**OTHER BUSINESS**

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.

16. A. General Manager's Report

B. Directors' Comments

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**OTHER BUSINESS - Continued**

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16. C. CLOSED SESSION relative to CONFERENCE WITH LABOR NEGOTIATOR pursuant to Government Code Section 54957.6 – Agency Designated Representative: President Matheis Unrepresented Employee: Paul Cook

D. Adjourn.

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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.



October 15, 2012  
Prepared and  
Submitted by: L. Bonkowski  
Approved by: P. Cook

CONSENT CALENDAR

MINUTES OF REGULAR BOARD MEETING

SUMMARY:

Provided are the minutes of the October 8, 2012 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE OCTOBER 8, 2012 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – Minutes of October 8, 2012 Regular Board Meeting



## EXHIBIT "A"

### MINUTES OF REGULAR MEETING – OCTOBER 8, 2012

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 Matheis on October 8, 2012 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

Directors Present: Matheis, Reinhart, Swan, and Withers

Directors Absent: LaMar

Also Present: General Manager Cook, Acting Director of Finance/Treasurer Jacobson, Executive Director of Operations Pedersen, Executive Director of Engineering Burton, Executive Director of Water Policy Heiertz, Secretary Bonkowski, Legal Counsel Arneson, Director of Public Affairs Beeman, Director of Water Resources Weghorst, Director of Human Resources Wells, Mr. Smithson, Mr. Omar Dandashi, Mr. Jim Reed, and Mr. Wayne Clark and other members of the public and staff.

WRITTEN COMMUNICATION: None.

ORAL COMMUNICATION:

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

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. Cook.

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. Cook.

### CONSENT CALENDAR

On MOTION by Withers, seconded and unanimously carried, CONSENT CALENDAR ITEMS 3 THROUGH 6 WERE APPROVED AS FOLLOWS:

3. MINUTES OF BOARD MEETINGS

Recommendation: That the minutes of the September 21, 2012 Adjourned Regular Board Meeting and the September 24, 2012 Regular Board Meeting be approved as presented.

4. 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, John Withers and Peer Swan.

5. BASIS SWAPS – WELLS FARGO BANK ISDA AGREEMENT APPROVAL

Recommendation: That the Board approve the draft *International Swap and Derivatives Agreement* with Wells Fargo Bank N.A. in substantially the form provided.

6. ASSET OPTIMIZATION – LAKE FOREST/SERRANO SUMMIT PROPERTY FUEL MODIFICATION AND TEMPORARY EASEMENT AGREEMENT

Recommendation: That the Board approve the Fuel Modification and Temporary Easement Agreement for the Asset Optimization – Lake Forest (Serrano Summit) project in substantially the form submitted.

### ACTION CALENDAR

#### ASSET OPTIMIZATION – LAKE FOREST/SERRANO SUMMIT PROPERTY FINAL MAP BUDGET INCREASE AND CONSULTANT SELECTIONS

General Manager Cook reported that the City Council has approved the District's Serrano Summit tentative tract map depicting the future planning areas and corresponding Area Plan for the property as well as certification of a project-specific EIR. Mr. Cook said that the Serrano Summit project will include up to 608 residential units, neighborhood and passive parks, a city hall and civic center complex, and IRWD operating facilities. On February 21, 2012, the City Council approved the intent to form a Community Facilities District (CFD) on the property, and the requisite public hearing process formally completed the CFD formation on April 17, 2012.

Mr. Cook said that on April 23, 2012, the Board committed to proceeding with the final map process and approved the retention of Lewis Operating Corporation to continue as entitlement consultant for the project. He said that at that time, staff also notified the Board that, following

Lewis' sub-consultant selection process, a budget increase for the projected costs to obtain a final map would be required for the next phase of entitlement.

Acting Director of Finance/Treasurer Jacobson reported that an approved final map will provide prospective homebuilders with clearly defined project improvement cost estimates and offer a project ready for construction. Obtaining a final map on the property will result in a number of deliverables to the District that will provide a more marketable project compared with the current approved tentative map. Mr. Jacobson said that the final map sub-consulting team is comprised of firms that were pre-qualified by Lewis. Lewis requested and evaluated the proposals using a value-based process and finalists for each service were interviewed by Lewis and District staff. To provide the deliverables, Lewis will retain firms for civil engineering services, landscape architecture, environmental permitting, geotechnical engineering, dry utility planning and fuel modification analysis. Based on evaluation of the proposals and consultant interviews, Lewis has recommended the following sub-consultants: 1) Civil Engineering by RBF Consultants; 2) Landscape Architecture by Architerra; 3) Environmental Permitting by VCS; 4) Dry Utility Planning by Utility Specialists; and 5) Fuel Modification by Firewise 2000. He said that additional details on the sub-consultant evaluation and selection process are included in the Consultant Selection Summary provided by Lewis in the Exhibit.

Mr. Jacobson said that the estimated project cost for design and processing of the final map for the Serrano Summit property includes entitlement management fees for Lewis in the amount of \$257,000 (previously approved by the Board), individual sub-consultant service fees totaling \$865,000, plan check and related City/agency fees estimated to be \$195,000 as well as contingencies. Mr. Jacobson introduced Mr. Omar Dandashi from Lewis Homes who was in the audience.

Director Withers reported that this item was reviewed and approved by the Asset Management Committee on October 1, 2012. On MOTION by Withers, seconded and unanimously carried, **THE BOARD APPROVED AN INCREASE TO THE FY 2012-13 CAPITAL BUDGET IN THE AMOUNT OF \$1,590,000 FOR PROJECT 1264, ASSET OPTIMIZATION – LAKE FOREST PROPERTY DEVELOPMENT FOR COSTS RELATED TO OBTAINING A FINAL MAP ON THE PROPERTY AND APPROVED AN EXPENDITURE AUTHORIZATION FOR \$1,590,000.**

#### ESTABLISHING CONNECTION FEES IN IMPROVEMENT DISTRICTS 184/284

General Manager Cook reported that the District will need to establish and adopt connection fees for redevelopment in Improvement Districts (IDs) 184/284 for a commercial development considering conversion to residential use. These IDs were for commercial development of the Foothill Ranch area which included residential IDs 182/282. Mr. Cook said that this item was previously brought to the Finance and Personnel Committee, and additional information was requested from staff regarding demand factors. The demand information is addressed in the write-up with details and also provided in the exhibit. On MOTION by Swan, seconded and unanimously carried, **THE BOARD APPROVED ESTABLISHING RESIDENTIAL CONNECTION FEES IN IMPROVEMENT DISTRICTS 184/284 AND ADOPTED THE FOLLOWING RESOLUTION BY TITLE:**

RESOLUTION NO 2012-41

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE  
RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA  
ADOPTING CHANGES TO CONNECTION FEES AS SET FORTH IN  
THE SCHEDULE OF RATES AND CHARGES IN EXHIBIT "B" TO THE  
RULES AND REGULATIONS OF IRVINE RANCH WATER DISTRICT  
FOR WATER, SEWER, RECYCLED WATER AND NATURAL  
TREATMENT SYSTEM SERVICE

DENTAL AND VISION INSURANCE COVERAGE FOR CALENDAR YEAR 2013

General Manager Cook reported that ACWA/JPIA has negotiated rates with Delta Dental for the plan year beginning January 1, 2013 which include a 2.01% increase in the premiums for IRWD's current dental plan, Plan A. IRWD has a two-year rate guarantee from EyeMed Vision Care for the District's vision coverage through December 31, 2013. Mr. Cook said that IRWD has retained a consultant team to review the District's overall retirement and health benefits package to maximize value to the employees and develop an equitable cost sharing method to minimize increasing exposure to rising costs in the future. The results of that study are still being developed and will not affect recommendations for adjustments to the 2013 dental and vision insurance benefits. Director Swan reported that this item was reviewed by the Finance and Personnel Committee on October 2, 2012 and the Committee concurs with the staff recommendation. On MOTION by Swan, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO CONTINUE COVERAGE FOR IRWD WITH ACWA/JPIA FOR DELTA DPO PLAN A WITH CHILD AND ADULT ORTHODONTIC COVERAGE, AND WITH EYEMED VISION CARE FOR THE 2013 CALENDAR YEAR; AND THE MAXIMUM AGE FOR DEPENDENTS IN EACH OF THESE PLANS WAS CHANGED TO AGE 26 AS ALLOWED UNDER THE FEDERAL HEALTH CARE REFORM ACT.

GENERAL MANAGER'S REPORT

General Manager Cook reported that staff has completed a response to the Grand Jury's reported entitled "Transparency Breaking up Compensation Fog – But Why Hide Pension Costs". He said that the District aligns its reporting format to the format specified by the State Controller's office.

Mr. Cook said that in regard to the OCWD recycled water penalty, for this year's basin equity assessment report, staff submitted two forms, one removing the exclusion of recycled water from total water demand and the other with the exclusion remaining. He said that he met with OCWD's General Manager and that this item could be a topic for discussion at a future joint Ad Hoc Committee meeting.

Mr. Cook said that as a follow-up to the WateReuse Research Initiative where the District has committed funding for a two- year period, this topic will also be discussed at the upcoming CASA conference where a presentation will be made on the initiative.

Mr. Cook updated the Board on the Environmental Impact Report (EIR) outreach process on the Biosolids project noting that it has been sent out for review with most of the outreach focused on neighboring the Irvine Company, Watermarke, Sea & Sage, and University Synagogue. He said that this week staff hopes to have a response to comments on the Draft EIR. He also said that staff is working toward a date for the Conditional Use Permit to be heard before the City of Irvine's Planning Commission. He further said that the Biosolids project went out to bid today.

#### DIRECTORS' COMMENTS

Director Reinhart reported on his attendance at MWDOC's PAMO meeting where Mr. Cook and Mr. Weghorst made a presentation on the District's Water Banking project which he said was well received. He reported on his attendance at a MWDOC Board Workshop, a SOCWA Board meeting, and a WACO meeting.

Director Swan reported that he attended an ACWA Board meeting and a workshop, a Newport Chamber of Commerce Legislative Committee meeting, and a WACO meeting.

Director Withers reported that he attended a CA LAFCO meeting and will also be attending a LAFCO Board meeting and a CORO luncheon this week.

Director Matheis reported that she will be attending a CalDesal conference and the NWRI Clark Prize event later this month.

#### CLOSED SESSION

Director Matheis said that Closed Session would be held as follows:

CLOSED SESSION RELATIVE TO Conference with Real Property Negotiator - Government Code Section 54956.8:

Property: Portions of Sections 3 and 4 of T30S, R26E MDB&M, Kern County  
Parcels Nos. 534-010-27, 534-010-28, 534-010-29, 534-010-30, 534-010-32  
Negotiating Parties: Anthony L. Leggio, President of Bolthouse Properties, LLC  
Agency Negotiator: Paul Cook, General Manager  
Purpose of Negotiations: Price and Term of Payment

#### OPEN SESSION

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

#### ADJOURNMENT

President Matheis adjourned the meeting.

Approved and signed this 15th day of October, 2012.

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President, IRVINE RANCH WATER DISTRICT

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Secretary, IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

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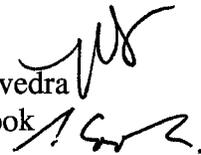
Legal Counsel - Bowie, Arneson, Wiles & Giannone

October 22, 2012

Prepared and

Submitted by: N. Savedra

Approved by: P. Cook



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

|             |                             |
|-------------|-----------------------------|
| 10/18/12    | OCSD Treatment Plant 1 Tour |
| 10/29-30/12 | CalDesal Conference, Irvine |
| 10/31/12    | Orange County Forum         |

Mary Aileen Matheis

|          |  |
|----------|--|
| 10/18/12 | Monthly meeting with Paul Cook regarding District activities |
| 10/19/12 | ACWA Regions 9 & 10 Joint Program                            |
| 10/22/12 | OCWD –Miraloma Recharge Basin Dedication                     |
| 10/27/12 | Irvine Public Schools Foundation Event                       |

Peer Swan

|          |   |
|----------|---|
| 10/22/12 | OCWD –Miraloma Recharge Basin Dedication                    |
| 10/24/12 | MWD-So. California Water Dialogue Meeting                   |
| 11/06/12 | CA Dept of Water Resources & NWRI Drought Response Workshop |

John Withers

|          |  |
|----------|--|
| 10/15/12 | MWDOC OC Water Use Efficiency Master Plan Stakeholder Workshop |
| 10/27/12 | Irvine Public Schools Foundation Event                         |

RECOMMENDATION:

THAT THE BOARD RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LaMAR, MARY AILEEN MATHEIS, PEER SWAN AND JOHN WITHERS AS DESCRIBED.

LIST OF EXHIBITS:

None



October 22, 2012  
Prepared and Submitted by: Various  
Approved by: Paul Cook 

CONSENT CALENDAR

DISTRICT STRATEGIC MEASURES DASHBOARD

SUMMARY:

Provided as Exhibits “A”, “B”, and “C” are the Strategic Measures Dashboard and informational items for Board review.

RECOMMENDATION:

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

EXHIBITS:

- Exhibit “A” – Strategic Measures Dashboard
- Exhibit “B” – Dyer Road Wellfield Status
- Exhibit “C” – Reservoir Data



**IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES DASHBOARD**

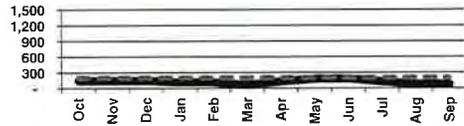
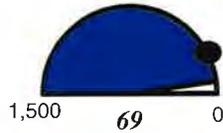
Exhibit "A"

**September 2012**

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

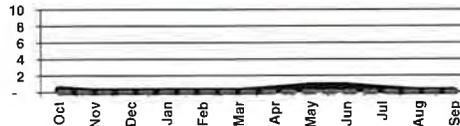
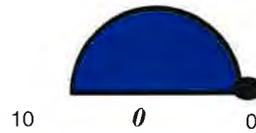
**Reliability-Potable/Nonpotable**

Target = 200 customer hours out of service this month



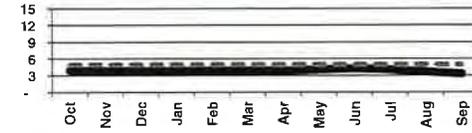
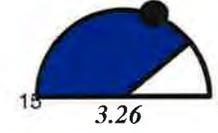
**Sewer Spills**

Target = 0 Spills this month



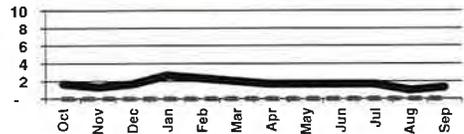
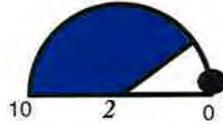
**OCSD CORF Flows**

Target = 4.95 MGD CORF flow to OCSD this month



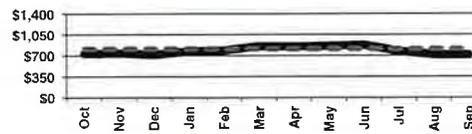
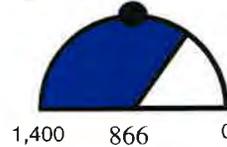
**OSHA Recordables**

Target = 0 reportable accidents this month



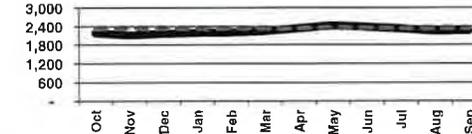
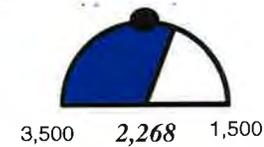
**Water System Cost--Potable**

Target = \$766/af delivered



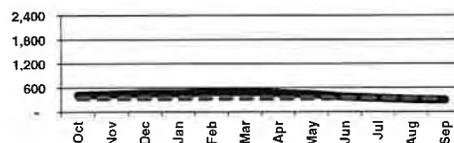
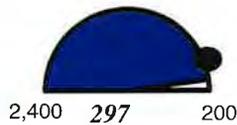
**Wastewater Cost**

Target = \$2,333/MG processed



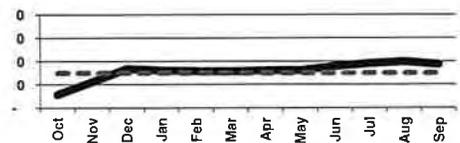
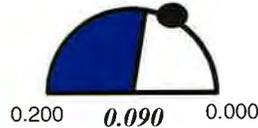
**Water System Cost--Nonpotable**

Target = \$322/ac-ft delivered this month



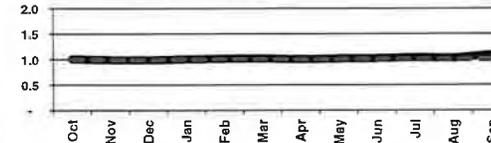
**MWRP Energy Cost per kwh**

Target = .0792 cost per kWh this month



**Enterprise Return**

Target = 1.0 (net income/goal) last month



● Target shown on gauge  
00.00 Figure for Current Month

Target shown on trend graph  
3-month rolling average

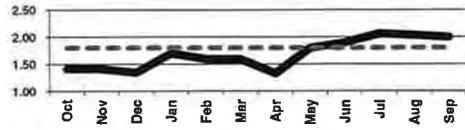
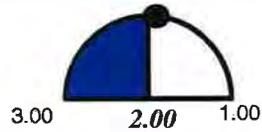
# IRVINE RANCH WATER DISTRICT STRATEGIC MEASURES DASHBOARD

**September 2012**

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

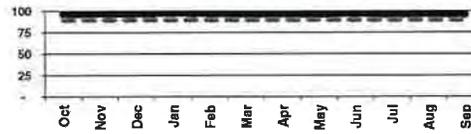
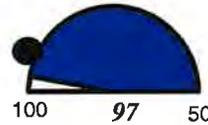
### Overhead Ratio

Target = 1.90 (G&A expenses/  
direct labor) this month



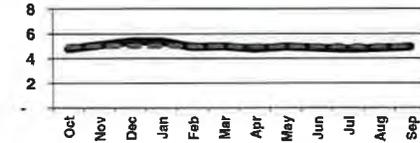
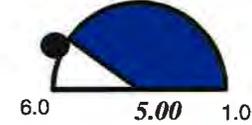
### Customer Satisfaction

Target = 90% satisfaction  
this month



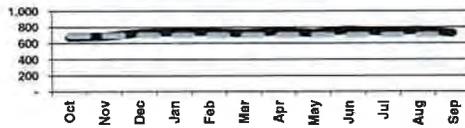
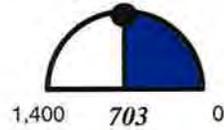
### Employee Satisfaction

Target = 5.0 score  
this month



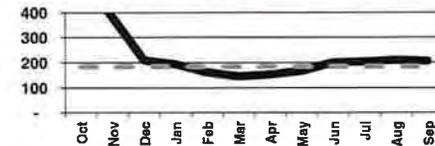
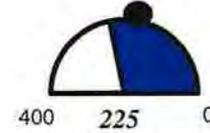
### DATS Well Production

Target = 700 Acre Feet  
per month



### IDP Treated Water

Target = 185 Acre Feet  
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> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 130.00       |             | <i>Thru:</i> September 2012 |
| November 2011  | 114.50       |             | <i>Goal:</i> 200.00         |
| December 2011  | 197.10       |             |                             |
| January 2012   | 35.42        |             |                             |
| February 2012  | 98.10        |             |                             |
| March 2012     | 65.10        |             |                             |
| April 2012     | 231.20       |             |                             |
| May 2012       | 252.60       |             |                             |
| June 2012      | 66.30        |             |                             |
| July 2012      | 62.80        |             |                             |
| August 2012    | 96.30        |             |                             |
| September 2012 | 68.70        |             |                             |

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. April, 2012-Newport Coast Marriott, blockage occurred in a sewer easement due to root intrusion. 50 gals SSO with 50 gals of wastewater released into the environment. All wastewater spilled soaked into the grass covered easement.
2. May, 2012 - MWRP North interceptor trunk sewer main break caused by pile driving activities during MWRP expansion. The break occurred on the 48" VCP trunk sewer main. 9,425 gals SSO with 9,425 gals of wastewater contained and recovered.

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 0            |             | <i>Thru:</i> September 2012 |
| November 2011  | 0            |             | <i>Goal:</i> 0              |
| December 2011  | 0            |             |                             |
| January 2012   | 0            |             |                             |
| February 2012  | 0            |             |                             |
| March 2012     | 0            |             |                             |
| April 2012     | 1.00         |             |                             |
| May 2012       | 1.00         |             |                             |
| June 2012      | 0            |             |                             |
| July 2012      | 0            |             |                             |
| August 2012    | 0            |             |                             |
| September 2012 | 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> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 3.83         |             | <i>Thru:</i> September 2012 |
| November 2011  | 3.83         |             | <i>Goal:</i> 4.95           |
| December 2011  | 3.84         |             |                             |
| January 2012   | 3.84         |             |                             |
| February 2012  | 3.84         |             |                             |
| March 2012     | 3.84         |             |                             |
| April 2012     | 3.95         |             |                             |
| May 2012       | 4.25         |             |                             |
| June 2012      | 4.53         |             |                             |
| July 2012      | 3.33         |             |                             |
| August 2012    | 3.27         |             |                             |
| September 2012 | 3.26         |             |                             |

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. Water Maint Tech II incurred lower back strain from lifting pipe fitting
2. Engineering Tech II; pain to R arm- joint tendonitis forearm and wrist

### MONTHLY DATA

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 0            |             | <i>Thru:</i> September 2012 |
| November 2011  | 3.00         |             | <i>Goal:</i> 0              |
| December 2011  | 2.00         |             |                             |
| January 2012   | 3.00         |             |                             |
| February 2012  | 2.00         |             |                             |
| March 2012     | 1.00         |             |                             |
| April 2012     | 2.00         |             |                             |
| May 2012       | 2.00         |             |                             |
| June 2012      | 1.00         |             |                             |
| July 2012      | 2.00         |             |                             |
| August 2012    | 0            |             |                             |
| September 2012 | 2.00         |             |                             |

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. None

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | .09          |             | <i>Thru:</i> September 2012 |
| November 2011  | .08          |             | <i>Goal:</i> .08            |
| December 2011  | .08          |             |                             |
| January 2012   | .08          |             |                             |
| February 2012  | .08          |             |                             |
| March 2012     | .08          |             |                             |
| April 2012     | .08          |             |                             |
| May 2012       | .08          |             |                             |
| June 2012      | .11          |             |                             |
| July 2012      | .10          |             |                             |
| August 2012    | .09          |             |                             |
| September 2012 | .09          |             |                             |

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> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 2,126.00     | 2,190.00    | <i>Thru:</i> September 2012 |
| November 2011  | 2,186.00     | 2,196.00    | <i>Goal:</i> 2,347.00       |
| December 2011  | 2,196.00     | 2,232.00    |                             |
| January 2012   | 2,202.00     | 2,273.00    |                             |
| February 2012  | 2,218.65     | 2,313.00    |                             |
| March 2012     | 2,331.06     | 2,363.00    |                             |
| April 2012     | 2,467.50     | 2,401.00    |                             |
| May 2012       | 2,506.00     | 2,463.00    |                             |
| June 2012      | 2,194.00     | 2,491.00    |                             |
| July 2012      | 2,297.00     | 2,435.00    |                             |
| August 2012    | 2,250.00     | 2,346.00    |                             |
| September 2012 | 2,268.00     | 2,333.00    |                             |

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. The budget anticipated more water being pumped and less being imported. In September 1,233 acre feet of additional imported water was purchased and pumped water fell below budget by 1,169. Water Operations staff manages maximizing pumped water on an annual basis and this will correct by fiscal year end.

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 699.00       | 866.00      | <i>Thru:</i> September 2012 |
| November 2011  | 795.17       | 858.00      | <i>Goal:</i> 812.00         |
| December 2011  | 657.43       | 828.00      |                             |
| January 2012   | 859.01       | 836.00      |                             |
| February 2012  | 843.39       | 834.00      |                             |
| March 2012     | 858.00       | 832.00      |                             |
| April 2012     | 846.00       | 828.00      |                             |
| May 2012       | 887.00       | 826.00      |                             |
| June 2012      | 893.00       | 824.00      |                             |
| July 2012      | 536.00       | 776.00      |                             |
| August 2012    | 726.00       | 812.00      |                             |
| September 2012 | 866.00       | 766.00      |                             |

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> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 490.00       | 451.00      | <i>Thru:</i> September 2012 |
| November 2011  | 404.40       | 468.00      | <i>Goal:</i> 339.00         |
| December 2011  | 517.82       | 485.00      |                             |
| January 2012   | 463.75       | 473.00      |                             |
| February 2012  | 500.14       | 486.00      |                             |
| March 2012     | 536.00       | 493.00      |                             |
| April 2012     | 370.00       | 482.00      |                             |
| May 2012       | 410.00       | 479.00      |                             |
| June 2012      | 346.00       | 472.00      |                             |
| July 2012      | 279.00       | 319.00      |                             |
| August 2012    | 314.00       | 339.00      |                             |
| September 2012 | 297.00       | 321.00      |                             |

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***Enterprise Return***

**MONTHLY STATUS REPORT**

Metric Owner: Finance

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 September measure is above budget due to higher than budgeted income at the Strawberry Farms Golf Course, Sycamore Canyon, and 230 Commerce.

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <b>From:</b> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 1.03         |             | <b>Thru:</b> September 2012 |
| November 2011  | .95          |             | <b>Goal:</b> 1.00           |
| December 2011  | .99          |             |                             |
| January 2012   | 1.07         |             |                             |
| February 2012  | 1.00         |             |                             |
| March 2012     | 1.00         |             |                             |
| April 2012     | 1.02         |             |                             |
| May 2012       | 1.03         |             |                             |
| June 2012      | 1.03         |             |                             |
| July 2012      | 1.07         |             |                             |
| August 2012    | 1.00         |             |                             |
| September 2012 | 1.20         |             |                             |

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. Information not available at time of reporting.

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u>  | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|---------------|-------------|-----------------------------|
| October 2011   | 1.24          |             | <i>Thru:</i> September 2012 |
| November 2011  | 1.00          |             | <i>Goal:</i> 1.80           |
| December 2011  | 1.81          |             |                             |
| January 2012   | 2.28          |             |                             |
| February 2012  | .70           |             |                             |
| March 2012     | 1.80          |             |                             |
| April 2012     | 1.50          |             |                             |
| May 2012       | 2.10          |             |                             |
| June 2012      | 2.10          |             |                             |
| July 2012      | 2.00          |             |                             |
| August 2012    | Not available |             |                             |
| September 2012 | Not available |             |                             |

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: 97%  
 Satisfaction: 94%  
 Timely: 93%  
 Phone: 100%  
 Field Contact: 100%

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 95.00        |             | <i>Thru:</i> September 2012 |
| November 2011  | 100.00       |             | <i>Goal:</i> 90.00          |
| December 2011  | 98.00        |             |                             |
| January 2012   | 98.00        |             |                             |
| February 2012  | 98.00        |             |                             |
| March 2012     | 95.00        |             |                             |
| April 2012     | 99.00        |             |                             |
| May 2012       | 96.00        |             |                             |
| June 2012      | 100.00       |             |                             |
| July 2012      | 93.00        |             |                             |
| August 2012    | 99.00        |             |                             |
| September 2012 | 97.00        |             |                             |

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. 8 surveys were returned of 24 surveys sent (33%). 6 of 8 respondents (75%) rated satisfaction as 5 or 6 on a scale of 1 to 6. In the 12 month period ending September 2012, 102 surveys have been returned of 296 surveys sent (34%). 80 of 102 respondents (78%) rated satisfaction as 5 or 6 on a scale of 1 to 6. 12 month average rating is 5.13%

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 5.36         |             | <i>Thru:</i> September 2012 |
| November 2011  | 5.91         |             | <i>Goal:</i> 5.00           |
| December 2011  | 4.86         |             |                             |
| January 2012   | 5.40         |             |                             |
| February 2012  | 4.60         |             |                             |
| March 2012     | 5.00         |             |                             |
| April 2012     | 4.77         |             |                             |
| May 2012       | 5.13         |             |                             |
| June 2012      | 4.67         |             |                             |
| July 2012      | 4.50         |             |                             |
| August 2012    | 5.33         |             |                             |
| September 2012 | 5.00         |             |                             |

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***DATS Well Production***

**MONTHLY STATUS REPORT**

Metric Owner: Tom Roberts Operations Manager

Definition of Measure:

Number of acre-feet of water produced by Dyer Road wells C-8 and C-9 to supply water to the Deep Aquifer Treatment System (DATS).

Method:

Summation of production from wells C-8 and C-9.

Data Collection

Data collected from meters at wells.

Current Issues

1. None

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 698.00       | 700.00      | <i>Thru:</i> September 2012 |
| November 2011  | 759.00       | 700.00      | <i>Goal:</i> 700.00         |
| December 2011  | 731.00       | 700.00      |                             |
| January 2012   | 736.00       | 700.00      |                             |
| February 2012  | 756.00       | 700.00      |                             |
| March 2012     | 689.00       | 700.00      |                             |
| April 2012     | 805.00       | 700.00      |                             |
| May 2012       | 685.00       | 700.00      |                             |
| June 2012      | 802.00       | 700.00      |                             |
| July 2012      | 733.00       | 700.00      |                             |
| August 2012    | 745.00       | 700.00      |                             |
| September 2012 | 703.00       | 700.00      |                             |

IRVINE RANCH WATER DISTRICT  
STRATEGIC MEASURES

***IDP Treated Water***

**MONTHLY STATUS REPORT**

Metric Owner: Tom Roberts Operations Manager

Definition of Measure:  
 Number of acre-feet of treated water produced by the Irvine Desalter Project (IDP).

Method:  
 Difference between final effluent volume and discharge to storm drain volume.

Data Collection  
 Data collected from final effluent and discharge to storm drain meters.

Current Issues  
 1. None

**MONTHLY DATA**

| <u>Month</u>   | <u>Value</u> | <u>Goal</u> | <i>From:</i> October 2011   |
|----------------|--------------|-------------|-----------------------------|
| October 2011   | 206.00       | 185.00      | <i>Thru:</i> September 2012 |
| November 2011  | 235.00       | 185.00      | <i>Goal:</i> 185.00         |
| December 2011  | 186.00       | 185.00      |                             |
| January 2012   | 162.00       | 185.00      |                             |
| February 2012  | 138.00       | 185.00      |                             |
| March 2012     | 136.00       | 185.00      |                             |
| April 2012     | 187.00       | 185.00      |                             |
| May 2012       | 178.00       | 185.00      |                             |
| June 2012      | 235.00       | 185.00      |                             |
| July 2012      | 200.00       | 185.00      |                             |
| August 2012    | 196.00       | 185.00      |                             |
| September 2012 | 225.00       | 185.00      |                             |

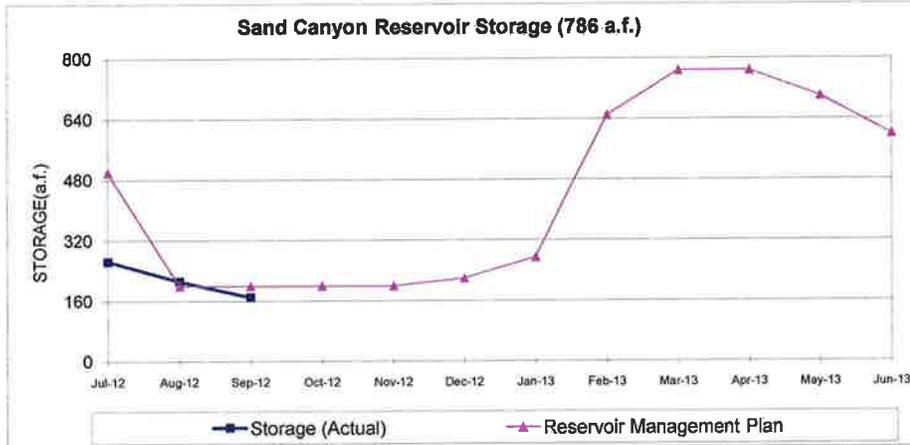
## EXHIBIT "B"

| <b>DYER ROAD WELL FIELD STATUS</b>         |                        |                      |                          |                 |                |                  | <b>Sep-2012</b>            |
|--|------------------------|----------------------|--------------------------|-----------------|----------------|------------------|----------------------------|
| Well Number                                | Production Mo./YTD     | Ref. Point Elevation | Depth to Water 9/30/2012 | Water Level-MSL | Depth of Bowls | Bowl Setting-MSL | Feet of Water Above Intake |
| 1  | 143.6 AF<br>491.3 AF   | 34                   | N/A                      | N/A             | 270            | -236             | N/A                        |
| 2  | 0.0 AF<br>78.2 AF      | 37                   | N/A                      | 37              | 270            | -234             | 270                        |
|  |                        |                      |                          | Static          |                |                  |                            |
| 3  | 0.0 AF<br>0.0 AF       | 55                   | 101                      | -46             | 215            | -160             | 114                        |
|  |                        |                      |                          | Static          |                |                  |                            |
| 4  | 216.9 AF<br>720.5 AF   | 38                   | 155                      | -117            | 216            | -178             | 61                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 5  | 47.1 AF<br>439.1 AF    | 48                   | 103                      | -55             | 290            | -242             | 187                        |
|  |                        |                      |                          | Static          |                |                  |                            |
| 6  | 166.2 AF<br>464.9 AF   | 43                   | 144                      | -101            | 250            | -207             | 106                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 7  | 80.4 AF<br>477.7 AF    | 40                   | 244                      | -204            | 290            | -250             | 46                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| C-8<br>DATS                                | 397.2 AF<br>1,227.7 AF | 37                   | 138                      | -101            | 305            | -268             | 167                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| C-9<br>DATS                                | 305.6 AF<br>952.3 AF   | 23                   | 136                      | -113            | 305            | -282             | 169                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 10   | 350.2 AF<br>1,082.3 AF | 47                   | 181                      | -134            | 250            | -203             | 69                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 11   | 47.0 AF<br>47.0 AF     | 40                   | 192                      | -152            | 300            | -260             | 108                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 12   | 204.0 AF<br>604.1 AF   | 51                   | 189                      | -138            | 300            | -249             | 111                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 13   | 87.6 AF<br>273.8 AF    | 40                   | 214                      | -174            | 300            | -260             | 86                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 14   | 185.0 AF<br>566.8 AF   | 47                   | 206                      | -159            | 311            | -264             | 105                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 15   | 377.8 AF<br>925.0 AF   | 44                   | 189                      | -145            | 300            | -256             | 111                        |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 16   | 109.8 AF<br>247.2 AF   | 47                   | 228                      | -181            | 280            | -233             | 52                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 17   | 283.1 AF<br>877.5 AF   | 52                   | 203                      | -152            | 250            | -199             | 47                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| 18   | 198.6 AF<br>494.7 AF   | 45                   | 232                      | -187            | 300            | -255             | 68                         |
|  |                        |                      |                          | Pumping         |                |                  |                            |
| Clear production: 2,497.3 AF for the month |                        |                      |                          |                 |                |                  |                            |
| FYTD: 7,790.1 AF                           |                        |                      |                          |                 |                |                  |                            |
| DATS production: 702.8 AF for the month    |                        |                      |                          |                 |                |                  |                            |
| FYTD: 2,180.0 AF                           |                        |                      |                          |                 |                |                  |                            |

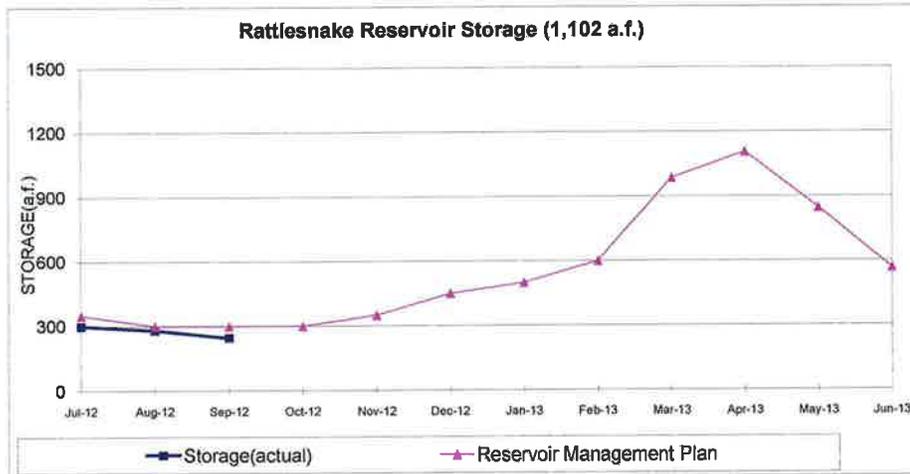


# EXHIBIT "C"

## RESERVOIR DATA FY 12-13

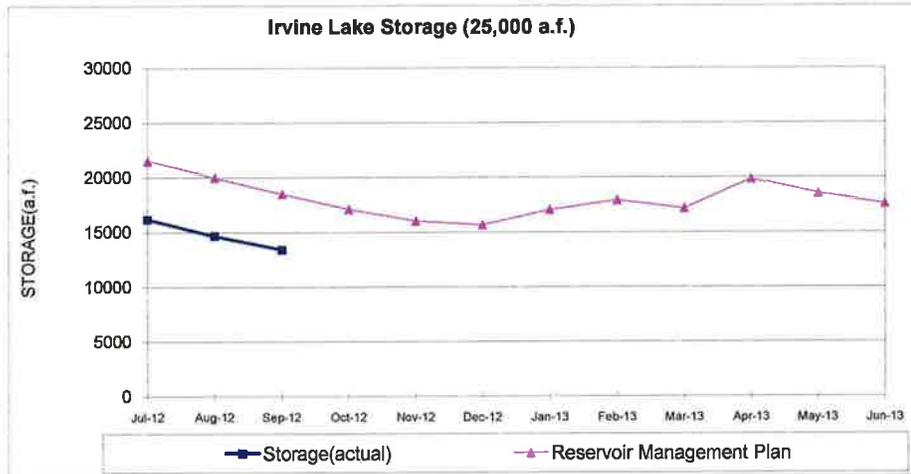


Sand Canyon Reservoir run-off was less than expected.

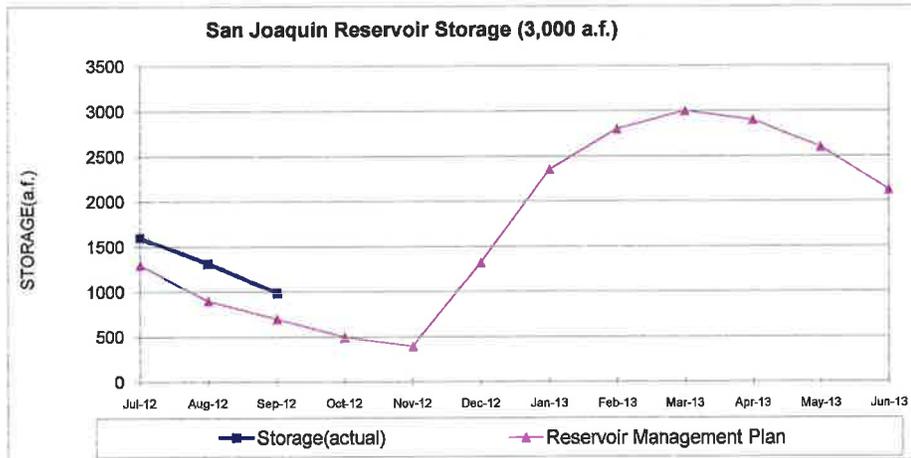


Rattlesnake storage is on track.

RESERVOIR DATA FY 12-13



Irvine Lake storage is on track.



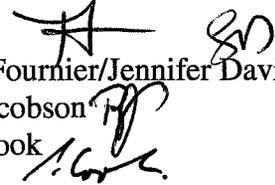
San Joaquin Reservoir storage is on track.

October 22, 2012

Prepared by: Tanja Fournier/Jennifer Davis

Submitted by: Rob Jacobson

Approved by: Paul Cook



## CONSENT CALENDAR

### SEPTEMBER 2012 FINANCIAL REPORTS

#### SUMMARY:

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

- A. The Investment Summary Report for September 2012. This Investment Summary Report is in conformity with the 2012 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 September 30, 2012, as outlined in Exhibit "B".
- C. The Summary of Payroll ACH payments in the total amount of \$1,337,985.14, as outlined in Exhibit "C".
- D. The September 30, 2012 Disbursement Summary of the tabulation of Warrant Nos. 332972 through 333640, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$11,380,050.35, as outlined in Exhibit "D".

#### FISCAL IMPACTS:

As of September 30, 2012, the book value of the investment portfolio was \$339,196,177, with a 0.39% rate of return and a market value of \$339,522,889. Based on the District's September 30, 2012 quarterly real estate investment rate of return of 10.18%, the District's weighted average return for the fixed income and real estate investments was 2.15%.

As of September 30, 2012, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash accrual in September from all swaps was negative \$556,609 and negative \$1,833,180 fiscal year to date.

Payroll ACH payments totaled \$1,337,985.14 and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll and water purchases for September totaled \$11,380,050.35.

#### 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 SEPTEMBER 2012; APPROVE THE SEPTEMBER 2012 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$1,337,985.14, AND APPROVE THE SEPTEMBER 2012 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS NOS. 332972 THROUGH 333640, WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$11,380,050.35.

LIST OF EXHIBITS:

- Exhibit "A" - Investment Summary Report
- Exhibit "B" - Monthly Interest Rate Swap Summary
- Exhibit "C" - Monthly Payroll ACH Summary
- Exhibit "D" - Monthly Summary of District Disbursements

09/28/12

| PRICE   | ACQUISITION DATE | CASH       | MARKET VALUE | MARKET VALUE DATE | RATING      | INVESTMENT TYPE      | ISSUING INSTITUTION         | PAR AMOUNT           | CURRENT YIELD | YTD    | YTD    | ORIGINAL COST           | CARRY VALUE             | MARKET VALUE            | UNREALIZED GAIN/LOSS |
|---|------------------|------------|--------------|-------------------|-------------|----------------------|-----------------------------|----------------------|---------------|--------|--------|-------------------------|-------------------------|-------------------------|----------------------|
| 100.12%   | 08/17/12         |            |              | 10/28/12          |             | LAIF                 | State of California Tsy.    | \$50,000,000         | 0.358%        |        |        | \$50,000,000.00         | \$50,000,000.00         | 50,060,982.15           | 60,982.15            |
| 100.12%   | 07/13/12         |            |              | 10/28/12          |             | LAIF-JPA             | State of California Tsy.    | 50,000,000           | 0.358%        |        |        | \$50,000,000.00         | \$50,000,000.00         | 50,060,982.15           | 60,982.15            |
| 100.12%   | 07/17/12         |            |              | 10/05/12          |             | LAIF-2009A           | State of California Tsy.    | 468,883              | 0.358%        |        |        | \$468,882.84            | \$468,882.84            | 469,454.71              | 571.87               |
| 100.12%   | 07/17/12         |            |              | 10/05/12          |             | LAIF-2009B           | State of California Tsy.    | 468,883              | 0.358%        |        |        | \$468,882.84            | \$468,882.84            | 469,454.71              | 571.87               |
| 100.12%   | 08/17/12         |            |              | 10/17/12          |             | LAIF BABS            | State of California Tsy.    | 68,913,102           | 0.358%        |        |        | \$68,913,102.20         | \$68,913,102.20         | 68,997,151.58           | 84,049.38            |
| 100.00%   | 09/28/12         |            |              | 09/29/12          |             | B of A Tsy. Reserves | Bank of America             | 8,223,332            | 0.009%        |        |        | 8,223,331.73            | 8,223,331.73            | 8,223,331.73            |                      |
| 100.81%   | 05/23/11         | N/A        | N/A          | 04/11/13          | Aaa/AAA/AAA | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 1.720%        | 0.517% |        | 5,112,550.00            | 5,031,363.72            | 5,040,250.00            | 8,886.28             |
| 100.04%   | 11/29/11         | One Time   | 11/29/12     | 11/29/13          | Aaa/AA+/AA+ | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 0.500%        | 0.596% | 0.690% | 4,990,500.00            | 4,994,489.74            | 5,002,050.00            | 7,560.26             |
| 100.45%   | 04/24/12         | N/A        | N/A          | 12/23/13          | Aaa/AA+/AAA | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 0.625%        | 0.304% |        | 5,026,600.00            | 5,019,600.00            | 5,022,450.00            | 2,850.00             |
| 100.00%   | 01/31/12         | Continuous | 04/27/12     | 01/27/14          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.350%        | 0.350% | 0.350% | 5,000,000.00            | 5,000,000.00            | 5,000,050.00            | 50.00                |
| 100.04%   | 01/30/12         | Continuous | 01/30/13     | 01/30/14          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.330%        | 0.355% | 0.380% | 4,997,500.00            | 4,998,337.89            | 5,002,150.00            | 3,812.11             |
| 101.57%   | 07/11/12         | N/A        | N/A          | 02/25/14          | Aaa/AA+/AAA | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 1.375%        | 0.301% |        | 5,086,800.00            | 5,074,612.33            | 5,078,500.00            | 3,887.67             |
| 100.00%   | 02/09/12         | Continuous | 04/25/12     | 04/25/14          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.430%        | 0.430% | 0.430% | 5,000,000.00            | 5,000,000.00            | 5,000,050.00            | 50.00                |
| 100.13%   | 05/23/12         | N/A        | N/A          | 05/23/14          | Aaa/AA+/NR  | FHLB - Note          | Fed Home Loan Bank          | 5,000,000            | 0.350%        | 0.394% |        | 4,995,600.00            | 4,996,389.59            | 5,006,650.00            | 10,260.41            |
| 101.98%   | 04/18/12         | N/A        | N/A          | 05/28/14          | Aaa/AA+/NR  | FHLB - Note          | Fed Home Loan Bank          | 5,000,000            | 1.375%        | 0.354% |        | 5,107,250.00            | 5,084,128.57            | 5,098,900.00            | 14,771.43            |
| 100.02%   | 10/19/11         | One Time   | 10/17/12     | 10/17/14          | Aaa/AA+/NR  | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 0.750%        | 0.801% | 0.902% | 4,992,500.00            | 4,994,885.74            | 5,001,000.00            | 6,114.26             |
| 100.21%   | 04/26/12         | One Time   | 04/26/13     | 10/24/14          | Aaa/AA+/NR  | FHLB - Note          | Fed Home Loan Mortgage Bank | 5,000,000            | 0.600%        | 0.425% |        | 5,008,700.00            | 5,007,191.11            | 5,010,350.00            | 3,158.89             |
| 100.07%   | 12/19/11         | Quarterly  | 12/19/12     | 12/19/14          | Aaa/AA+/NR  | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 0.625%        | 0.625% | 1.038% | 5,000,000.00            | 5,000,000.00            | 5,003,450.00            | 3,450.00             |
| 100.40%   | 01/30/12         | One Time   | 01/30/14     | 01/30/15          | Aaa/AA+/NR  | FNMA - Note          | Fed Natl Mortgage Assoc     | 5,000,000            | 0.750%        | 0.500% | 0.500% | 5,024,850.00            | 5,019,295.03            | 5,020,200.00            | 904.97               |
| 100.40%   | 01/30/12         | One Time   | 01/30/14     | 01/30/15          | Aaa/AA+/NR  | FNMA - Note          | Fed Natl Mortgage Assoc     | 10,000,000           | 0.750%        | 0.453% | 0.453% | 10,059,000.00           | 10,045,811.13           | 10,040,400.00           | (5,411.13)           |
| 100.00%   | 02/09/12         | Continuous | 05/09/12     | 02/09/15          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.460%        | 0.480% | 0.700% | 4,997,000.00            | 4,997,643.23            | 5,000,050.00            | 2,406.75             |
| 100.00%   | 03/14/12         | Continuous | 09/12/12     | 03/12/15          | Aaa/AA+/NR  | FHLB - Note          | Fed Home Loan Bank          | 5,000,000            | 0.550%        | 0.601% | 0.855% | 4,992,500.00            | 4,993,879.23            | 5,000,150.00            | 6,270.77             |
| 100.24%   | 04/18/12         | Continuous | 04/16/13     | 04/16/15          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.600%        | 0.617% | 0.651% | 4,997,500.00            | 4,997,879.69            | 5,011,800.00            | 13,920.31            |
| 100.11%   | 06/27/12         | Quarterly  | 12/26/12     | 06/26/15          | Aaa/AA+/NR  | FNMA - Note          | Fed Natl Mortgage Assoc     | 10,000,000           | 0.700%        | 0.693% | 0.660% | 10,002,000.00           | 10,001,829.18           | 10,010,500.00           | 8,670.82             |
| 100.18%   | 08/28/12         | Continuous | 08/27/13     | 08/27/15          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 10,000,000           | 0.480%        | 0.480% | 0.480% | 10,000,000.00           | 10,000,000.00           | 10,017,700.00           | 17,700.00            |
| 100.04%   | 09/17/12         | Continuous | 09/17/13     | 09/17/15          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.480%        | 0.482% | 0.482% | 4,999,750.00            | 4,999,753.20            | 5,001,750.00            | 1,996.80             |
| 100.04%   | 09/17/12         | Continuous | 09/17/13     | 09/17/15          | Aaa/AA+/NR  | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.480%        | 0.455% | 0.472% | 5,001,250.00            | 5,001,234.02            | 5,001,750.00            | 515.98               |
| 100.01%   | 09/25/12         | Quarterly  | 09/25/13     | 09/25/15          | Aaa/AA+/NR  | FHLMC - Note         | Fed Home Loan Mortgage Bank | 5,000,000            | 0.500%        | 0.470% | 0.490% | 5,001,500.00            | 5,001,491.78            | 5,000,500.00            | (991.78)             |
| 100.04%   | 09/28/12         | Continuous | 12/28/12     | 09/28/15          | NA/AA+/NR   | FFCB - Note          | Fed Farm Credit Bank        | 5,000,000            | 0.450%        | 0.470% | 0.470% | 4,997,000.00            | 4,997,008.22            | 5,001,900.00            | 4,891.78             |
| 101.59%   | 08/23/12         | N/A        | N/A          | 06/20/13          |             | CA ST-RANS-A1        | State of California         | 3,500,000            | 2.500%        | 0.430% | 0.430% | 3,559,535.00            | 3,551,821.16            | 3,555,650.00            | 3,828.84             |
| <b>SUB-TOTAL</b>                                  |                  |            |              |                   |             |                      |                             | <b>\$311,574,200</b> |               |        |        | <b>\$312,024,084.61</b> | <b>\$311,882,844.18</b> | <b>\$312,209,557.03</b> | <b>\$326,712.85</b>  |
| <b>RESTRICTED CASH (Swap Collateral Deposits)</b> |                  |            |              |                   |             |                      |                             |                      |               |        |        |                         |                         |                         |                      |
| 100.00%   |                  |            |              |                   |             | Collateral Deposit   | Citi-Group                  | \$18,523,332         | 0.144%        |        |        | \$18,523,332.41         | \$18,523,332.41         | 18,523,332.41           |                      |
| 100.00%   |                  |            |              |                   |             | Collateral Deposit   | Merrill Lynch               | \$8,790,000          | 0.144%        |        |        | \$8,790,000.00          | \$8,790,000.00          | 8,790,000.00            |                      |
| <b>SUB-TOTAL</b>                                  |                  |            |              |                   |             |                      |                             | <b>\$27,313,332</b>  |               |        |        | <b>\$27,313,332.41</b>  | <b>\$27,313,332.41</b>  | <b>\$27,313,332.41</b>  |                      |
| <b>TOTAL INVESTMENTS</b>                          |                  |            |              |                   |             |                      |                             | <b>\$338,887,532</b> |               |        |        | <b>\$339,337,417.02</b> | <b>\$339,196,176.59</b> | <b>\$339,522,889.44</b> |                      |
|   |                  |            |              |                   |             | Petty Cash           |                             |                      |               |        |        | 3,300.00                |                         |                         |                      |
|   |                  |            |              |                   |             | Recent July Bal      | Bank Bal. (unrec.)          |                      |               |        |        | (1,108,120.94)          |                         |                         |                      |
|   |                  |            |              |                   |             |                      | Bank of America             |                      |               |        |        | \$338,232,596.08        |                         |                         |                      |

- (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/or Brokers
- (3) Real estate rate of return is based on most recent quarter end return
- Outstanding Variable Rate Debt \$372,560,000  
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps) \$242,560,000  
Investment Balance: \$338,232,596  
Investment to Variable Rate Debt Ratio: 139%  
Portfolio - Average Number of Days To Maturity 344

|           | Investment Portfolio | Real Estate Portfolio (3) | Weighted Avg. Return |
|-----------|----------------------|---------------------------|----------------------|
| September | 0.39%                | 10.18%                    | 2.14%                |
| August    | 0.41%                | 11.29%                    | 2.19%                |
| Change    | -0.02%               |                           |                      |

This Investment Summary Report is in conformity with the 2012 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

IRVINE RANCH WATER DISTRICT  
SUMMARY OF MATURITIES

09/28/12

PORTFOLIO \$338,887,532

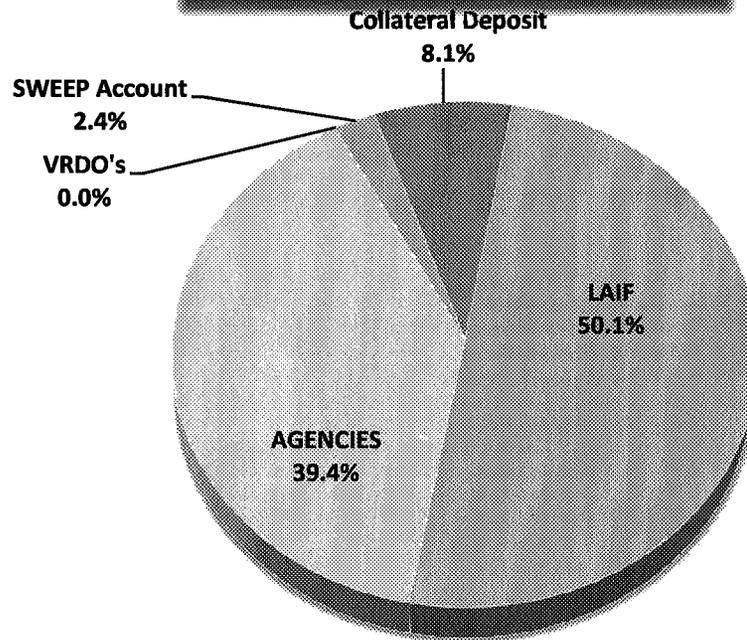
| DATE                       | TOTAL                | %              | LAIF                 | AGENCIES           | VRDO     | MONEY MARKET SAVINGS & SWEEP | Collateral * Deposit | CAL REV NOTES      |
|----------------------------|----------------------|----------------|----------------------|--------------------|----------|------------------------------|----------------------|--------------------|
| 9/12                       | \$35,536,664         | 10.49%         |                      |                    |          | 8,223,332                    | \$27,313,332         |                    |
| 10/12                      | \$169,850,868        | 50.12%         | \$169,850,868        |                    |          |                              |                      |                    |
| 11/12                      |                      |                |                      |                    |          |                              |                      |                    |
| 12/12                      |                      |                |                      |                    |          |                              |                      |                    |
| 1/13                       |                      |                |                      |                    |          |                              |                      |                    |
| 2/13                       |                      |                |                      |                    |          |                              |                      |                    |
| 3/13                       | \$5,000,000          | 1.48%          |                      | 5,000,000          |          |                              |                      |                    |
| 04/13                      | \$3,500,000          | 1.03%          |                      |                    |          |                              |                      |                    |
| 05/13                      |                      |                |                      |                    |          |                              |                      | 3,500,000          |
| 06/13                      |                      |                |                      |                    |          |                              |                      |                    |
| 07/13                      |                      |                |                      |                    |          |                              |                      |                    |
| 8/13                       |                      |                |                      |                    |          |                              |                      |                    |
| <b>SUB-TOTAL</b>           | <b>\$213,887,532</b> | <b>63.11%</b>  | <b>\$169,850,868</b> | <b>5,000,000</b>   | <b>-</b> | <b>8,223,332</b>             | <b>\$27,313,332</b>  | <b>\$3,500,000</b> |
| <b>13 Months - 3 YEARS</b> |                      |                |                      |                    |          |                              |                      |                    |
| 9/1/2013 - 12/31/2013      | 10,000,000           | 2.95%          |                      | 10,000,000         |          |                              |                      |                    |
| 1/1/2014 - 3/31/2014       | \$15,000,000         | 4.43%          |                      | 15,000,000         |          |                              |                      |                    |
| 4/1/2014 - 6/30/2014       | \$15,000,000         | 4.43%          |                      | 15,000,000         |          |                              |                      |                    |
| 7/1/2014 - 9/30/2014       |                      |                |                      |                    |          |                              |                      |                    |
| 10/1/2014 - 12/31/2014     | \$15,000,000         | 4.43%          |                      | 15,000,000         |          |                              |                      |                    |
| 1/1/2015 - 3/31/2015       | \$25,000,000         | 7.38%          |                      | 25,000,000         |          |                              |                      |                    |
| 4/1/2015 - 6/30/2015       | \$15,000,000         | 4.43%          |                      | 15,000,000         |          |                              |                      |                    |
| 07/1/30/2015 - 9/30/2015   | \$30,000,000         | 8.85%          |                      | 30,000,000         |          |                              |                      |                    |
| <b>TOTALS</b>              | <b>\$338,887,532</b> | <b>100.00%</b> | <b>\$169,850,868</b> | <b>130,000,000</b> | <b>-</b> | <b>8,223,332</b>             | <b>\$27,313,332</b>  | <b>\$3,500,000</b> |

% OF PORTFOLIO 50.12%      38.36%      2.43%      8.06%      1.03%

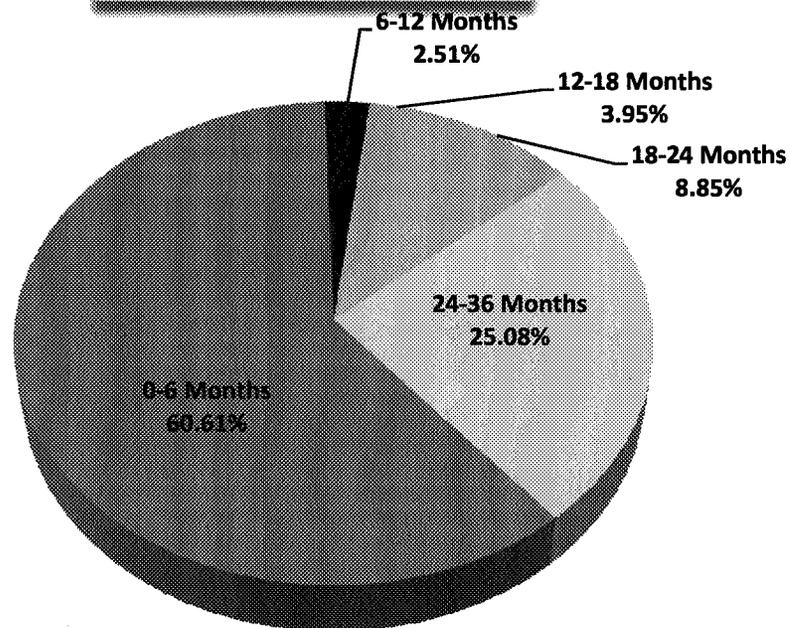
\* Return of posted collateral is dependant on interest rates.

**September 2012 INVESTMENT PORTFOLIO**  
**As of September 30, 2012**

**Portfolio by Investment Type**



**Portfolio by Maturities**



IRVINE RANCH WATER DISTRICT  
 INVESTMENT SUMMARY REPORT

Joint Powers Agency - Investment Contracts

9/30/2012

| Settlement<br>Date | JPA Issue      | Investment<br>Contract                                | Original Cost         | Current Par           | Market Value<br>09/30/12 |
|--------------------|----------------|---|-----------------------|-----------------------|--------------------------|
| 10/25/1994         | JPA - Issue #1 | AIG Matched Funding Corp.<br>7.705% Due 2-15-14       | \$ 407,878,616        | \$ 254,221,200        | \$ 254,221,200           |
| 10/25/1994         | JPA - Issue #2 | Federal National Mortgage Assoc.<br>8.18% Due 2-15-14 | \$ 518,644,189        | \$ 365,414,156        | \$ 398,758,198           |
|                    |                |   | <u>\$ 926,522,805</u> | <u>\$ 619,635,356</u> | <u>\$ 652,979,398</u>    |

Irvine Ranch Water District  
 Summary of Real Estate  
 9/30/2012

|                                 | <u>ACQUISITION<br/>DATE</u> | <u>PROPERTY<br/>TYPE</u> | <u>OWNERSHIP<br/>INTEREST</u> | <u>ORIGINAL<br/>COST</u> | <u>RATE OF RETURN<br/>QUARTER ENDED<br/>Sep-12</u> |
|---------------------------------|-----------------------------|--------------------------|-------------------------------|--------------------------|--|
| Sycamore Canyon                 | Dec-92                      | Apartments               | Fee Simple                    | \$ 43,550,810            | 13.03%   |
| Wood Canyon Villas              | Jun-91                      | Apartments               | Limited Partner               | \$ 6,000,000             | 8.30%  |
| ITC (230 Commerce)              | Jul-03                      | Office Building          | Fee Simple                    | \$ 5,739,845             | 8.58%  |
| Waterworks Business Pk.         | Nov-08                      | Research & Dev.          | Fee Simple                    | \$ 8,630,577             | 4.12%  |
| Sand Canyon Professional Center | Jul-12                      | Medical Building         | Fee Simple                    | \$ 8,111,211             | 3.86%  |
|                                 |                             |                          |                               | <u>\$ 72,032,443</u>     | <u>10.18%</u>                                      |

\*Original Estimate provided was revised in June - correction to Wood Canyon expenses increased the rate of return for June

**IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT**  
**INVESTMENT ACTIVITY**  
**Sep-12**

**MATURITIES/SALES**

**PURCHASES**

| DATE      | SECURITY TYPE                    | PAR         | YIELD | DATE      | SECURITY TYPE | PAR         | YIELD |
|-----------|----------------------------------|-------------|-------|-----------|---------------|-------------|-------|
| 9/14/2012 | VRDO - West Basin (Partial Call) | \$3,560,000 | 0.23% | 9/17/2012 | FFCB - Note   | \$5,000,000 | 0.48% |
| 9/20/2012 | FFCB - Note                      | \$5,000,000 | 0.57% | 9/17/2012 | FFCB - Note   | \$5,000,000 | 0.46% |
|           |                                  |             |       | 9/25/2012 | FHLMC - Note  | \$5,000,000 | 0.47% |
|           |                                  |             |       | 9/28/2012 | FFCB - Note   | \$5,000,000 | 0.47% |

**LAIF ACTIVITY**

**COLLATERALIZED DEPOSIT ACTIVITY**

|                 |                            |
|-----------------|----------------------------|
| Balance Forward | \$27,581,612               |
| CITIGROUP       | \$0                        |
| MERRILL LYNCH   | <u>(\$268,279)</u>         |
| Balance at 9/30 | <u><u>\$27,313,333</u></u> |

**IRVINE RANCH WATER DISTRICT  
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL  
September 30, 2012**

Exhibit "B"

|  |               |                   |               |                       |      |            |               | LIBOR Avg %         |                     |                       | Prior Mo.              |                        | Current Mo.            |                | 12-Mo Avg |  |
|--|---------------|-------------------|---------------|-----------------------|------|------------|---------------|---------------------|---------------------|-----------------------|------------------------|------------------------|------------------------|----------------|-----------|--|
|  |               |                   |               |                       |      |            |               | 0.24%               | 0.22%               | 0.25%                 |                        |                        |                        |                |           |  |
| Current Fiscal Year Active Swaps             |               |                   |               |                       |      |            |               | Cash Flow           |                     |                       |                        | (Since 6/06)           |                        | Mark to Market |           |  |
| Effective Date                               | Maturity Date | Years to Maturity | Counter Party | Notional Amt          | Type | Base Index | Fixed Rate    | Prior Month         | Current Month       | Fiscal YTD            | Cumulative Cash Flow   | Current Mark to Market | Notional Difference    |                |           |  |
| <b>Fixed Payer Swaps - By Effective Date</b> |               |                   |               |                       |      |            |               |                     |                     |                       |                        |                        |                        |                |           |  |
| 6/4/2006                                     | 6/4/2019      | 6.7               | ML            | \$ 20,000,000         | FXP  | LIBOR      | 6.200%        | \$ (99,126)         | \$ (89,384)         | \$ (294,394)          | \$ (5,337,241)         | \$ 13,315,215          | \$ (6,684,785)         |                |           |  |
| 6/4/2006                                     | 6/4/2019      | 6.7               | CG            | \$ 20,000,000         | FXP  | LIBOR      | 6.200%        | \$ (99,126)         | \$ (89,384)         | \$ (294,394)          | \$ (5,337,241)         | \$ 13,310,040          | \$ (6,689,960)         |                |           |  |
| 6/17/2006                                    | 6/17/2019     | 6.7               | CG            | \$ 30,000,000         | FXP  | LIBOR      | 6.140%        | \$ (147,217)        | \$ (132,755)        | \$ (437,170)          | \$ (7,904,457)         | \$ 20,046,062          | \$ (9,953,938)         |                |           |  |
| 3/10/2007                                    | 3/10/2029     | 16.5              | ML            | \$ 30,000,000         | FXP  | LIBOR      | 5.687%        | \$ (135,926)        | \$ (122,543)        | \$ (403,611)          | \$ (6,957,029)         | \$ 15,339,849          | \$ (14,660,151)        |                |           |  |
| 3/10/2007                                    | 3/10/2029     | 16.5              | CG            | \$ 30,000,000         | FXP  | LIBOR      | 5.687%        | \$ (135,926)        | \$ (122,543)        | \$ (403,611)          | \$ (6,957,029)         | \$ 15,288,144          | \$ (14,711,856)        |                |           |  |
| <b>Totals/Weighted Avgs</b>                  |               | <b>11.2</b>       |               | <b>\$ 130,000,000</b> |      |            | <b>5.949%</b> | <b>\$ (617,321)</b> | <b>\$ (556,609)</b> | <b>\$ (1,833,180)</b> | <b>\$ (32,492,998)</b> | <b>\$ 77,299,310</b>   | <b>\$ (52,700,690)</b> |                |           |  |
| <b>Total Current Year Active Swaps</b>       |               |                   |               |                       |      |            |               | <b>\$ (617,321)</b> | <b>\$ (556,609)</b> | <b>\$ (1,833,180)</b> | <b>\$ (32,492,998)</b> | <b>\$ 77,299,310</b>   | <b>\$ (52,700,690)</b> |                |           |  |

| Current Fiscal Year Terminated Swaps       |               |  |               |              |      |            |            | Cash Flow   |               |             |                      | Mark to Market         |                     |
|--|---------------|--|---------------|--------------|------|------------|------------|-------------|---------------|-------------|----------------------|------------------------|---------------------|
| Effective Date                             | Maturity Date |  | Counter Party | Notional Amt | Type | Base Index | Fixed Rate | Prior Month | Current Month | Fiscal YTD  | Cumulative Cash Flow | Current Mark to Market | Notional Difference |
| <b>Total Current Year Terminated Swaps</b> |               |  |               |              |      |            |            | <b>\$ -</b> | <b>\$ -</b>   | <b>\$ -</b> | <b>\$ -</b>          | <b>\$ -</b>            | <b>\$ -</b>         |

| Current Fiscal Year - Total Swaps                       |  |  |  |  |  |  |  | Cash Flow           |                     |                       |                        | Mark to Market         |                        |
|---|--|--|--|--|--|--|--|---------------------|---------------------|-----------------------|------------------------|------------------------|------------------------|
|   |  |  |  |  |  |  |  | Prior Month         | Current Month       | Fiscal YTD            | Cumulative Cash Flow   | Current Mark to Market | Notional Difference    |
| <b>Total Current Year Active &amp; Terminated Swaps</b> |  |  |  |  |  |  |  | <b>\$ (617,321)</b> | <b>\$ (556,609)</b> | <b>\$ (1,833,180)</b> | <b>\$ (32,492,998)</b> | <b>\$ 77,299,310</b>   | <b>\$ (52,700,690)</b> |

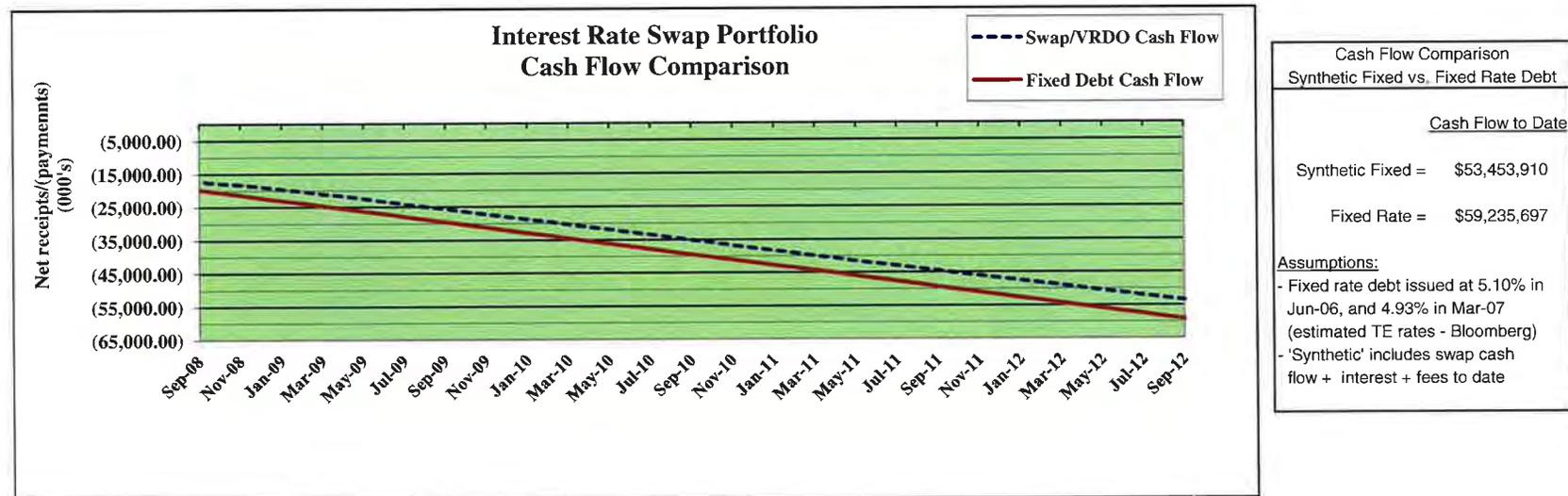




Exhibit "C"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

September  
2012

| DATE      | AMOUNT                       | VENDOR          | PURPOSE          |
|-----------|------------------------------|-----------------|------------------|
| 9/7/2012  | 668,471.51                   | BANK OF AMERICA | PAYROLL 09/07/12 |
| 9/21/2012 | 669,513.63                   | BANK OF AMERICA | PAYROLL 09/21/12 |
|           | <u><u>\$1,337,985.14</u></u> |                 |                  |



## Exhibit "D"

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 1  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                 | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 332972                        |              | 04-SEP-12 | Bonnie Steward                                |      | 9.90           |              |                | Negotiable |
| 332973                        |              | 04-SEP-12 | Cynthia Beck                                  |      | 18.70          |              |                | Negotiable |
| 332974                        |              | 04-SEP-12 | Eliberto Leal                                 |      | 212.00         |              |                | Negotiable |
| 332975                        |              | 04-SEP-12 | Eric Olivolo                                  |      | 112.05         |              |                | Negotiable |
| 332976                        |              | 04-SEP-12 | Fiona Sanchez                                 |      | 83.60          |              |                | Negotiable |
| 332977                        |              | 04-SEP-12 | Franklin Soto                                 |      | 75.00          |              |                | Negotiable |
| 332978                        |              | 04-SEP-12 | Lars Oldewage                                 |      | 217.50         |              |                | Negotiable |
| 332979                        |              | 04-SEP-12 | Tanja Fournier                                |      | 1,013.92       |              |                | Negotiable |
| 332980                        |              | 05-SEP-12 | Edwin Dillhoefer                              |      | 105.00         |              |                | Negotiable |
| 332981                        |              | 05-SEP-12 | Mark Gingras                                  |      | 71.00          |              |                | Negotiable |
| 332982                        |              | 05-SEP-12 | Michelle Klein                                |      | 48.48          |              |                | Negotiable |
| 332983                        |              | 05-SEP-12 | AAF INTERNATIONAL                             |      | 749.59         |              |                | Negotiable |
| 332984                        |              | 05-SEP-12 | AIRGAS-WEST, INC.                             |      | 66.43          |              |                | Negotiable |
| 332985                        |              | 05-SEP-12 | ALEXANDER CONTRACT SERVICES INC               |      | 100,004.94     |              |                | Negotiable |
| 332986                        |              | 05-SEP-12 | AMERICAN MESSAGING SERVICES LLC               |      | 297.73         |              |                | Negotiable |
| 332987                        |              | 05-SEP-12 | ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA |      | 32,055.04      |              |                | Negotiable |
| 332988                        |              | 05-SEP-12 | AT&T  |      | 50.28          |              |                | Negotiable |
| 332989                        |              | 05-SEP-12 | AT&T  |      | 6,508.40       |              |                | Negotiable |
| 332990                        |              | 05-SEP-12 | AVISTA TECHNOLOGIES, INC                      |      | 4,928.04       |              |                | Negotiable |
| 332991                        |              | 05-SEP-12 | BIOMAGIC INC                                  |      | 5,243.44       |              |                | Negotiable |
| 332992                        |              | 05-SEP-12 | BOHAC CONSULTING SERVICES, INC.               |      | 180.00         |              |                | Negotiable |
| 332993                        |              | 05-SEP-12 | BOND LOGISTIX LLC                             |      | 3,750.00       |              |                | Negotiable |
| 332994                        |              | 05-SEP-12 | BOYD & ASSOCIATES                             |      | 3,438.00       |              |                | Negotiable |
| 332995                        |              | 05-SEP-12 | CALIFORNIA BARRICADE INC                      |      | 28,456.04      |              |                | Negotiable |
| 332996                        |              | 05-SEP-12 | CALIFORNIA UTILITY EQUIPMENT INC.             |      | 384.48         |              |                | Negotiable |
| 332997                        |              | 05-SEP-12 | CANON BUSINESS SOLUTIONS INC                  |      | 64.61          |              |                | Negotiable |
| 332998                        |              | 05-SEP-12 | CAPTIVE AUDIENCE MARKETING INC.               |      | 85.12          |              |                | Negotiable |
| 332999                        |              | 05-SEP-12 | CHARLES P CROWLEY COMPANY INC                 |      | 4,529.47       |              |                | Negotiable |
| 333000                        |              | 05-SEP-12 | CITY OF IRVINE                                |      | 3,952.00       |              |                | Negotiable |
| 333001                        |              | 05-SEP-12 | CLA-VAL COMPANY                               |      | 1,336.81       |              |                | Negotiable |
| 333002                        |              | 05-SEP-12 | CONDITTON MONITORING SERVICES INC             |      | 5,894.25       |              |                | Negotiable |
| 333003                        |              | 05-SEP-12 | CONEYBEARE INC                                |      | 9,529.59       |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 2  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                            | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |      |                |              |                |            |
| 333004                        |              | 05-SEP-12 | DEVISE ENGINEERING INC                   |      | 4,278.67       |              |                | Negotiable |
| 333005                        |              | 05-SEP-12 | DME INC                                  |      | 1,568.10       |              |                | Negotiable |
| 333006                        |              | 05-SEP-12 | DUDEK                                    |      | 9,162.54       |              |                | Negotiable |
| 333007                        |              | 05-SEP-12 | EAST ORANGE COUNTY WATER DISTRICT        |      | 1,564.18       |              |                | Negotiable |
| 333008                        |              | 05-SEP-12 | ELECTRICAL SYSTEMS ENGINEERING           |      | 8,745.00       |              |                | Negotiable |
| 333009                        |              | 05-SEP-12 | EVANS-HYDRO INC                          |      | 11,737.77      |              |                | Negotiable |
| 333010                        |              | 05-SEP-12 | EXPRESSAIR                               |      | 164.00         |              |                | Negotiable |
| 333011                        |              | 05-SEP-12 | FERGUSON WATERWORKS                      |      | 603.40         |              |                | Negotiable |
| 333012                        |              | 05-SEP-12 | FIDELITY SECURITY LIFE INSURANCE COMPANY |      | 5,717.24       |              |                | Negotiable |
| 333013                        |              | 05-SEP-12 | FISHER SCIENTIFIC COMPANY LLC            |      | 1,686.46       |              |                | Negotiable |
| 333014                        |              | 05-SEP-12 | FLATIRON WEST INC                        |      | 295,996.42     |              |                | Negotiable |
| 333015                        |              | 05-SEP-12 | FT ZIEBARTH COMPANY                      |      | 165,645.45     |              |                | Negotiable |
| 333016                        |              | 05-SEP-12 | GALLADE CHEMICAL INC                     |      | 343.94         |              |                | Negotiable |
| 333017                        |              | 05-SEP-12 | GANAHL LUMBER CO.                        |      | 167.08         |              |                | Negotiable |
| 333018                        |              | 05-SEP-12 | GATEWAY PACIFIC CONTRACTORS, INC.        |      | 31,033.32      |              |                | Negotiable |
| 333019                        |              | 05-SEP-12 | GATEWAY PACIFIC CONTRACTORS, INC.        |      | 3,448.15       |              |                | Negotiable |
| 333020                        |              | 05-SEP-12 | GEI CONSULTANTS                          |      | 35,633.97      |              |                | Negotiable |

D-1

| Payment Number | Sequence Num | Date | Supplier Name                                | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|----------------|--------------|------|--|------|----------------|--------------|----------------|------------|
| 333021         | 05-SEP-12    |      | INC<br>GJ AUTOMOTIVE<br>EQUIPMENT CO INC     |      | 14,756.36      |              |                | Negotiable |
| 333022         | 05-SEP-12    |      | GLOBALSTAR INC                               |      | 169.12         |              |                | Negotiable |
| 333023         | 05-SEP-12    |      | GRAINGER                                     |      | 3,647.47       |              |                | Negotiable |
| 333024         | 05-SEP-12    |      | GRAPHIC CONTROLS<br>LLC                      |      | 213.97         |              |                | Negotiable |
| 333025         | 05-SEP-12    |      | GREEN BUILDING<br>CERTIFICATION<br>INSTITUTE |      | 500.00         |              |                | Negotiable |
| 333026         | 05-SEP-12    |      | HARDY & HARPER INC                           |      | 28,810.00      |              |                | Negotiable |
| 333027         | 05-SEP-12    |      | HARMSWORTH<br>ASSOCIATES                     |      | 2,795.00       |              |                | Negotiable |
| 333028         | 05-SEP-12    |      | HDR ENGINEERING<br>INC                       |      | 31,762.54      |              |                | Negotiable |
| 333029         | 05-SEP-12    |      | HILL BROTHERS<br>CHEMICAL COMPANY            |      | 12,169.69      |              |                | Negotiable |
| 333030         | 05-SEP-12    |      | HOME DEPOT USA INC                           |      | 535.15         |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 3  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date | Supplier Name                             | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |      |   |      |                |              |                |            |
| 333031                        | 05-SEP-12    |      | HUNSAKER &<br>ASSOCIATES IRVINE           |      | 2,240.00       |              |                | Negotiable |
| 333032                        | 05-SEP-12    |      | INDUSTRIAL<br>NETWORKING                  |      | 620.03         |              |                | Negotiable |
| 333033                        | 05-SEP-12    |      | IRVINE PIPE &<br>SUPPLY INC               |      | 210.78         |              |                | Negotiable |
| 333034                        | 05-SEP-12    |      | JAMBOREE HOUSING<br>CORPORATION           |      | 176,200.00     |              |                | Negotiable |
| 333035                        | 05-SEP-12    |      | LA HABRA FENCE<br>COMPANY INC             |      | 623.00         |              |                | Negotiable |
| 333036                        | 05-SEP-12    |      | LABELLE-MARVIN INC                        |      | 975.00         |              |                | Negotiable |
| 333037                        | 05-SEP-12    |      | LAYNE CHRISTENSEN<br>COMPANY              |      | 30,604.04      |              |                | Negotiable |
| 333038                        | 05-SEP-12    |      | LGC GEOTECHNICAL,<br>INC.                 |      | 127.50         |              |                | Negotiable |
| 333039                        | 05-SEP-12    |      | MC MASTER CARR<br>SUPPLY CO               |      | 877.71         |              |                | Negotiable |
| 333040                        | 05-SEP-12    |      | MCR TECHNOLOGIES<br>INC                   |      | 758.00         |              |                | Negotiable |
| 333041                        | 05-SEP-12    |      | MISCOWATER                                |      | 9,943.57       |              |                | Negotiable |
| 333042                        | 05-SEP-12    |      | MUNICIPAL<br>MAINTENANCE<br>EQUIPMENT INC |      | 190.07         |              |                | Negotiable |
| 333043                        | 05-SEP-12    |      | NATIONAL READY<br>MIXED CONCRETE CO       |      | 2,447.49       |              |                | Negotiable |
| 333044                        | 05-SEP-12    |      | NEWPORT BEACH,<br>CITY OF                 |      | 806.09         |              |                | Negotiable |
| 333045                        | 05-SEP-12    |      | NINYO & MOORE                             |      | 1,313.00       |              |                | Negotiable |
| 333046                        | 05-SEP-12    |      | NMG GEOTECHNICAL<br>INC                   |      | 3,329.10       |              |                | Negotiable |
| 333047                        | 05-SEP-12    |      | OLIN CORPORATION                          |      | 17,580.86      |              |                | Negotiable |
| 333048                        | 05-SEP-12    |      | ONESOURCE<br>DISTRIBUTORS LLC             |      | 1,615.29       |              |                | Negotiable |
| 333049                        | 05-SEP-12    |      | ORANGE COUNTY FIRE<br>PROTECTION          |      | 1,555.00       |              |                | Negotiable |
| 333050                        | 05-SEP-12    |      | ORANGE COUNTY<br>TREASURER                |      | 121.50         |              |                | Negotiable |
| 333051                        | 05-SEP-12    |      | OSTS, INC                                 |      | 2,497.50       |              |                | Negotiable |
| 333052                        | 05-SEP-12    |      | PRUDENTIAL OVERALL<br>SUPPLY              |      | 3,295.11       |              |                | Negotiable |
| 333053                        | 05-SEP-12    |      | RBF CONSULTING                            |      | 30,258.53      |              |                | Negotiable |
| 333054                        | 05-SEP-12    |      | SANTA ANA BLUE<br>PRINT                   |      | 2,623.32       |              |                | Negotiable |
| 333055                        | 05-SEP-12    |      | SHAMROCK SUPPLY CO<br>INC                 |      | 664.21         |              |                | Negotiable |
| 333056                        | 05-SEP-12    |      | SOLARBEE INC                              |      | 5,172.28       |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 4  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date | Supplier Name                            | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |      |  |      |                |              |                |            |
| 333057                        | 05-SEP-12    |      | SOUTHERN<br>CALIFORNIA EDISON<br>COMPANY |      | 754.27         |              |                | Negotiable |
| 333058                        | 05-SEP-12    |      | SPARKLETTS                               |      | 344.86         |              |                | Negotiable |
| 333059                        | 05-SEP-12    |      | STANTEC CONSULTING<br>SERVICES INC.      |      | 10,090.50      |              |                | Negotiable |
| 333060                        | 05-SEP-12    |      | SUPERMEDIA LLC                           |      | 71.25          |              |                | Negotiable |
| 333061                        | 05-SEP-12    |      | TEKDRAULICS                              |      | 3,159.50       |              |                | Negotiable |
| 333062                        | 05-SEP-12    |      | TELEDYNE LEEMAN                          |      | 139.07         |              |                | Negotiable |

| Payment Number | Sequence Num | Date      | Supplier Name                                 | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|----------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| 333063         |              | 05-SEP-12 | LABS<br>TESTAMERICA<br>LABORATORIES, INC      |      | 157.50         |              |                | Negotiable |
| 333064         |              | 05-SEP-12 | THE IRVINE COMPANY<br>LLC                     |      | 2,399.61       |              |                | Negotiable |
| 333065         |              | 05-SEP-12 | THOMPSON<br>INDUSTRIAL SUPPLY                 |      | 211.38         |              |                | Negotiable |
| 333066         |              | 05-SEP-12 | TRI-STATE SEMINAR                             |      | 600.00         |              |                | Negotiable |
| 333067         |              | 05-SEP-12 | TROPICAL PLAZA<br>NURSERY INC                 |      | 678.34         |              |                | Negotiable |
| 333068         |              | 05-SEP-12 | UNITED PARCEL<br>SERVICE INC                  |      | 32.11          |              |                | Negotiable |
| 333069         |              | 05-SEP-12 | UNITED STATES<br>POSTAL SERVICE               |      | 87.11          |              |                | Negotiable |
| 333070         |              | 05-SEP-12 | UNIVAR USA INC                                |      | 2,586.00       |              |                | Negotiable |
| 333071         |              | 05-SEP-12 | UTILITY SYSTEMS<br>SCIENCE & SOFTWARE<br>INC. |      | 2,520.00       |              |                | Negotiable |
| 333072         |              | 05-SEP-12 | VERIZON CALIFORNIA<br>INC                     |      | 229.00         |              |                | Negotiable |
| 333073         |              | 05-SEP-12 | WALTERS WHOLESALE<br>ELECTRIC                 |      | 179.02         |              |                | Negotiable |
| 333074         |              | 05-SEP-12 | WAXIE'S<br>ENTERPRISES, INC                   |      | 694.02         |              |                | Negotiable |
| 333075         |              | 05-SEP-12 | WESTERN AV                                    |      | 576.68         |              |                | Negotiable |
| 333076         |              | 05-SEP-12 | WILDERMUTH<br>ENVIRONMENTAL INC               |      | 416.00         |              |                | Negotiable |
| 333077         |              | 05-SEP-12 | WOLTERS KLUWER LAW<br>& BUSINESS              |      | 321.61         |              |                | Negotiable |
| 333078         |              | 06-SEP-12 | BK FOUNTAIN WORKS                             |      | 678.62         |              |                | Negotiable |
| 333079         |              | 06-SEP-12 | BOYD & ASSOCIATES                             |      | 270.00         |              |                | Negotiable |
| 333080         |              | 06-SEP-12 | CLEARINGHOUSE                                 |      | 528.45         |              |                | Negotiable |
| 333081         |              | 06-SEP-12 | DUDEK   |      | 22.50          |              |                | Negotiable |
| 333082         |              | 06-SEP-12 | FRANCHISE TAX<br>BOARD                        |      | 350.00         |              |                | Negotiable |
| 333083         |              | 06-SEP-12 | HOME DEPOT USA INC                            |      | 129.25         |              |                | Negotiable |

IRWD Ledger  
 BANK: Bank of America N.A.      Branch : Los Angeles      Payment Register For 01-SEP-12 To 30-SEP-12      Report Date: 02-OCT-2012 08:44  
 Bank Account Currency: USD ( US Dollar )      Account: Checking AP and PR      Page: 5  
 Payment Type: All      Payment Currency: USD ( US Dollar )      Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name   | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 333084                        |              | 06-SEP-12 | INTERNAL REVENUE<br>SERVICE                           |      | 1,376.92       |              |                | Negotiable |
| 333085                        |              | 06-SEP-12 | INTERNAL REVENUE<br>SERVICE                           |      | 25.00          |              |                | Negotiable |
| 333086                        |              | 06-SEP-12 | IRWD-PETTY CASH<br>CUSTODIAN                          |      | 1,063.48       |              |                | Negotiable |
| 333087                        |              | 06-SEP-12 | KILL-N-BUGS<br>TERMITE AND PEST<br>CONTROL SERVICES   |      | 2,525.00       |              |                | Negotiable |
| 333088                        |              | 06-SEP-12 | LSA ASSOCIATES INC                                    |      | 3,284.70       |              |                | Negotiable |
| 333089                        |              | 06-SEP-12 | O G SUPPLY  |      | 2,696.85       |              |                | Negotiable |
| 333090                        |              | 06-SEP-12 | ORANGE COUNTY<br>SHERIFF'S OFFICE                     |      | 930.73         |              |                | Negotiable |
| 333091                        |              | 06-SEP-12 | PERS LONG TERM<br>CARE                                |      | 1,178.47       |              |                | Negotiable |
| 333092                        |              | 06-SEP-12 | PROVOST &<br>PRITCHARD<br>ENGINEERING GROUP,<br>INC.  |      | 11,628.00      |              |                | Negotiable |
| 333093                        |              | 06-SEP-12 | RAINBOW DISPOSAL<br>CO INC                            |      | 482.22         |              |                | Negotiable |
| 333094                        |              | 06-SEP-12 | SOUTH COAST AIR<br>QUALITY MANAGEMENT<br>DISTRICT     |      | 12,956.06      |              |                | Negotiable |
| 333095                        |              | 06-SEP-12 | TRUGREEN LANDCARE<br>LLC                              |      | 245.21         |              |                | Negotiable |
| 333096                        |              | 06-SEP-12 | UNITED STATES POST<br>OFFICE                          |      | 25,000.00      |              |                | Negotiable |
| 333097                        |              | 06-SEP-12 | ZEBRON CONTRACTING<br>INC                             |      | 60,000.00      |              |                | Negotiable |
| 333098                        |              | 10-SEP-12 | CDW GOVERNMENT LLCPAY                                 |      | 9,232.62       |              |                | Negotiable |
| 333099                        |              | 11-SEP-12 | BANK OF NEW YORK NEWARK<br>MELLON TRUST<br>COMPANY NA |      | 3,513.90       |              |                | Negotiable |
| 333100                        |              | 13-SEP-12 | Casey King  |      | 100.00         |              |                | Negotiable |
| 333101                        |              | 13-SEP-12 | Eric Olivolo  |      | 70.00          |              |                | Negotiable |
| 333102                        |              | 13-SEP-12 | John Hayes  |      | 300.00         |              |                | Negotiable |
| 333103                        |              | 13-SEP-12 | Leslie Bonkowski                                      |      | 236.47         |              |                | Negotiable |
| 333104                        |              | 13-SEP-12 | Steven LaMar  |      | 716.95         |              |                | Negotiable |
| 333105                        |              | 13-SEP-12 | Thomas Bonkowski                                      |      | 27.61          |              |                | Negotiable |
| 333106                        |              | 13-SEP-12 | AARP HEALTH CARE<br>OPTIONS                           |      | 210.92         |              |                | Negotiable |
| 333107                        |              | 13-SEP-12 | ACTION ELECTRIC<br>CORP                               |      | 723.25         |              |                | Negotiable |
| 333108                        |              | 13-SEP-12 | ADS LLC   |      | 1,936.50       |              |                | Negotiable |
| 333109                        |              | 13-SEP-12 | AIRGAS-WEST, INC.                                     |      | 234.64         |              |                | Negotiable |

IRWD Ledger  
 BANK: Bank of America N.A.      Branch : Los Angeles      Payment Register For 01-SEP-12 To 30-SEP-12      Report Date: 02-OCT-2012 08:44  
 Account: Checking AP and PR      Page: 6

Bank Account Currency: USD ( US Dollar )  
Payment Type: All

Payment Currency: USD ( US Dollar )  
Display Supplier Address: No

| Payment Number   | Sequence Num | Date      | Supplier Name                         | Site | Payment Amount              | Cleared Date                 | Cleared Amount | Status     |
|--|--------------|-----------|---------------------------------------|------|-----------------------------|------------------------------|----------------|------------|
| Payment Document : IRWD CHECK  |              |           |                                       |      |                             |                              |                |            |
| 333110   |              | 13-SEP-12 | ANTHEM BLUE CROSS                     |      | 525.96                      |                              |                | Negotiable |
| 333111   |              | 13-SEP-12 | APD CONSULTANTS<br>INC                |      | 4,760.50                    |                              |                | Negotiable |
| 333112   |              | 13-SEP-12 | ARCADIS U.S., INC.                    |      | 4,658.00                    |                              |                | Negotiable |
| 333113   |              | 13-SEP-12 | AT&T                                  |      | 1,782.82                    |                              |                | Negotiable |
| 333114   |              | 13-SEP-12 | ATHENS SERVICES                       |      | 1,983.12                    |                              |                | Negotiable |
| 333115   |              | 13-SEP-12 | BANKS, DANA                           |      | 83.52                       |                              |                | Negotiable |
| 333116   |              | 13-SEP-12 | BDC SPECIAL WASTE                     |      | 200.00                      |                              |                | Negotiable |
| 333117   |              | 13-SEP-12 | BIOMAGIC INC                          |      | 6,055.29                    |                              |                | Negotiable |
| 333118   |              | 13-SEP-12 | BIXBY LAND COMPANY                    |      | 562.88                      |                              |                | Negotiable |
| 333119   |              | 13-SEP-12 | BLENKLE, PATRICK                      |      | 342.73                      |                              |                | Negotiable |
| 333120   |              | 13-SEP-12 | BLOOMBERG FINANCE<br>LP               |      | 16,380.00                   |                              |                | Negotiable |
| 333121   |              | 13-SEP-12 | BORCHARD SURVEYING<br>& MAPPING, INC. |      | 1,910.00                    |                              |                | Negotiable |
| 333122   |              | 13-SEP-12 | BROOKS UTILITY<br>PRODUCTS GROUP      |      | 689.30                      |                              |                | Negotiable |
| 333123   |              | 13-SEP-12 | C WELLS PIPELINE<br>MATERIALS INC     |      | 3,274.53                    |                              |                | Negotiable |
| 333124   |              | 13-SEP-12 | CAL WATER<br>PURIFICATION             |      | 80.00                       |                              |                | Negotiable |
| 333125   |              | 13-SEP-12 | CALIFORNIA BANK &<br>TRUST            |      | 22,487.92                   |                              |                | Negotiable |
| 333126   |              | 13-SEP-12 | CALIFORNIA<br>BARRICADE INC           |      | 8,177.69                    |                              |                | Negotiable |
| 333127   |              | 13-SEP-12 | CANON BUSINESS<br>SOLUTIONS INC       |      | 1,389.97                    |                              |                | Negotiable |
| 333128   |              | 13-SEP-12 | CANON FINANCIAL<br>SERVICES INC       |      | 7,090.20                    |                              |                | Negotiable |
| 333129   |              | 13-SEP-12 | CARL WARREN & CO                      |      | 581.24                      |                              |                | Negotiable |
| 333130   |              | 13-SEP-12 | CDW GOVERNMENT LLC                    |      | 631.67                      |                              |                | Negotiable |
| 333131   |              | 13-SEP-12 | CEDAR CREEK APTS                      |      | 135.66                      |                              |                | Negotiable |
| 333132   |              | 13-SEP-12 | CHARLES BORKMAN<br>CONSULTANTS        |      | 5,200.00                    |                              |                | Negotiable |
| 333133   |              | 13-SEP-12 | CHING, STAN                           |      | 32.07                       |                              |                | Negotiable |
| 333134   |              | 13-SEP-12 | CITY CIRCUIT<br>BREAKERS              |      | 300.20                      |                              |                | Negotiable |
| 333135   |              | 13-SEP-12 | CITY OF IRVINE                        |      | 399.30                      |                              |                | Negotiable |
| 333136   |              | 13-SEP-12 | CITY OF ORANGE                        |      | 26.15                       |                              |                | Negotiable |
| 333137   |              | 13-SEP-12 | CLEAN ENERGY FUELS                    |      | 1,190.25                    |                              |                | Negotiable |
| 333138   |              | 13-SEP-12 | CNC ENGINEERING,<br>INC               |      | 11,302.00                   |                              |                | Negotiable |
| 333139   |              | 13-SEP-12 | COASTAL TRAFFIC<br>SYSTEMS, INC       |      | 510.00                      |                              |                | Negotiable |
| 333140   |              | 13-SEP-12 | COLDWELL BANKER                       |      | 15.00                       |                              |                | Negotiable |
| IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44 |              |           |                                       |      |                             |                              |                |            |
| BANK: Bank of America N.A.   |              |           | Branch : Los Angeles                  |      | Account: Checking AP and PR |                              | Page: 7        |            |
| Bank Account Currency: USD ( US Dollar )   |              |           | Payment Currency: USD ( US Dollar )   |      |                             | Display Supplier Address: No |                |            |
| Payment Type: All  |              |           |                                       |      |                             |                              |                |            |

| Payment Number                | Sequence Num | Date      | Supplier Name  | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |      |                |              |                |            |
| 333141                        |              | 13-SEP-12 | COMMERCIAL<br>CLEANING SYSTEMS<br>INC                |      | 240.00         |              |                | Negotiable |
| 333142                        |              | 13-SEP-12 | CONEYBEARE INC                                       |      | 18,872.68      |              |                | Negotiable |
| 333143                        |              | 13-SEP-12 | CRANE, BOB   |      | 126.91         |              |                | Negotiable |
| 333144                        |              | 13-SEP-12 | DANGELO CO   |      | 2,489.03       |              |                | Negotiable |
| 333145                        |              | 13-SEP-12 | DCSE INC   |      | 2,300.00       |              |                | Negotiable |
| 333146                        |              | 13-SEP-12 | DEE JASPAR &<br>ASSOCIATES, INC.                     |      | 37,519.01      |              |                | Negotiable |
| 333147                        |              | 13-SEP-12 | DRUCK INC, GE<br>SENSING                             |      | 332.10         |              |                | Negotiable |
| 333148                        |              | 13-SEP-12 | ERAGLE GRAPHICS INC                                  |      | 1,767.76       |              |                | Negotiable |
| 333149                        |              | 13-SEP-12 | ELECTRABOND  |      | 450.00         |              |                | Negotiable |
| 333150                        |              | 13-SEP-12 | EMERGENCY POWER<br>CONTROLS INC                      |      | 2,000.00       |              |                | Negotiable |
| 333151                        |              | 13-SEP-12 | EMPLOYEE BENEFIT<br>SPECIALIST, INC                  |      | 670.00         |              |                | Negotiable |
| 333152                        |              | 13-SEP-12 | ENVIRONMENTAL<br>EXPRESS INC                         |      | 3,119.55       |              |                | Negotiable |
| 333153                        |              | 13-SEP-12 | FARRELL &<br>ASSOCIATES                              |      | 186.66         |              |                | Negotiable |
| 333154                        |              | 13-SEP-12 | FEDEX  |      | 343.80         |              |                | Negotiable |
| 333155                        |              | 13-SEP-12 | FIRST CHOICE<br>SERVICES                             |      | 259.24         |              |                | Negotiable |
| 333156                        |              | 13-SEP-12 | FIRST HEALTH LIFE<br>AND HEALTH<br>INSURANCE COMPANY |      | 38.70          |              |                | Negotiable |
| 333157                        |              | 13-SEP-12 | FISHER SCIENTIFIC<br>COMPANY LLC                     |      | 1,024.52       |              |                | Negotiable |
| 333158                        |              | 13-SEP-12 | FIVE POINT   |      | 32,461.26      |              |                | Negotiable |

|        |           |                   |  |  |           |  |            |
|--------|-----------|-------------------|--|--|-----------|--|------------|
| 333159 | 13-SEP-12 | PARTNERS LLC      |  |  | 77,430.37 |  | Negotiable |
| 333160 | 13-SEP-12 | FLATIRON WEST INC |  |  | 8,007.20  |  | Negotiable |
|        |           | FORTIS RESOURCE   |  |  |           |  |            |
|        |           | PARTNERS INC      |  |  |           |  |            |
| 333161 | 13-SEP-12 | FRANK LA PLACA    |  |  | 175.00    |  | Negotiable |
|        |           | EXTERMINATING INC |  |  |           |  |            |
| 333162 | 13-SEP-12 | GATEWAY PACIFIC   |  |  | 95,490.00 |  | Negotiable |
|        |           | CONTRACTORS, INC. |  |  |           |  |            |
| 333163 | 13-SEP-12 | GATEWAY PACIFIC   |  |  | 28,915.84 |  | Negotiable |
|        |           | CONTRACTORS, INC. |  |  |           |  |            |
| 333164 | 13-SEP-12 | GCI CONSTRUCTION, |  |  | 6,428.98  |  | Negotiable |
|        |           | INC.              |  |  |           |  |            |
| 333165 | 13-SEP-12 | GOLDEN BELL       |  |  | 9,730.50  |  | Negotiable |
|        |           | PRODUCTS          |  |  |           |  |            |
| 333166 | 13-SEP-12 | GOOGLE INC.       |  |  | 1,014.60  |  | Negotiable |
| 333167 | 13-SEP-12 | GRAINGER          |  |  | 32.63     |  | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 8  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name      | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--------------------|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |                    |      |                |              |                |            |
| 333168                        |              | 13-SEP-12 | GRAPHIC CONTROLS   |      | 421.79         |              |                | Negotiable |
|                               |              |           | LLC                |      |                |              |                |            |
| 333169                        |              | 13-SEP-12 | HARPER &           |      | 718.75         |              |                | Negotiable |
|                               |              |           | ASSOCIATES         |      |                |              |                |            |
|                               |              |           | ENGINEERING INC    |      |                |              |                |            |
| 333170                        |              | 13-SEP-12 | HARRINGTON         |      | 2,323.45       |              |                | Negotiable |
|                               |              |           | INDUSTRIAL         |      |                |              |                |            |
|                               |              |           | PLASTICS LLC       |      |                |              |                |            |
| 333171                        |              | 13-SEP-12 | HASLER             |      | 58.28          |              |                | Negotiable |
| 333172                        |              | 13-SEP-12 | HDR ENGINEERING    |      | 121,145.45     |              |                | Negotiable |
|                               |              |           | INC                |      |                |              |                |            |
| 333173                        |              | 13-SEP-12 | HEARTLAND BUSINESS |      | 160.88         |              |                | Negotiable |
|                               |              |           | CREDIT CORPORATION |      |                |              |                |            |
| 333174                        |              | 13-SEP-12 | HILL BROTHERS      |      | 17,954.25      |              |                | Negotiable |
|                               |              |           | CHEMICAL COMPANY   |      |                |              |                |            |
| 333175                        |              | 13-SEP-12 | HOME DEPOT USA INC |      | 230.49         |              |                | Negotiable |
| 333176                        |              | 13-SEP-12 | HUMANA INSURANCE   |      | 20.90          |              |                | Negotiable |
|                               |              |           | COMPANY            |      |                |              |                |            |
| 333177                        |              | 13-SEP-12 | II FUELS INC       |      | 31,314.25      |              |                | Negotiable |
| 333178                        |              | 13-SEP-12 | INDUSTRIAL METAL   |      | 119.81         |              |                | Negotiable |
|                               |              |           | SUPPLY CO          |      |                |              |                |            |
| 333179                        |              | 13-SEP-12 | IRVINE PIPE &      |      | 3,606.73       |              |                | Negotiable |
|                               |              |           | SUPPLY INC         |      |                |              |                |            |
| 333180                        |              | 13-SEP-12 | JCI JONES          |      | 7,810.24       |              |                | Negotiable |
|                               |              |           | CHEMICALS INC      |      |                |              |                |            |
| 333181                        |              | 13-SEP-12 | JOHN MICHAEL COVAS |      | 99.90          |              |                | Negotiable |
| 333182                        |              | 13-SEP-12 | KELLY SERVICES INC |      | 1,532.16       |              |                | Negotiable |
| 333183                        |              | 13-SEP-12 | KILL-N-BUGS        |      | 1,650.00       |              |                | Negotiable |
|                               |              |           | TERMITE AND PEST   |      |                |              |                |            |
|                               |              |           | CONTROL SERVICES   |      |                |              |                |            |
| 333184                        |              | 13-SEP-12 | KPRS CONSTRUCTION  |      | 58,132.48      |              |                | Negotiable |
|                               |              |           | SERVICES, INC      |      |                |              |                |            |
| 333185                        |              | 13-SEP-12 | LAKE FOREST COMM   |      | 2,032.52       |              |                | Negotiable |
|                               |              |           | ASSN               |      |                |              |                |            |
| 333186                        |              | 13-SEP-12 | LCS TECHNOLOGIES,  |      | 6,187.50       |              |                | Negotiable |
|                               |              |           | INC.               |      |                |              |                |            |
| 333187                        |              | 13-SEP-12 | LEATHERWOOD        |      | 394,543.60     |              |                | Negotiable |
|                               |              |           | CONSTRUCTION INC   |      |                |              |                |            |
| 333188                        |              | 13-SEP-12 | LEATHERWOOD        |      | 14,604.80      |              |                | Negotiable |
|                               |              |           | CONSTRUCTION INC   |      |                |              |                |            |
| 333189                        |              | 13-SEP-12 | LEE, CINDY         |      | 26.95          |              |                | Negotiable |
| 333190                        |              | 13-SEP-12 | LIGHTING RESOURCES |      | 2,587.45       |              |                | Negotiable |
|                               |              |           | LLC                |      |                |              |                |            |
| 333191                        |              | 13-SEP-12 | LOCHRIDGE, DAVID   |      | 7,440.00       |              |                | Negotiable |
| 333192                        |              | 13-SEP-12 | MALCOLM PIRNIE INC |      | 906.77         |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 9  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name      | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--------------------|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |                    |      |                |              |                |            |
| 333193                        |              | 13-SEP-12 | MARSH RISK &       |      | 282,765.00     |              |                | Negotiable |
|                               |              |           | INSURANCE SVCS     |      |                |              |                |            |
| 333194                        |              | 13-SEP-12 | MARVIN GARDENS LLC |      | 263.99         |              |                | Negotiable |
| 333195                        |              | 13-SEP-12 | MC MASTER CARR     |      | 467.81         |              |                | Negotiable |
|                               |              |           | SUPPLY CO          |      |                |              |                |            |
| 333196                        |              | 13-SEP-12 | MCBAIN INSTRUMENTS |      | 595.00         |              |                | Negotiable |
| 333197                        |              | 13-SEP-12 | MIKE, MIKE         |      | 129.21         |              |                | Negotiable |
| 333198                        |              | 13-SEP-12 | MISCOWATER         |      | 304.53         |              |                | Negotiable |
| 333199                        |              | 13-SEP-12 | MOBILE MODULAR     |      | 2,217.50       |              |                | Negotiable |
|                               |              |           | MANAGEMENT         |      |                |              |                |            |
|                               |              |           | CORPORATION        |      |                |              |                |            |
| 333200                        |              | 13-SEP-12 | MUTUAL PROPANE     |      | 27.00          |              |                | Negotiable |

|        |           |   |           |            |
|--------|-----------|---|-----------|------------|
| 333201 | 13-SEP-12 | NATIONAL READY MIXED CONCRETE CO            | 2,571.43  | Negotiable |
| 333202 | 13-SEP-12 | NATURES IMAGE INC                           | 997.21    | Negotiable |
| 333203 | 13-SEP-12 | NMG GEOTECHNICAL INC                        | 7,100.20  | Negotiable |
| 333204 | 13-SEP-12 | O'HAREN GOVERNMENT RELATIONS                | 6,500.00  | Negotiable |
| 333205 | 13-SEP-12 | OLIN CORPORATION                            | 10,149.50 | Negotiable |
| 333206 | 13-SEP-12 | OLSON HAGEL FISHBURN, LLP                   | 297.50    | Negotiable |
| 333207 | 13-SEP-12 | ONE PELICAN HILL ROAD NORTH                 | 468.63    | Negotiable |
| 333208 | 13-SEP-12 | ORANGE COUNTY WATER DISTRICT                | 7,231.48  | Negotiable |
| 333209 | 13-SEP-12 | ORANGE, COUNTY OF                           | 2,995.00  | Negotiable |
| 333210 | 13-SEP-12 | PACIFIC TECHNOLOGIES INC                    | 9,092.54  | Negotiable |
| 333211 | 13-SEP-12 | PAPER DEPOT DOCUMENT DESTRUCTION LLC        | 708.00    | Negotiable |
| 333212 | 13-SEP-12 | PASCAL & LUDWIG CONSTRUCTORS                | 11,102.90 | Negotiable |
| 333213 | 13-SEP-12 | PAUL E BRADLEY INC                          | 517.50    | Negotiable |
| 333214 | 13-SEP-12 | PAYNE & FEARS LLP                           | 11,801.00 | Negotiable |
| 333215 | 13-SEP-12 | PEARPOINT                                   | 1,021.69  | Negotiable |
| 333216 | 13-SEP-12 | PORTOLA PLACE APTS                          | 176.08    | Negotiable |
| 333217 | 13-SEP-12 | PRAXAIR DISTRIBUTION INC                    | 342.47    | Negotiable |
| 333218 | 13-SEP-12 | PROVOST & PRITCHARD ENGINEERING GROUP, INC. | 4,414.00  | Negotiable |
| 333219 | 13-SEP-12 | PSOMAS                                      | 15,551.44 | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 10  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                    | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |      |                |              |                |            |
| 333220                        |              | 13-SEP-12 | RAM AIR ENGINEERING INC                          |      | 4,532.34       |              |                | Negotiable |
| 333221                        |              | 13-SEP-12 | REED, JAMES D                                    |      | 1,952.89       |              |                | Negotiable |
| 333222                        |              | 13-SEP-12 | REED, MARCUS                                     |      | 43.61          |              |                | Negotiable |
| 333223                        |              | 13-SEP-12 | REFRIGERATION SUPPLIES                           |      | 3,253.83       |              |                | Negotiable |
| 333224                        |              | 13-SEP-12 | RINGCLEAR LLC                                    |      | 72.24          |              |                | Negotiable |
| 333225                        |              | 13-SEP-12 | RUNYON, JOSHUA                                   |      | 45.68          |              |                | Negotiable |
| 333226                        |              | 13-SEP-12 | SANDERS PAVING INC                               |      | 156,045.00     |              |                | Negotiable |
| 333227                        |              | 13-SEP-12 | SANTA ANA BLUE PRINT                             |      | 681.12         |              |                | Negotiable |
| 333228                        |              | 13-SEP-12 | SANTA ANA CITY OF                                |      | 19,760.37      |              |                | Negotiable |
| 333229                        |              | 13-SEP-12 | SANTIAGO AQUEDUCT COMMISSION                     |      | 44,044.49      |              |                | Negotiable |
| 333230                        |              | 13-SEP-12 | SCIENTIFIC REFRIGERATION                         |      | 538.75         |              |                | Negotiable |
| 333231                        |              | 13-SEP-12 | SHAMROCK SUPPLY CO INC                           |      | 613.91         |              |                | Negotiable |
| 333232                        |              | 13-SEP-12 | SIGMA-ALDRICH INC                                |      | 354.23         |              |                | Negotiable |
| 333233                        |              | 13-SEP-12 | SIMI VALLEY LANDFILL AND RECYCLING CENTER        |      | 1,204.80       |              |                | Negotiable |
| 333234                        |              | 13-SEP-12 | SOUTH COAST ANSWERING SERVICE                    |      | 618.09         |              |                | Negotiable |
| 333235                        |              | 13-SEP-12 | SOUTH COAST WATER CO.                            |      | 40.00          |              |                | Negotiable |
| 333236                        |              | 13-SEP-12 | SOUTH COAST WATER CO.                            |      | 151.66         |              |                | Negotiable |
| 333237                        |              | 13-SEP-12 | SOUTHERN CALIFORNIA EDISON COMPANY               |      | 39,088.08      |              |                | Negotiable |
| 333238                        |              | 13-SEP-12 | SOUTHERN COUNTIES LUBRICANTS LLC                 |      | 1,468.69       |              |                | Negotiable |
| 333239                        |              | 13-SEP-12 | STROJNY, DAN                                     |      | 29.10          |              |                | Negotiable |
| 333240                        |              | 13-SEP-12 | TEKRAULICS                                       |      | 43,418.19      |              |                | Negotiable |
| 333241                        |              | 13-SEP-12 | TEWARI, PIYUSH                                   |      | 30.47          |              |                | Negotiable |
| 333242                        |              | 13-SEP-12 | THE GAS COMPANY                                  |      | 867.11         |              |                | Negotiable |
| 333243                        |              | 13-SEP-12 | TROPICAL PLAZA NURSERY INC                       |      | 42,303.59      |              |                | Negotiable |
| 333244                        |              | 13-SEP-12 | TRUCPARCO  |      | 254.56         |              |                | Negotiable |
| 333245                        |              | 13-SEP-12 | TSAO, MICHAEL                                    |      | 921.92         |              |                | Voided     |
| 333246                        |              | 13-SEP-12 | UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA |      | 793.50         |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 11  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                          | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |      |                |              |                |            |
| 333247                        |              | 13-SEP-12 | UNITED PARCEL SERVICE INC              |      | 20.00          |              |                | Negotiable |
| 333248                        |              | 13-SEP-12 | US BANK NAT'L ASSOCIATION NORTH DAKOTA |      | 77,686.31      |              |                | Negotiable |
| 333249                        |              | 13-SEP-12 | US PEROXIDE LLC                        |      | 19,251.79      |              |                | Negotiable |
| 333250                        |              | 13-SEP-12 | USA BLUEBOOK                           |      | 180.03         |              |                | Negotiable |
| 333251                        |              | 13-SEP-12 | VWR INTERNATIONAL, LLC                 |      | 244.81         |              |                | Negotiable |
| 333252                        |              | 13-SEP-12 | W DESIGN ASSOCIATES INC                |      | 1,050.00       |              |                | Negotiable |
| 333253                        |              | 13-SEP-12 | WASTE MANAGEMENT OF ORANGE COUNTY      |      | 3,591.57       |              |                | Negotiable |
| 333254                        |              | 13-SEP-12 | WATER ENVIRONMENT FEDERATION           |      | 220.00         |              |                | Negotiable |
| 333255                        |              | 13-SEP-12 | WAXIE'S ENTERPRISES, INC               |      | 694.02         |              |                | Negotiable |
| 333256                        |              | 13-SEP-12 | WECK LABORATORIES INC                  |      | 4,100.00       |              |                | Negotiable |
| 333257                        |              | 13-SEP-12 | WEST COAST SAND & GRAVEL INC.          |      | 964.73         |              |                | Negotiable |
| 333258                        |              | 13-SEP-12 | WINWOOD GLEN APTS                      |      | 29.29          |              |                | Negotiable |
| 333259                        |              | 13-SEP-12 | WIRELESS WATCHDOGS LLC                 |      | 1,028.00       |              |                | Negotiable |
| 333260                        |              | 13-SEP-12 | ZEE MEDICAL SERVICE CO                 |      | 598.37         |              |                | Negotiable |
| 333261                        |              | 13-SEP-12 | FEDEX                                  |      | 159.55         |              |                | Negotiable |
| 333262                        |              | 13-SEP-12 | KPRS CONSTRUCTION SERVICES, INC        |      | 134,671.09     |              |                | Negotiable |
| 333263                        |              | 13-SEP-12 | ORANGE COUNTY VECTOR CONTROL DISTRICT  |      | 1,602.45       |              |                | Negotiable |
| 333264                        |              | 13-SEP-12 | PASCAL & LUDWIG CONSTRUCTORS           |      | 508,444.87     |              |                | Negotiable |
| 333265                        |              | 13-SEP-12 | PAULUS ENGINEERING INC                 |      | 33,097.50      |              |                | Negotiable |
| 333266                        |              | 13-SEP-12 | WALTERS WHOLESALE ELECTRIC             |      | 3,539.44       |              |                | Negotiable |
| 333267                        |              | 20-SEP-12 | Eric Akiyoshi                          |      | 20.98          |              |                | Negotiable |
| 333268                        |              | 20-SEP-12 | Jesus Perez                            |      | 170.00         |              |                | Negotiable |
| 333269                        |              | 20-SEP-12 | Roberta Sitzler                        |      | 34.57          |              |                | Negotiable |
| 333270                        |              | 20-SEP-12 | Zackariah Tegel                        |      | 287.00         |              |                | Negotiable |
| 333271                        |              | 20-SEP-12 | A D WILSON INC                         |      | 757.89         |              |                | Negotiable |
| 333272                        |              | 20-SEP-12 | ABDOLLAHI, SARVAD                      |      | 30.20          |              |                | Negotiable |
| 333273                        |              | 20-SEP-12 | ACTION ELECTRIC CORP                   |      | 488.07         |              |                | Negotiable |

## IRWD Ledger

BANK: Bank of America N.A.  
 Bank Account Currency: USD ( US Dollar )  
 Payment Type: All

Branch : Los Angeles

Payment Register For 01-SEP-12 To 30-SEP-12

Account: Checking AP and PR  
 Payment Currency: USD ( US Dollar )

Report Date: 02-OCT-2012 08:44

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Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                       | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|-------------------------------------|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |                                     |      |                |              |                |            |
| 333274                        |              | 20-SEP-12 | AIRGAS-WEST, INC.                   |      | 291.36         |              |                | Negotiable |
| 333275                        |              | 20-SEP-12 | ASHFORD, WALT                       |      | 955.71         |              |                | Negotiable |
| 333276                        |              | 20-SEP-12 | AT&T                                |      | 1,995.42       |              |                | Negotiable |
| 333277                        |              | 20-SEP-12 | AT&T                                |      | 9,080.55       |              |                | Negotiable |
| 333278                        |              | 20-SEP-12 | AVISTA TECHNOLOGIES, INC            |      | 1,450.70       |              |                | Negotiable |
| 333279                        |              | 20-SEP-12 | BIOMAGIC INC                        |      | 12,695.35      |              |                | Negotiable |
| 333280                        |              | 20-SEP-12 | BORCHARD SURVEYING & MAPPING, INC.  |      | 2,525.50       |              |                | Negotiable |
| 333281                        |              | 20-SEP-12 | BOTTOM LINE UTILITY SOLUTIONS, INC. |      | 69,189.41      |              |                | Negotiable |
| 333282                        |              | 20-SEP-12 | BRENNTAG PACIFIC INC                |      | 15,128.10      |              |                | Negotiable |
| 333283                        |              | 20-SEP-12 | BRITHINEE ELECTRIC                  |      | 1,366.20       |              |                | Negotiable |
| 333284                        |              | 20-SEP-12 | BROOKFIELD HOMES                    |      | 52.94          |              |                | Negotiable |
| 333285                        |              | 20-SEP-12 | BUTIER ENGINEERING INC              |      | 21,716.00      |              |                | Negotiable |
| 333286                        |              | 20-SEP-12 | C WELLS PIPELINE MATERIALS INC      |      | 27,305.24      |              |                | Negotiable |
| 333287                        |              | 20-SEP-12 | CALIFORNIA BANK AND TRUST           |      | 86.64          |              |                | Negotiable |
| 333288                        |              | 20-SEP-12 | CALIFORNIA BARRICADE INC            |      | 4.06           |              |                | Negotiable |
| 333289                        |              | 20-SEP-12 | CHEN, SOPHIA                        |      | 36.98          |              |                | Negotiable |
| 333290                        |              | 20-SEP-12 | CHEUNG, ANDREW                      |      | 30.82          |              |                | Negotiable |
| 333291                        |              | 20-SEP-12 | CHIA, KAREN                         |      | 28.38          |              |                | Negotiable |
| 333292                        |              | 20-SEP-12 | CITY OF ORANGE                      |      | 349.45         |              |                | Negotiable |
| 333293                        |              | 20-SEP-12 | CITY OF TUSTIN                      |      | 207,340.00     |              |                | Negotiable |
| 333294                        |              | 20-SEP-12 | CLEARINGHOUSE                       |      | 528.45         |              |                | Negotiable |
| 333295                        |              | 20-SEP-12 | COAST PLUMBING HEATING AND AIR, INC |      | 317.80         |              |                | Negotiable |

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|        |           |                                |  |           |  |            |
|--------|-----------|--------------------------------|--|-----------|--|------------|
| 333296 | 20-SEP-12 | COMMERCE ENERGY INC            |  | 379.79    |  | Negotiable |
| 333297 | 20-SEP-12 | COMMERCIAL ROOFING SYSTEMS INC |  | 67,002.00 |  | Negotiable |
| 333298 | 20-SEP-12 | CONEYBEARE INC                 |  | 8,550.10  |  | Negotiable |
| 333299 | 20-SEP-12 | CONTROLLED KEY SYSTEMS INC     |  | 92.00     |  | Negotiable |
| 333300 | 20-SEP-12 | CORRPRO COMPANIES INC          |  | 72,800.00 |  | Negotiable |
| 333301 | 20-SEP-12 | COVENEY, ROBERT                |  | 34.18     |  | Negotiable |
| 333302 | 20-SEP-12 | CR & R INCORPORATED            |  | 12.20     |  | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 13  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                   | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 333303                        |              | 20-SEP-12 | CREDENTIAL CHECK CORPORATION                    |      | 383.49         |              |                | Negotiable |
| 333304                        |              | 20-SEP-12 | CUMMINS CAL PACIFIC LLC                         |      | 28,946.28      |              |                | Negotiable |
| 333305                        |              | 20-SEP-12 | D & G SIGNS                                     |      | 337.13         |              |                | Negotiable |
| 333306                        |              | 20-SEP-12 | DIRECTV INC                                     |      | 89.99          |              |                | Negotiable |
| 333307                        |              | 20-SEP-12 | DISCOVERY SCIENCE CENTER                        |      | 31,752.00      |              |                | Negotiable |
| 333308                        |              | 20-SEP-12 | EI&C ENGINEERING INC                            |      | 17,480.00      |              |                | Negotiable |
| 333309                        |              | 20-SEP-12 | EMPLOYMENT DEVELOPMENT DEPARTMENT               |      | 10,716.00      |              |                | Negotiable |
| 333310                        |              | 20-SEP-12 | ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC. |      | 9,518.35       |              |                | Negotiable |
| 333311                        |              | 20-SEP-12 | ESA PWA   |      | 20,127.26      |              |                | Negotiable |
| 333312                        |              | 20-SEP-12 | FARRELL & ASSOCIATES                            |      | 293.08         |              |                | Negotiable |
| 333313                        |              | 20-SEP-12 | FEDEX   |      | 250.75         |              |                | Negotiable |
| 333314                        |              | 20-SEP-12 | FERGUSON WATERWORKS                             |      | 15,963.18      |              |                | Negotiable |
| 333315                        |              | 20-SEP-12 | FERGUSON, DAVID                                 |      | 3,819.92       |              |                | Negotiable |
| 333316                        |              | 20-SEP-12 | FISERV  |      | 617.75         |              |                | Negotiable |
| 333317                        |              | 20-SEP-12 | FISHER SCIENTIFIC COMPANY LLC                   |      | 937.94         |              |                | Negotiable |
| 333318                        |              | 20-SEP-12 | FLEET SOLUTIONS LLC                             |      | 3,992.00       |              |                | Negotiable |
| 333319                        |              | 20-SEP-12 | FLEMING TRAILERS, INC                           |      | 2,595.25       |              |                | Negotiable |
| 333320                        |              | 20-SEP-12 | FORTIS RESOURCE PARTNERS INC                    |      | 7,424.00       |              |                | Negotiable |
| 333321                        |              | 20-SEP-12 | FOX, JOANN                                      |      | 483.43         |              |                | Negotiable |
| 333322                        |              | 20-SEP-12 | FRANCHISE TAX BOARD                             |      | 350.00         |              |                | Negotiable |
| 333323                        |              | 20-SEP-12 | GIBSON, FRANK                                   |      | 25.65          |              |                | Negotiable |
| 333324                        |              | 20-SEP-12 | GRAINGER  |      | 1,426.69       |              |                | Negotiable |
| 333325                        |              | 20-SEP-12 | GRAY, JACQUELINE W                              |      | 2,329.89       |              |                | Negotiable |
| 333326                        |              | 20-SEP-12 | GRAYBAR ELECTRIC COMPANY                        |      | 8,111.03       |              |                | Negotiable |
| 333327                        |              | 20-SEP-12 | GREEN, MONICA                                   |      | 28.69          |              |                | Negotiable |
| 333328                        |              | 20-SEP-12 | GRUBB, ROYAL                                    |      | 95.47          |              |                | Negotiable |
| 333329                        |              | 20-SEP-12 | HACH COMPANY                                    |      | 277.93         |              |                | Negotiable |
| 333330                        |              | 20-SEP-12 | HARDY & HARPER INC                              |      | 350.00         |              |                | Negotiable |
| 333331                        |              | 20-SEP-12 | HARMSWORTH ASSOCIATES                           |      | 6,540.00       |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 14  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                            | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |      |                |              |                |            |
| 333332                        |              | 20-SEP-12 | HOME DEPOT USA INC                       |      | 821.68         |              |                | Negotiable |
| 333333                        |              | 20-SEP-12 | HUNSAKER & ASSOCIATES IRVINE             |      | 6,548.00       |              |                | Negotiable |
| 333334                        |              | 20-SEP-12 | II FUELS INC                             |      | 31,953.89      |              |                | Negotiable |
| 333335                        |              | 20-SEP-12 | IMAGE OPTIONS, INC                       |      | 54.40          |              |                | Negotiable |
| 333336                        |              | 20-SEP-12 | INDUSTRIAL METAL SUPPLY CO               |      | 21.12          |              |                | Negotiable |
| 333337                        |              | 20-SEP-12 | INTERNAL REVENUE SERVICE                 |      | 25.00          |              |                | Negotiable |
| 333338                        |              | 20-SEP-12 | INTERNAL REVENUE SERVICE                 |      | 1,376.93       |              |                | Negotiable |
| 333339                        |              | 20-SEP-12 | IRON MOUNTAIN INFORMATION MANAGEMENT INC |      | 1,733.62       |              |                | Negotiable |
| 333340                        |              | 20-SEP-12 | IRVINE COMMUNITY                         |      | 595.59         |              |                | Negotiable |

| Payment Number | Sequence Num | Date      | Supplier Name   | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|----------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| 333341         |              | 20-SEP-12 | DEVELOPMENT<br>IRVINE COMMUNITY<br>DEVELOPMENT<br>COMPANY |      | 9,395.00       |              |                | Negotiable |
| 333342         |              | 20-SEP-12 | IRVINE PACIFIC, LP  |      | 155.33         |              |                | Negotiable |
| 333343         |              | 20-SEP-12 | IRWD-PETTY CASH<br>CUSTODIAN                              |      | 1,036.23       |              |                | Negotiable |
| 333344         |              | 20-SEP-12 | JENNY CRAIG WLC<br>INC.                                   |      | 565.68         |              |                | Negotiable |
| 333345         |              | 20-SEP-12 | JMG SECURITY<br>SYSTEMS INC                               |      | 2,375.00       |              |                | Negotiable |
| 333346         |              | 20-SEP-12 | JOHN G. ALEVIZOS<br>D.O. INC.                             |      | 1,351.44       |              |                | Negotiable |
| 333347         |              | 20-SEP-12 | JOHNSON BROTHERS<br>VENTURES                              |      | 866.29         |              |                | Negotiable |
| 333348         |              | 20-SEP-12 | JWC ENVIRONMENTAL   |      | 1,807.86       |              |                | Negotiable |
| 333349         |              | 20-SEP-12 | KEVIN P. KELLEY   |      | 749.75         |              |                | Negotiable |
| 333350         |              | 20-SEP-12 | KILL-N-BUGS<br>TERMITE AND PEST<br>CONTROL SERVICES       |      | 3,600.00       |              |                | Negotiable |
| 333351         |              | 20-SEP-12 | KIM, HYAEKWANG  |      | 197.83         |              |                | Negotiable |
| 333352         |              | 20-SEP-12 | KOREA HOUSE BBQ   |      | 2,773.96       |              |                | Negotiable |
| 333353         |              | 20-SEP-12 | KPRS CONSTRUCTION<br>SERVICES, INC                        |      | 3,253.46       |              |                | Negotiable |
| 333354         |              | 20-SEP-12 | KRAEMER, ROY /<br>NOYA                                    |      | 64.88          |              |                | Negotiable |
| 333355         |              | 20-SEP-12 | LEE & SAKAHARA<br>ARCHITECTS, INC                         |      | 693.29         |              |                | Negotiable |
| 333356         |              | 20-SEP-12 | LUNDBECK, RICHARD   |      | 33.43          |              |                | Negotiable |
| 333357         |              | 20-SEP-12 | M R HARRISON  |      | 186.97         |              |                | Negotiable |
| 333358         |              | 20-SEP-12 | Martha Ramos  |      | 1,672.14       |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 15  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                   | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 333359                        |              | 20-SEP-12 | MARTINEZ DE MUNOZ,<br>LINA                      |      | 51.85          |              |                | Negotiable |
| 333360                        |              | 20-SEP-12 | MC MASTER CARR<br>SUPPLY CO                     |      | 609.32         |              |                | Negotiable |
| 333361                        |              | 20-SEP-12 | MERCHANTS<br>LANDSCAPE SERVICES<br>INC          |      | 7,280.00       |              |                | Negotiable |
| 333362                        |              | 20-SEP-12 | MOHAMADI, FARROKH                               |      | 503.54         |              |                | Negotiable |
| 333363                        |              | 20-SEP-12 | MOODY'S INVESTORS<br>SERVICE INC                |      | 9,000.00       |              |                | Negotiable |
| 333364                        |              | 20-SEP-12 | MOODY, JARED                                    |      | 25.19          |              |                | Negotiable |
| 333365                        |              | 20-SEP-12 | MORGAN, CLYDE                                   |      | 40.61          |              |                | Negotiable |
| 333366                        |              | 20-SEP-12 | MORI, DAVID                                     |      | 180.06         |              |                | Negotiable |
| 333367                        |              | 20-SEP-12 | MUNICIPAL WATER<br>DISTRICT OF ORANGE<br>COUNTY |      | 26,800.00      |              |                | Negotiable |
| 333368                        |              | 20-SEP-12 | MUTUAL PROPANE                                  |      | 76.00          |              |                | Negotiable |
| 333369                        |              | 20-SEP-12 | NEJEDLY, BRIAN                                  |      | 25.65          |              |                | Negotiable |
| 333370                        |              | 20-SEP-12 | NEWPORT BEACH,<br>CITY OF                       |      | 271.25         |              |                | Negotiable |
| 333371                        |              | 20-SEP-12 | NEWPORT<br>ELECTRONICS INC                      |      | 965.64         |              |                | Negotiable |
| 333372                        |              | 20-SEP-12 | NINYO & MOORE                                   |      | 691.00         |              |                | Negotiable |
| 333373                        |              | 20-SEP-12 | NWRI  |      | 50,000.00      |              |                | Negotiable |
| 333374                        |              | 20-SEP-12 | OCTA  |      | 5,142.00       |              |                | Negotiable |
| 333375                        |              | 20-SEP-12 | OLIN CORPORATION                                |      | 37,847.11      |              |                | Negotiable |
| 333376                        |              | 20-SEP-12 | ON ASSIGNMENT LAB<br>SUPPORT                    |      | 746.88         |              |                | Negotiable |
| 333377                        |              | 20-SEP-12 | ORANGE COUNTY FIRE<br>PROTECTION                |      | 165.00         |              |                | Negotiable |
| 333378                        |              | 20-SEP-12 | ORANGE COUNTY<br>SANITATION<br>DISTRICT         |      | 12,743.50      |              |                | Negotiable |
| 333379                        |              | 20-SEP-12 | ORANGE COUNTY<br>SHERIFF'S OFFICE               |      | 930.73         |              |                | Negotiable |
| 333380                        |              | 20-SEP-12 | ORANGE COUNTY<br>TREASURER                      |      | 272.00         |              |                | Negotiable |
| 333381                        |              | 20-SEP-12 | PACIFIC GAS AND<br>ELECTRIC COMPANY             |      | 869.78         |              |                | Negotiable |
| 333382                        |              | 20-SEP-12 | PACIFIC MOON REAL<br>ESTATE                     |      | 34.08          |              |                | Negotiable |
| 333383                        |              | 20-SEP-12 | PALOS, CINDY                                    |      | 92.56          |              |                | Negotiable |
| 333384                        |              | 20-SEP-12 | PAULUS ENGINEERING<br>INC                       |      | 167,517.23     |              |                | Negotiable |
| 333385                        |              | 20-SEP-12 | PERS LONG TERM<br>CARE                          |      | 1,178.47       |              |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 16  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

Cleared

D-9

| Payment Number                | Sequence Num | Date      | Supplier Name                             | Site | Payment Amount | Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |      |                |            |
| 333386                        |              | 20-SEP-12 | PINNACLE LANDSCAPE COMPANY                |      | 202.21         |      |                | Negotiable |
| 333387                        |              | 20-SEP-12 | PINNACLE TOWERS LLC                       |      | 569.34         |      |                | Negotiable |
| 333388                        |              | 20-SEP-12 | POST COMPANY                              |      | 129.00         |      |                | Negotiable |
| 333389                        |              | 20-SEP-12 | POWERTECH GROUP INC, THE                  |      | 1,949.00       |      |                | Negotiable |
| 333390                        |              | 20-SEP-12 | PRAXAIR DISTRIBUTION INC                  |      | 2,492.08       |      |                | Negotiable |
| 333391                        |              | 20-SEP-12 | PRINCIPAL LIFE INSURANCE                  |      | 23,285.00      |      |                | Negotiable |
| 333392                        |              | 20-SEP-12 | RBF CONSULTING                            |      | 742.85         |      |                | Negotiable |
| 333393                        |              | 20-SEP-12 | REACH EMPLOYEE ASSISTANCE INC             |      | 741.00         |      |                | Negotiable |
| 333394                        |              | 20-SEP-12 | RESPONSE ENVELOPE, INC                    |      | 3,541.20       |      |                | Negotiable |
| 333395                        |              | 20-SEP-12 | REYES CONSTRUCTION INC                    |      | 766.31         |      |                | Negotiable |
| 333396                        |              | 20-SEP-12 | RIDGE LANDSCAPE ARCHITECTS                |      | 48.49          |      |                | Negotiable |
| 333397                        |              | 20-SEP-12 | SANTA ANA CITY OF                         |      | 49.73          |      |                | Negotiable |
| 333398                        |              | 20-SEP-12 | SAPETTO GROUP INC                         |      | 7,742.50       |      |                | Negotiable |
| 333399                        |              | 20-SEP-12 | SECURTEC DISTRICT PATROL INC              |      | 3,700.00       |      |                | Negotiable |
| 333400                        |              | 20-SEP-12 | SEMA CONSTRUCTION INC                     |      | 643.83         |      |                | Negotiable |
| 333401                        |              | 20-SEP-12 | SHAMROCK SUPPLY CO INC                    |      | 2,138.08       |      |                | Negotiable |
| 333402                        |              | 20-SEP-12 | SMITH, RYAN                               |      | 36.13          |      |                | Negotiable |
| 333403                        |              | 20-SEP-12 | SOUTHERN CALIFORNIA EDISON COMPANY        |      | 197,303.59     |      |                | Negotiable |
| 333404                        |              | 20-SEP-12 | SOUTHERN CALIFORNIA SECURITY CENTER, INC. |      | 130.28         |      |                | Negotiable |
| 333405                        |              | 20-SEP-12 | SUNG, WILLIAM                             |      | 38.03          |      |                | Negotiable |
| 333406                        |              | 20-SEP-12 | TAYLOR MORRISON                           |      | 19.05          |      |                | Negotiable |
| 333407                        |              | 20-SEP-12 | TAYLOR WOODROW HOMES                      |      | 26.56          |      |                | Negotiable |
| 333408                        |              | 20-SEP-12 | TELEDYNE LEEMAN LABS                      |      | 163.53         |      |                | Negotiable |
| 333409                        |              | 20-SEP-12 | TETRA TECH, INC                           |      | 15,262.89      |      |                | Negotiable |
| 333410                        |              | 20-SEP-12 | THE GAS COMPANY                           |      | 775.59         |      |                | Negotiable |
| 333411                        |              | 20-SEP-12 | TROPICAL PLAZA NURSERY INC                |      | 3,696.00       |      |                | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 17  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                     | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 333412                        |              | 20-SEP-12 | TRUGREEN LANDCARE LLC                             |      | 720.00         |              |                | Negotiable |
| 333413                        |              | 20-SEP-12 | TUSTIN UNIFIED SCHOOL DISTRICT MAINT & OPERATIONS |      | 12,129.56      |              |                | Negotiable |
| 333414                        |              | 20-SEP-12 | UNITED PARCEL SERVICE INC                         |      | 20.00          |              |                | Negotiable |
| 333415                        |              | 20-SEP-12 | UNITED SITE SERVICES OF CALIFORNIA INC            |      | 139.24         |              |                | Negotiable |
| 333416                        |              | 20-SEP-12 | US PEROXIDE LLC                                   |      | 6,596.96       |              |                | Negotiable |
| 333417                        |              | 20-SEP-12 | VERIZON CALIFORNIA INC                            |      | 252.93         |              |                | Negotiable |
| 333418                        |              | 20-SEP-12 | VULCAN MATERIALS COMPANY                          |      | 1,345.71       |              |                | Negotiable |
| 333419                        |              | 20-SEP-12 | VWR INTERNATIONAL, LLC                            |      | 2,926.31       |              |                | Negotiable |
| 333420                        |              | 20-SEP-12 | WALTERS WHOLESAL E ELECTRIC                       |      | 3,460.07       |              |                | Negotiable |
| 333421                        |              | 20-SEP-12 | WATERLINE TECHNOLOGIES INC                        |      | 11,097.68      |              |                | Negotiable |
| 333422                        |              | 20-SEP-12 | WAXIE'S ENTERPRISES, INC                          |      | 1,830.61       |              |                | Negotiable |
| 333423                        |              | 20-SEP-12 | WECK LABORATORIES INC                             |      | 2,580.00       |              |                | Negotiable |
| 333424                        |              | 20-SEP-12 | WEST COAST SAND & GRAVEL INC.                     |      | 913.96         |              |                | Negotiable |
| 333425                        |              | 20-SEP-12 | WESTERN EXTERMINATOR COMPANY                      |      | 17,750.00      |              |                | Negotiable |
| 333426                        |              | 20-SEP-12 | WESTERN PAVING CONTRACTORS                        |      | 168.25         |              |                | Negotiable |
| 333427                        |              | 20-SEP-12 | WESTERN WATER WORKS SUPPLY                        |      | 734.03         |              |                | Negotiable |

| Payment Number   | Sequence Num | Date      | Supplier Name           | Site | Payment Amount                      | Cleared Date | Cleared Amount | Status     |
|--|--------------|-----------|-------------------------|------|-------------------------------------|--------------|----------------|------------|
| COMPANY  |              |           |                         |      |                                     |              |                |            |
| 333428   |              | 20-SEP-12 | WHITE, DAWN             |      | 71.32                               |              |                | Negotiable |
| 333429   |              | 20-SEP-12 | WOO, LAWRENCE           |      | 26.07                               |              |                | Negotiable |
| 333430   |              | 20-SEP-12 | WOODBURY COMMUNITY ASSN |      | 2,128.72                            |              |                | Negotiable |
| 333431   |              | 20-SEP-12 | YORKE ENGINEERING LLC   |      | 8,192.80                            |              |                | Negotiable |
| 333432   |              | 20-SEP-12 | YOUNG, KENNEY           |      | 28.38                               |              |                | Negotiable |
| 333433   |              | 20-SEP-12 | ZEE MEDICAL SERVICE CO  |      | 201.01                              |              |                | Negotiable |
| 333434   |              | 20-SEP-12 | ZGLOBAL, INC.           |      | 13,577.00                           |              |                | Negotiable |
| 333435   |              | 20-SEP-12 | Andrew Yue              |      | 400.83                              |              |                | Negotiable |
| IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44 |              |           |                         |      |                                     |              |                |            |
| BANK: Bank of America N.A.   |              |           | Branch : Los Angeles    |      | Account: Checking AP and PR         |              | Page: 18       |            |
| Bank Account Currency: USD ( US Dollar )   |              |           |                         |      | Payment Currency: USD ( US Dollar ) |              |                |            |
| Payment Type: All  |              |           |                         |      | Display Supplier Address: No        |              |                |            |

| Payment Number   | Sequence Num | Date      | Supplier Name                         | Site  | Payment Amount                      | Cleared Date | Cleared Amount | Status     |
|--|--------------|-----------|---------------------------------------|-------|-------------------------------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK  |              |           |                                       |       |                                     |              |                |            |
| 333436   |              | 20-SEP-12 | Martha Ramos                          |       | 106.94                              |              |                | Negotiable |
| 333437   |              | 21-SEP-12 | DEVISE ENGINEERINGMISSION INC         | VIEJO | 4,906.21                            |              |                | Negotiable |
| 333438   |              | 21-SEP-12 | A & Y ASPHALT CONTRACTORS INC         |       | 10,977.00                           |              |                | Negotiable |
| 333439   |              | 21-SEP-12 | ABEL PUMPS LP                         |       | 2,842.64                            |              |                | Negotiable |
| 333440   |              | 21-SEP-12 | ASSURED FLOW SALES INC                |       | 213.18                              |              |                | Negotiable |
| 333441   |              | 21-SEP-12 | AT&T                                  |       | 15.90                               |              |                | Negotiable |
| 333442   |              | 21-SEP-12 | BRITHINEE ELECTRIC                    |       | 13,177.21                           |              |                | Negotiable |
| 333443   |              | 21-SEP-12 | BUSH & ASSOCIATES INC                 |       | 10,192.00                           |              |                | Negotiable |
| 333444   |              | 21-SEP-12 | COASTAL TRAFFIC SYSTEMS, INC          |       | 510.00                              |              |                | Negotiable |
| 333445   |              | 21-SEP-12 | CONEYBEARE INC                        |       | 1,890.00                            |              |                | Negotiable |
| 333446   |              | 21-SEP-12 | DME INC                               |       | 40.91                               |              |                | Negotiable |
| 333447   |              | 21-SEP-12 | DWYER INSTRUMENTS INC                 |       | 7,808.09                            |              |                | Negotiable |
| 333448   |              | 21-SEP-12 | EXPRESSAIR                            |       | 154.00                              |              |                | Negotiable |
| 333449   |              | 21-SEP-12 | FISERV                                |       | 11,004.34                           |              |                | Negotiable |
| 333450   |              | 21-SEP-12 | GRAINGER                              |       | 1,105.30                            |              |                | Negotiable |
| 333451   |              | 21-SEP-12 | GRAYBAR ELECTRIC COMPANY              |       | 3,774.95                            |              |                | Negotiable |
| 333452   |              | 21-SEP-12 | GUARANTEED PROPERTY INSPECTIONS, INC. |       | 3,950.00                            |              |                | Negotiable |
| 333453   |              | 21-SEP-12 | HACH COMPANY                          |       | 930.71                              |              |                | Negotiable |
| 333454   |              | 21-SEP-12 | HOME DEPOT USA INC                    |       | 121.99                              |              |                | Negotiable |
| 333455   |              | 21-SEP-12 | II FUELS INC                          |       | 15,252.88                           |              |                | Negotiable |
| 333456   |              | 21-SEP-12 | IRVINE PIPE & SUPPLY INC              |       | 285.14                              |              |                | Negotiable |
| 333457   |              | 21-SEP-12 | KANA PIPELINE INC                     |       | 17,290.00                           |              |                | Negotiable |
| 333458   |              | 21-SEP-12 | LEE & SAKAHARA ARCHITECTS, INC        |       | 6,503.25                            |              |                | Negotiable |
| 333459   |              | 21-SEP-12 | MARSH RISK & INSURANCE SVCS           |       | 32,500.00                           |              |                | Negotiable |
| 333460   |              | 21-SEP-12 | ORANGE COUNTY TREASURER               |       | 34.00                               |              |                | Negotiable |
| 333461   |              | 21-SEP-12 | ROYAL WHOLESALE ELECTRIC              |       | 3,884.82                            |              |                | Negotiable |
| 333462   |              | 21-SEP-12 | SANDERS PAVING INC                    |       | 41,473.00                           |              |                | Negotiable |
| 333463   |              | 21-SEP-12 | SOUTHERN CALIFORNIA EDISON COMPANY    |       | 106,592.03                          |              |                | Negotiable |
| 333464   |              | 21-SEP-12 | TAYLOR MORRISON                       |       | 96.80                               |              |                | Negotiable |
| IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44 |              |           |                                       |       |                                     |              |                |            |
| BANK: Bank of America N.A.   |              |           | Branch : Los Angeles                  |       | Account: Checking AP and PR         |              | Page: 19       |            |
| Bank Account Currency: USD ( US Dollar )   |              |           |                                       |       | Payment Currency: USD ( US Dollar ) |              |                |            |
| Payment Type: All  |              |           |                                       |       | Display Supplier Address: No        |              |                |            |

| Payment Number                | Sequence Num | Date      | Supplier Name                            | Site            | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|-----------------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |                 |                |              |                |            |
| 333465                        |              | 21-SEP-12 | TROPICAL PLAZA NURSERY INC               |                 | 1,400.00       |              |                | Negotiable |
| 333466                        |              | 21-SEP-12 | ULINE INC                                |                 | 91.77          |              |                | Negotiable |
| 333467                        |              | 21-SEP-12 | VWR INTERNATIONAL, LLC                   |                 | 52.38          |              |                | Negotiable |
| 333468                        |              | 21-SEP-12 | WALTERS WHOLESALE ELECTRIC               |                 | 149.86         |              |                | Negotiable |
| 333469                        |              | 21-SEP-12 | WAXIE'S ENTERPRISES, INC                 |                 | 686.56         |              |                | Negotiable |
| 333470                        |              | 21-SEP-12 | BANK OF NEW YORK MELLON TRUST COMPANY NA | NEWARK          | 5,134.00       |              |                | Negotiable |
| 333471                        |              | 25-SEP-12 | ORANGE COUNTY SANITATION DISTRICT        | FOUNTAIN VALLEY | 2,275.90       |              |                | Negotiable |
| 333472                        |              | 25-SEP-12 | BOWIE, ARNESON, PAY                      |                 | 65,998.23      |              |                | Negotiable |

| Payment Number                           | Sequence Num | Date      | Supplier Name                       | Site | Payment Amount                              | Cleared Date | Cleared Amount                 | Status     |
|--|--------------|-----------|-------------------------------------|------|---|--------------|--------------------------------|------------|
| WILES & GIANNONE                         |              |           |                                     |      |   |              |                                |            |
| 333473                                   |              | 27-SEP-12 | Amy McNulty                         |      | 82.30                                       |              |                                | Negotiable |
| 333474                                   |              | 27-SEP-12 | Didene Martin                       |      | 200.00                                      |              |                                | Negotiable |
| 333475                                   |              | 27-SEP-12 | Robert Jacobson                     |      | 173.17                                      |              |                                | Negotiable |
| 333476                                   |              | 27-SEP-12 | ADS LLC                             |      | 2,836.50                                    |              |                                | Negotiable |
| 333477                                   |              | 27-SEP-12 | ADT SECURITY SERVICES INC           |      | 3,051.07                                    |              |                                | Negotiable |
| 333478                                   |              | 27-SEP-12 | AFLAC                               |      | 5,725.56                                    |              |                                | Negotiable |
| 333479                                   |              | 27-SEP-12 | AIRGAS-WEST, INC.                   |      | 4,152.72                                    |              |                                | Negotiable |
| 333480                                   |              | 27-SEP-12 | ALLIANCE FOR WATER EFFICIENCY NFP   |      | 1,023.79                                    |              |                                | Negotiable |
| 333481                                   |              | 27-SEP-12 | ALTERNATIVE FUELS TODAY, INC.       |      | 4,700.00                                    |              |                                | Negotiable |
| 333482                                   |              | 27-SEP-12 | AMERICAN SOCIETY OF CIVIL ENGINEERS |      | 280.00                                      |              |                                | Negotiable |
| 333483                                   |              | 27-SEP-12 | API FUND FOR PAYROLL EDUCATION      |      | 405.00                                      |              |                                | Negotiable |
| 333484                                   |              | 27-SEP-12 | ARMORCAST PRODUCTS COMPANY          |      | 9,783.04                                    |              |                                | Negotiable |
| 333485                                   |              | 27-SEP-12 | ASSOCIATED POWER INC                |      | 1,966.07                                    |              |                                | Negotiable |
| 333486                                   |              | 27-SEP-12 | AT&T                                |      | 5,118.34                                    |              |                                | Negotiable |
| 333487                                   |              | 27-SEP-12 | AT&T                                |      | 942.67                                      |              |                                | Negotiable |
| 333488                                   |              | 27-SEP-12 | BECKMAN CENTER                      |      | 7,632.42                                    |              |                                | Negotiable |
| 333489                                   |              | 27-SEP-12 | BILL'S SWEEPING SERVICE INC         |      | 460.00                                      |              |                                | Negotiable |
| 333490                                   |              | 27-SEP-12 | BIOMAGIC INC                        |      | 7,864.52                                    |              |                                | Negotiable |
| 333491                                   |              | 27-SEP-12 | BIOMERIEUX INC                      |      | 101.15                                      |              |                                | Negotiable |
| 333492                                   |              | 27-SEP-12 | BRITHINEE ELECTRIC                  |      | 6,361.26                                    |              |                                | Negotiable |
| IRWD Ledger                              |              |           |                                     |      |   |              |                                |            |
| BANK: Bank of America N.A.               |              |           | Branch : Los Angeles                |      | Payment Register For 01-SEP-12 To 30-SEP-12 |              | Report Date: 02-OCT-2012 08:44 |            |
| Bank Account Currency: USD ( US Dollar ) |              |           |                                     |      | Account: Checking AP and PR                 |              | Page: 20                       |            |
| Payment Type: All                        |              |           |                                     |      | Payment Currency: USD ( US Dollar )         |              | Display Supplier Address: No   |            |

| Payment Number                           | Sequence Num | Date      | Supplier Name                          | Site | Payment Amount                              | Cleared Date | Cleared Amount                 | Status     |
|--|--------------|-----------|--|------|---|--------------|--------------------------------|------------|
| Payment Document : IRWD CHECK            |              |           |  |      |   |              |                                |            |
| 333493                                   |              | 27-SEP-12 | BROOKFIELD WOODBURY II LLC             |      | 788.15                                      |              |                                | Negotiable |
| 333494                                   |              | 27-SEP-12 | BRUCE NEWELL                           |      | 1,316.00                                    |              |                                | Negotiable |
| 333495                                   |              | 27-SEP-12 | BRYAN, DEBRA K                         |      | 41.76                                       |              |                                | Negotiable |
| 333496                                   |              | 27-SEP-12 | BUSH & ASSOCIATES INC                  |      | 2,384.00                                    |              |                                | Negotiable |
| 333497                                   |              | 27-SEP-12 | C WELLS PIPELINE MATERIALS INC         |      | 7,898.37                                    |              |                                | Negotiable |
| 333498                                   |              | 27-SEP-12 | CALIFORNIA BARRICADE INC               |      | 3,325.00                                    |              |                                | Negotiable |
| 333499                                   |              | 27-SEP-12 | CARBURETION & TURBO SYSTEMS, INC.      |      | 1,196.43                                    |              |                                | Negotiable |
| 333500                                   |              | 27-SEP-12 | CARRINGTON PROPERTY SERVICES           |      | 27.47                                       |              |                                | Negotiable |
| 333501                                   |              | 27-SEP-12 | CDW GOVERNMENT LLC                     |      | 1,778.47                                    |              |                                | Negotiable |
| 333502                                   |              | 27-SEP-12 | CH2M HILL, INC                         |      | 25,760.00                                   |              |                                | Negotiable |
| 333503                                   |              | 27-SEP-12 | CHARLES P CROWLEY COMPANY INC          |      | 644.66                                      |              |                                | Negotiable |
| 333504                                   |              | 27-SEP-12 | CITY CIRCUIT BREAKERS                  |      | 5,155.84                                    |              |                                | Negotiable |
| 333505                                   |              | 27-SEP-12 | CLEAN ENERGY FUELS                     |      | 2,089.15                                    |              |                                | Negotiable |
| 333506                                   |              | 27-SEP-12 | COAST PLUMBING HEATING AND AIR, INC    |      | 1,202.01                                    |              |                                | Negotiable |
| 333507                                   |              | 27-SEP-12 | COLONIAL LIFE & ACCIDENT INSURANCE CO. |      | 1,751.68                                    |              |                                | Negotiable |
| 333508                                   |              | 27-SEP-12 | COMMERCIAL CLEANING SYSTEMS INC        |      | 10,973.99                                   |              |                                | Negotiable |
| 333509                                   |              | 27-SEP-12 | CONDITION MONITORING SERVICES INC      |      | 660.73                                      |              |                                | Negotiable |
| 333510                                   |              | 27-SEP-12 | CONEYBEARE INC                         |      | 11,010.59                                   |              |                                | Negotiable |
| 333511                                   |              | 27-SEP-12 | COX COMMUNICATIONS                     |      | 2,320.60                                    |              |                                | Negotiable |
| 333512                                   |              | 27-SEP-12 | CUMMINGS, CHARLES                      |      | 33.86                                       |              |                                | Negotiable |
| 333513                                   |              | 27-SEP-12 | DATA CLEAN CORPORATION                 |      | 513.25                                      |              |                                | Negotiable |
| 333514                                   |              | 27-SEP-12 | DELTA SYSTEMS ENGINEERING              |      | 31,852.32                                   |              |                                | Negotiable |
| 333515                                   |              | 27-SEP-12 | DISCOVERY SCIENCE CENTER               |      | 28,125.00                                   |              |                                | Negotiable |
| 333516                                   |              | 27-SEP-12 | DOUBLE U COMPANY                       |      | 44.28                                       |              |                                | Negotiable |
| 333517                                   |              | 27-SEP-12 | DUDEK                                  |      | 1,970.00                                    |              |                                | Negotiable |
| 333518                                   |              | 27-SEP-12 | ELABRA INC                             |      | 3,406.00                                    |              |                                | Negotiable |
| IRWD Ledger                              |              |           |  |      |   |              |                                |            |
| BANK: Bank of America N.A.               |              |           | Branch : Los Angeles                   |      | Payment Register For 01-SEP-12 To 30-SEP-12 |              | Report Date: 02-OCT-2012 08:44 |            |
| Bank Account Currency: USD ( US Dollar ) |              |           |  |      | Account: Checking AP and PR                 |              | Page: 21                       |            |
| Payment Type: All                        |              |           |  |      | Payment Currency: USD ( US Dollar )         |              | Display Supplier Address: No   |            |

Payment Document : IRWD CHECK

|        |           |   |           |            |
|--------|-----------|---|-----------|------------|
| 333519 | 27-SEP-12 | ELECTRABOND   | 725.00    | Negotiable |
| 333520 | 27-SEP-12 | ENDRESS AND HAUSER<br>INC                             | 458.66    | Negotiable |
| 333521 | 27-SEP-12 | ENVIRONMENTAL<br>ENGINEERING AND<br>CONTRACTING, INC. | 5,754.51  | Negotiable |
| 333522 | 27-SEP-12 | EXPRESSAIR  | 150.40    | Negotiable |
| 333523 | 27-SEP-12 | FAROKHIAN, MEHEI                                      | 27.47     | Negotiable |
| 333524 | 27-SEP-12 | FARRELL &<br>ASSOCIATES                               | 249.41    | Negotiable |
| 333525 | 27-SEP-12 | FARWEST CORROSION<br>CONTROL CO                       | 4,936.45  | Negotiable |
| 333526 | 27-SEP-12 | FERGUSON<br>WATERWORKS                                | 2,931.88  | Negotiable |
| 333527 | 27-SEP-12 | FIBRWRAP<br>CONSTRUCTION INC                          | 941.31    | Negotiable |
| 333528 | 27-SEP-12 | FIRE EXTINGUISHING<br>SAFETY                          | 418.23    | Negotiable |
| 333529 | 27-SEP-12 | FIRST CHOICE<br>SERVICES                              | 1,245.11  | Negotiable |
| 333530 | 27-SEP-12 | FISERV  | 309.75    | Negotiable |
| 333531 | 27-SEP-12 | FISHER SCIENTIFIC<br>COMPANY LLC                      | 4,907.19  | Negotiable |
| 333532 | 27-SEP-12 | FOPCO INC   | 6,323.00  | Negotiable |
| 333533 | 27-SEP-12 | FORTIS RESOURCE<br>PARTNERS INC                       | 4,083.20  | Negotiable |
| 333534 | 27-SEP-12 | FRANCIS, CHANDINE                                     | 79.30     | Negotiable |
| 333535 | 27-SEP-12 | G.M. SAGER<br>CONSTRUCTION<br>CO, INC                 | 14,700.00 | Negotiable |
| 333536 | 27-SEP-12 | GAMAH LUMBER CO.                                      | 505.81    | Negotiable |
| 333537 | 27-SEP-12 | GARZA INDUSTRIES,<br>INC                              | 1,292.58  | Negotiable |
| 333538 | 27-SEP-12 | GENTERRA<br>CONSULTANTS INC                           | 1,500.00  | Negotiable |
| 333539 | 27-SEP-12 | GRAINGER  | 2,351.86  | Negotiable |
| 333540 | 27-SEP-12 | GRAYBAR ELECTRIC<br>COMPANY                           | 7,523.79  | Negotiable |
| 333541 | 27-SEP-12 | HARPER &<br>ASSOCIATES<br>ENGINEERING INC             | 2,600.00  | Negotiable |
| 333542 | 27-SEP-12 | HARRINGTON<br>INDUSTRIAL<br>PLASTICS LLC              | 1,606.41  | Negotiable |

IRWD Ledger Payment Register For 01-SEP-12 To 30-SEP-12 Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 22  
 Bank Account Currency: USD ( US Dollar ) Payment Currency: USD ( US Dollar )  
 Payment Type: All Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                       | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 333543                        |              | 27-SEP-12 | HARTFORD LIFE AND<br>ACCIDENT INSURANCE<br>COMPANY  |      | 153.62         |              |                | Negotiable |
| 333544                        |              | 27-SEP-12 | HDR ENGINEERING<br>INC                              |      | 136,327.16     |              |                | Negotiable |
| 333545                        |              | 27-SEP-12 | HILL BROTHERS<br>CHEMICAL COMPANY                   |      | 3,846.28       |              |                | Negotiable |
| 333546                        |              | 27-SEP-12 | HOME DEPOT USA INC                                  |      | 102.91         |              |                | Negotiable |
| 333547                        |              | 27-SEP-12 | INCIPIO TECHNOLOGY                                  |      | 464.04         |              |                | Negotiable |
| 333548                        |              | 27-SEP-12 | INDUSTRIAL METAL<br>SUPPLY CO                       |      | 289.85         |              |                | Negotiable |
| 333549                        |              | 27-SEP-12 | IRVINE PACIFIC, LP                                  |      | 27.82          |              |                | Negotiable |
| 333550                        |              | 27-SEP-12 | IRVINE PIPE &<br>SUPPLY INC                         |      | 2,115.17       |              |                | Negotiable |
| 333551                        |              | 27-SEP-12 | IRWD-PETTY CASH<br>CUSTODIAN                        |      | 681.84         |              |                | Negotiable |
| 333552                        |              | 27-SEP-12 | J POST GRADING INC                                  |      | 616.66         |              |                | Negotiable |
| 333553                        |              | 27-SEP-12 | JCI JONES<br>CHEMICALS INC                          |      | 6,479.95       |              |                | Negotiable |
| 333554                        |              | 27-SEP-12 | KELLEY BLUE BOOK,<br>INC.                           |      | 75.43          |              |                | Negotiable |
| 333555                        |              | 27-SEP-12 | KFIR, SHIRA   |      | 44.36          |              |                | Negotiable |
| 333556                        |              | 27-SEP-12 | KILL-N-BUGS<br>TERMITE AND PEST<br>CONTROL SERVICES |      | 450.00         |              |                | Negotiable |
| 333557                        |              | 27-SEP-12 | LI, DAHAI   |      | 31.30          |              |                | Negotiable |
| 333558                        |              | 27-SEP-12 | LIU, SHYHKWEI                                       |      | 77.54          |              |                | Negotiable |
| 333559                        |              | 27-SEP-12 | MALCOLM PIRNIE INC                                  |      | 1,513.50       |              |                | Negotiable |
| 333560                        |              | 27-SEP-12 | MAMCO INC   |      | 625.88         |              |                | Negotiable |
| 333561                        |              | 27-SEP-12 | MARVIN GARDENS LLC                                  |      | 2,593.70       |              |                | Negotiable |
| 333562                        |              | 27-SEP-12 | MBF CONSULTING,<br>INC.                             |      | 8,245.84       |              |                | Negotiable |
| 333563                        |              | 27-SEP-12 | MC MASTER CARR<br>SUPPLY CO                         |      | 3,801.44       |              |                | Negotiable |
| 333564                        |              | 27-SEP-12 | METCALFE, CLAYTON                                   |      | 32.56          |              |                | Negotiable |
| 333565                        |              | 27-SEP-12 | MUNICIPAL WATER<br>DISTRICT OF ORANGE<br>COUNTY     |      | 180,102.00     |              |                | Negotiable |

|        |           |                                     |           |            |
|--------|-----------|-------------------------------------|-----------|------------|
| 333566 | 27-SEP-12 | NASI, JOHN                          | 30.65     | Negotiable |
| 333567 | 27-SEP-12 | NATIONAL READY<br>MIXED CONCRETE CO | 794.41    | Negotiable |
| 333568 | 27-SEP-12 | NEPTUNE TECHNOLOGY                  | 41,450.99 | Negotiable |
| 333569 | 27-SEP-12 | NEWPORT BEACH,<br>CITY OF           | 806.09    | Negotiable |
| 333570 | 27-SEP-12 | NMG GEOTECHNICAL<br>INC             | 1,196.50  | Negotiable |

IRWD Ledger      Payment Register For 01-SEP-12 To 30-SEP-12      Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A.      Branch : Los Angeles      Account: Checking AP and PR      Page: 23  
 Bank Account Currency: USD ( US Dollar )      Payment Currency: USD ( US Dollar )  
 Payment Type: All      Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                                     | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|---|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |   |      |                |              |                |            |
| 333571                        |              | 27-SEP-12 | OCE NORTH AMERICA<br>INC                          |      | 15,130.93      |              |                | Negotiable |
| 333572                        |              | 27-SEP-12 | OCEAN BLUE<br>ENVIRONMENTAL<br>SERVICES INC       |      | 3,094.02       |              |                | Negotiable |
| 333573                        |              | 27-SEP-12 | OCWA  |      | 100.00         |              |                | Negotiable |
| 333574                        |              | 27-SEP-12 | OLIN CORPORATION                                  |      | 17,780.01      |              |                | Negotiable |
| 333575                        |              | 27-SEP-12 | ORANGE COUNTY<br>TREASURER                        |      | 851.50         |              |                | Negotiable |
| 333576                        |              | 27-SEP-12 | ORANGE, COUNTY OF                                 |      | 1,375.00       |              |                | Negotiable |
| 333577                        |              | 27-SEP-12 | PAULUS ENGINEERING<br>INC                         |      | 8,740.00       |              |                | Negotiable |
| 333578                        |              | 27-SEP-12 | PAYNE & FEARS LLP                                 |      | 26,806.45      |              |                | Negotiable |
| 333579                        |              | 27-SEP-12 | PHO, LETU   |      | 31.61          |              |                | Negotiable |
| 333580                        |              | 27-SEP-12 | POLYDYNE INC                                      |      | 2,300.00       |              |                | Negotiable |
| 333581                        |              | 27-SEP-12 | PONTON INDUSTRIES<br>INC                          |      | 340.63         |              |                | Negotiable |
| 333582                        |              | 27-SEP-12 | PRAXAIR<br>DISTRIBUTION INC                       |      | 1,426.38       |              |                | Negotiable |
| 333583                        |              | 27-SEP-12 | PRE-PAID LEGAL<br>SERVICES INC                    |      | 1,539.41       |              |                | Negotiable |
| 333584                        |              | 27-SEP-12 | PSOMAS  |      | 3,466.00       |              |                | Negotiable |
| 333585                        |              | 27-SEP-12 | QUINN POWER<br>SYSTEMS                            |      | 2,748.42       |              |                | Negotiable |
| 333586                        |              | 27-SEP-12 | RAM AIR<br>ENGINEERING INC                        |      | 1,576.19       |              |                | Negotiable |
| 333587                        |              | 27-SEP-12 | REFRIGERATION<br>SUPPLIES                         |      | 265.50         |              |                | Negotiable |
| 333588                        |              | 27-SEP-12 | RIBANT, ANNE                                      |      | 36.08          |              |                | Negotiable |
| 333589                        |              | 27-SEP-12 | RMC WATER AND<br>ENVIRONMENT                      |      | 1,900.00       |              |                | Negotiable |
| 333590                        |              | 27-SEP-12 | ROBINSON, KAREN                                   |      | 39.75          |              |                | Negotiable |
| 333591                        |              | 27-SEP-12 | RUDOLPH AND<br>SLETTEN                            |      | 470.17         |              |                | Negotiable |
| 333592                        |              | 27-SEP-12 | SANTA ANA BLUE<br>PRINT                           |      | 3,390.35       |              |                | Negotiable |
| 333593                        |              | 27-SEP-12 | SCHINDLER ELEVATOR<br>CORPORATION                 |      | 176.40         |              |                | Negotiable |
| 333594                        |              | 27-SEP-12 | SEPARATION<br>PROCESSES INC                       |      | 8,633.62       |              |                | Negotiable |
| 333595                        |              | 27-SEP-12 | SHAMROCK SUPPLY CO<br>INC                         |      | 1,792.04       |              |                | Negotiable |
| 333596                        |              | 27-SEP-12 | SONOMA APTS                                       |      | 138.48         |              |                | Negotiable |
| 333597                        |              | 27-SEP-12 | SOUTH COAST AIR<br>QUALITY MANAGEMENT<br>DISTRICT |      | 852.82         |              |                | Negotiable |

IRWD Ledger      Payment Register For 01-SEP-12 To 30-SEP-12      Report Date: 02-OCT-2012 08:44  
 BANK: Bank of America N.A.      Branch : Los Angeles      Account: Checking AP and PR      Page: 24  
 Bank Account Currency: USD ( US Dollar )      Payment Currency: USD ( US Dollar )  
 Payment Type: All      Display Supplier Address: No

| Payment Number                | Sequence Num | Date      | Supplier Name                            | Site | Payment Amount | Cleared Date | Cleared Amount | Status     |
|-------------------------------|--------------|-----------|--|------|----------------|--------------|----------------|------------|
| Payment Document : IRWD CHECK |              |           |  |      |                |              |                |            |
| 333598                        |              | 27-SEP-12 | SOUTHERN<br>CALIFORNIA EDISON<br>COMPANY |      | 87,541.62      |              |                | Negotiable |
| 333599                        |              | 27-SEP-12 | SPARKLETTS                               |      | 855.91         |              |                | Negotiable |
| 333600                        |              | 27-SEP-12 | STEVEN ENTERPRISES<br>INC                |      | 1,043.72       |              |                | Negotiable |
| 333601                        |              | 27-SEP-12 | STONE, MATT                              |      | 24.93          |              |                | Negotiable |
| 333602                        |              | 27-SEP-12 | SU, ROSANNA                              |      | 93.16          |              |                | Negotiable |
| 333603                        |              | 27-SEP-12 | SULLY-MILLER<br>CONTRACTING CO.          |      | 7,452.95       |              |                | Negotiable |
| 333604                        |              | 27-SEP-12 | SULLY-MILLER<br>CONTRACTING CO.          |      | 141,605.96     |              |                | Negotiable |
| 333605                        |              | 27-SEP-12 | SUPPORT PRODUCTS<br>SERVICES             |      | 9,988.90       |              |                | Negotiable |
| 333606                        |              | 27-SEP-12 | T AND S LARSEN<br>MAINTENANCE            |      | 400.00         |              |                | Negotiable |
| 333607                        |              | 27-SEP-12 | TESTAMERICA<br>LABORATORIES, INC         |      | 115.50         |              |                | Negotiable |
| 333608                        |              | 27-SEP-12 | TETRA TECH, INC                          |      | 15,717.50      |              |                | Negotiable |



| Payment Number | Sequence Num | Date | Supplier Name                                   | Site         | Payment Amount | Cleared Date | Cleared Amount | Status     |
|----------------|--------------|------|---|--------------|----------------|--------------|----------------|------------|
| 9593           | 24-SEP-12    |      | MELLON TRUST COMPANY NA                         |              |                |              |                |            |
|                |              |      | SUMITOMO MITSUI BANKING CORPORAION              | NEW YORK     | 1,892.13       |              |                | Negotiable |
| 9594           | 24-SEP-12    |      | BANK OF AMERICA                                 | PAY          | 295.00         |              |                | Negotiable |
| 9595           | 24-SEP-12    |      | MERRILL LYNCH                                   |              |                |              |                |            |
|                |              |      | INTERNAL REVENUE SERVICE                        | FRESNO       | 139,103.47     |              |                | Negotiable |
| 9596           | 24-SEP-12    |      | FRANCHISE TAX BOARD                             | SACRAMENTO   | 37,993.56      |              |                | Negotiable |
| 9597           | 24-SEP-12    |      | EMPLOYMENT DEVELOPMENT DEPARTMENT               | W SACRAMENTO | 8,801.98       |              |                | Negotiable |
| 9598           | 24-SEP-12    |      | WILLIAMS, TWYLA                                 | PARKER       | 1,158.79       |              |                | Negotiable |
| 9599           | 24-SEP-12    |      | CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES | SACRAMENTO   | 1,991.98       |              |                | Negotiable |
| 9600           | 24-SEP-12    |      | EMPLOYEE BENEFIT SPECIALIST, INC                | PAY          | 10,458.76      |              |                | Negotiable |
| 9601           | 24-SEP-12    |      | GREAT WEST                                      | DENVER       | 84,990.84      |              |                | Negotiable |
| 9602           | 24-SEP-12    |      | CALPERS   | SACRAMENTO   | 76,951.06      |              |                | Negotiable |
| 9603           | 24-SEP-12    |      | SUMITOMO MITSUI BANKING CORPORAION              | NEW YORK     | 5,069.84       |              |                | Negotiable |
| 9604           | 24-SEP-12    |      | BANK OF NEW YORK MELLON TRUST COMPANY NA        | NEWARK       | 3,173.04       |              |                | Negotiable |
| 9605           | 24-SEP-12    |      | ORANGE COUNTY WATER DISTRICT                    | F.V.         | 22,377.40      |              |                | Negotiable |
| 9606           | 24-SEP-12    |      | BANK OF NEW YORK MELLON TRUST COMPANY NA        | NEWARK       | 750.00         |              |                | Negotiable |
| 9607           | 24-SEP-12    |      | MUNICIPAL WATER DISTRICT OF ORANGEVALLEY COUNTY | FOUNTAIN     | 1,600,605.46   |              |                | Negotiable |
| 9608           | 24-SEP-12    |      | ORANGE COUNTY WATER DISTRICT                    | F.V.         | 13,792.20      |              |                | Negotiable |
| 9609           | 24-SEP-12    |      | U.S. BANK NATIONAL ASSOCIATION                  | ST. LOUIS    | 8,441.33       |              |                | Negotiable |
| 9610           | 24-SEP-12    |      | INTERNAL REVENUE SERVICE                        | FRESNO       | 137,144.91     |              |                | Negotiable |
| 9611           | 24-SEP-12    |      | FRANCHISE TAX BOARD                             | SACRAMENTO   | 37,532.23      |              |                | Negotiable |

IRWD Ledger  
 BANK: Bank of America N.A. Branch : Los Angeles  
 Bank Account Currency: USD ( US Dollar )  
 Payment Type: All

Payment Register For 01-SEP-12 To 30-SEP-12  
 Account: Checking AP and PR  
 Payment Currency: USD ( US Dollar )  
 Display Supplier Address: No

Report Date: 02-OCT-2012 08:44  
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| Payment Number               | Sequence Num | Date          | Supplier Name                                   | Site         | Payment Amount | Cleared Date | Cleared Amount | Status     |
|------------------------------|--------------|---------------|---|--------------|----------------|--------------|----------------|------------|
| Payment Document : IRWD Wire |              |               |   |              |                |              |                |            |
| 9612                         |              | 24-SEP-12     | EMPLOYMENT DEVELOPMENT DEPARTMENT               | W SACRAMENTO | 8,762.68       |              |                | Negotiable |
| 9613                         |              | 24-SEP-12     | WILLIAMS, TWYLA                                 | PARKER       | 1,158.79       |              |                | Negotiable |
| 9614                         |              | 24-SEP-12     | CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES | SACRAMENTO   | 1,991.98       |              |                | Negotiable |
| 9615                         |              | 24-SEP-12     | EMPLOYEE BENEFIT SPECIALIST, INC                | PAY          | 11,134.26      |              |                | Negotiable |
| 9616                         |              | 24-SEP-12     | GREAT WEST                                      | DENVER       | 77,562.31      |              |                | Negotiable |
| 9617                         |              | 24-SEP-12     | CALPERS   | SACRAMENTO   | 77,272.52      |              |                | Negotiable |
| 9618                         |              | 25-SEP-12     | YORK INSURANCE SERVICES GROUP INC - CA          | PAY          | 12,018.94      |              |                | Negotiable |
| 9619                         |              | 27-SEP-12     | BANK OF AMERICA MERRILL LYNCH                   | PAY          | 816,032.08     |              |                | Negotiable |
| 9620                         |              | 27-SEP-12     | CITIGROUP GLOBAL MARKETS INC.                   | NEW YORK     | 816,032.27     |              |                | Negotiable |
| Payment Document Subtotal:   |              |               |   |              | 4,376,034.46   |              |                |            |
| Bank Account Subtotal :      |              |               |   |              | 11,380,050.35  |              |                |            |
| Report Count : 704           |              | Report Total: |   |              | 11,380,050.35  |              |                |            |

\*\*\* End of Report \*\*\*

D-16

October 22, 2012 <sup>DS</sup> *RJS*  
Prepared by: R. Joshi/M. Hoolihan *MHJ*  
Submitted by: K. Burton *KB*  
Approved by: Paul Cook *P. Cook*

CONSENT CALENDAR

UPDATES TO EXPENDITURE AUTHORIZATIONS SOURCE OF FUNDS

SUMMARY:

Staff requests that the Board approve updates to the source of funds for the following Expenditure Authorizations:

- For MWRP General System Modifications, Project 20910, update source of funds from Regional Sewer with LAWD with Enhancement to Capital Replacement Fund;
- For Sewer General System Modifications, Project 20957, update source of funds from Regional Sewer with LAWD with Enhancement to Capital Replacement Fund;
- For LAWRP General System Modifications, Project 21004, update source of funds from Regional Sewer with LAWD with Enhancement to Capital Replacement Fund; and
- For General System Modifications, Project 11485, update source of funds from Regional Domestic Water with LAWD with Enhancement to Capital Replacement Fund.

BACKGROUND:

The FY 2012-13 Capital Budget was adopted by the Board at the June 11, 2012 Board Meeting; subsequently, the expenditure authorizations (and source of funds) were approved for the aforementioned projects. Following additional analysis, staff determined that these projects will be used for the repair or replacement of existing facilities rather than build-out ratio type projects. Staff requests that the Board approve updates to the source of funds for the aforementioned projects from regional allocations with enhancement to the capital replacement funds.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on October 16, 2012.

**RECOMMENDATION:**

THAT THE BOARD APPROVE UPDATES TO THE EXPENDITURE AUTHORIZATIONS FOR PROJECTS 20910 (1149), 20957 (1221), 21004 (1265), AND 11485 (1646) FROM REGIONAL ALLOCATIONS WITH ENHANCEMENT TO THE CAPITAL REPLACEMENT FUNDS.

**LIST OF EXHIBITS:**

Exhibit "A" – Updated Expenditure Authorizations









08  
October 22, 2012  
Prepared by: S. Malloy  
Submitted by: K. Burton (KB)  
Approved by: Paul Cook / [Signature]

## CONSENT CALENDAR

### MICHELSON WATER RECYCLING PLANT PROTECTIVE COATINGS EXPENDITURE AUTHORIZATION

#### SUMMARY:

Existing facilities and equipment within the Michelson Water Recycling Plant (MWRP) require reapplication of protective coatings due to age and deterioration from the elements. Staff recommends that the Board approve an Expenditure Authorization in the amount of \$350,000 for the MWRP Protective Coatings Project.

#### BACKGROUND:

During design of the MWRP Phase 2 Expansion, the main color scheme of the project facilities and equipment was changed to "Medium Bronze" from the existing color scheme of "Desert Tan." Originally, it was planned that IRWD staff in the Facilities Paintings and Coatings Group would reapply protective coatings on the existing MWRP facilities and equipment that are aged and exposed to the elements. This work was planned to be performed after the conclusion of the MWRP Phase 2 Expansion Project over a one- to two-year period. In light of recent staffing changes, staff now plans to hire a contractor to perform this work. Staff prepared a cost estimate for the work and included the MWRP Protective Coatings Project in the amount of \$350,000 in the FY 2012-13 Capital Budget.

As the MWRP Phase 2 Expansion is getting closer to completion, staff recommends commencing this protective coatings work. Staff prepared a list of facilities and equipment requiring reapplication of protective coatings and categorized the items into three groups below and detailed in Exhibit "A":

1. Facilities and equipment exposed to the atmosphere;
2. Interior facilities; and
3. Electrical facilities

Staff recommends proceeding with the first phase of this work which includes facilities and equipment under "Group 1", bringing all exposed equipment at MWRP coated with the revised color scheme. Staff will obtain bids to perform the work, and anticipates the contract can be approved within the General Manager's authority level. Staff will obtain bids for Groups 2 and 3 work at a later date.

#### FISCAL IMPACTS:

Project 21123 (3799) is included in the FY 2012-13 Capital Budget. An Expenditure Authorization is requested as shown in the table below and in Exhibit "B".

| Project No. | Current Budget | Addition <Reduction> | Total Budget | Existing EA | This EA Request | Total EA Request |
|-------------|----------------|----------------------|--------------|-------------|-----------------|------------------|
| 21123(3799) | \$350,000      | \$ -0-               | \$350,000    | \$ -0-      | \$350,000       | \$350,000        |

ENVIRONMENTAL COMPLIANCE:

This activity is categorically exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Sections 15301 and 15302.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on October 16, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$350,000 FOR THE MWRP PROTECTIVE COATINGS, PROJECT 21123 (3799).

LIST OF EXHIBITS:

- Exhibit "A" – List of MWRP Proposed Areas to Be Re-coated
- Exhibit "B" – Expenditure Authorization

# EXHIBIT "A"

**Michelson Water Recycling Plant  
Proposed Areas to Be Re-Coated**

**GROUP 1**

| Item # | Item   | Bldg | Description   | Engineer's Estimate | Parada Cost |
|--------|--|------|---|---------------------|-------------|
| 1      | Paint Shop/Paint Booth   | 70   | Exterior doors, roof vents, down spouts                           | \$1,800.00          | \$4,250.00  |
| 2      | Primary Odor Scrubber  | 115  | Scrubber and ducting  | \$4,800.00          | \$3,600.00  |
| 3      | Dept. 50 Storage Room (Old Dewatering Bldg.)                                       | 110  | Exterior doors, interior doors, roof vents, down spouts           | \$8,000.00          | \$5,150.00  |
| 4      | Electrical Maintenance Storage   | 100  | Exterior Doors, interior doors                                    | \$8,000.00          | \$3,700.00  |
| 5      | Old Control Room   | 90   | Exterior door, roof lattice                                       | \$7,500.00          | \$7,500.00  |
| 6      | Methanol Tank  | 85   | Pumps, piping, valves, and tank (See Note 1)                      | \$4,800.00          | \$5,650.00  |
| 7      | FEB Control Room   | 75   | Exterior Doors, vents   | \$1,600.00          | \$3,100.00  |
| 8      | MPS-3 Pumps (2 Pumps at FEB)   |      | Pumps, piping, valves   | \$2,000.00          | \$1,950.00  |
| 9      | Pig Launching Station (at FEB)   |      | Entire  | \$800.00            | \$475.00    |
| 10     | Sludge Valve/SBW Valve Actuators (at FEB)  |      | Entire  | \$2,400.00          | \$850.00    |
| 11     | Storm Water Pump Station #2  |      | Pumps, piping, valves   | \$1,200.00          | \$1,200.00  |
| 12     | Aeration Blower Room   | 80   | External doors, vents, down spouts                                | \$1,200.00          | \$3,500.00  |
| 13     | Groundwater Pumps (7 total)  |      | Piping, valves  | \$4,400.00          | \$2,125.00  |
| 14     | Aeration Tank Dewatering Pump  |      | Piping, valves  | \$8,000.00          | \$1,700.00  |
| 15     | Rectangular Secondary Clarifier Dewatering Pump                                    |      | Piping, valves  | \$4,500.00          | \$850.00    |
| 16     | Mixed Liquor Scum Pump #2  |      | Piping, valves  | \$2,400.00          | \$1,700.00  |
| 17     | Circular Clarifier RAS Pumps   |      | Pumps, piping, valves   | \$4,500.00          | \$5,000.00  |
| 18     | Circular Clarifier Control Room  |      | Doors, trim   | \$3,200.00          | \$1,800.00  |
| 19     | Circular Clarifier Scum Pump   |      | Piping, valves  | \$2,400.00          | \$638.00    |
| 20     | Circular Clarifier Dewatering Pump   |      | Piping, valves  | \$2,400.00          | \$400.00    |
| 21     | Circular Clarifier Compressor Room   |      | Doors, trim   | \$1,200.00          | \$775.00    |
| 22     | Tertiary Filter Air Scour  |      | Blower, piping, valves  | \$1,200.00          | \$1,200.00  |
| 23     | Filter Pump Station #2 (FPS-2)   | 210  | Exterior doors, down spouts, interior door, roof vents            | \$4,400.00          | \$2,900.00  |
| 24     | Filter Structure (all external piping) (excludes pipe below grating on north side) |      | Piping, valves, air piping, overflow pipe, particle counter frame | \$30,000.00         | \$7,000.00  |

|                         |   |    |  |                     |                    |
|-------------------------|---|----|--|---------------------|--------------------|
| 25                      | Filter Control Cabinet (filter deck)            |    | Entire   | \$1,600.00          | \$2,884.00         |
| 26                      | Filter Surge Tower                              |    | Entire   | \$4,800.00          | \$4,000.00         |
| 27                      | Filter Backwash Pumps (at backwash supply tank) |    | Pumps, piping, valves, down drain, and effluent line relief piping | \$4,800.00          | \$5,000.00         |
| 28                      | Chlorine Facility                               | 30 | External doors, vents, atrium, interior window frames, down spouts | \$0.00              | \$4,575.00         |
| 29                      | Effluent (MPS-2) Pumps (2)                      |    | Pumps, piping, valves  | \$4,800.00          | \$2,000.00         |
| 30                      | In-Plant Water Pump                             |    | Pump, piping, valves   | \$1,200.00          | \$500.00           |
| 31                      | Surge Tank                                      |    | Tank, piping, valves   | \$24,000.00         | \$6,000.00         |
| 32                      | Pressure Reducing Station #2                    |    | Piping, valves   | \$2,400.00          | \$1,275.00         |
| 33                      | Mixed Liquor Scum Pump #3, west of new MgOH     |    | Piping, valves   | \$0.00              | \$1,700.00         |
| 34                      | Pressure Reducing Station #1, next to SWPS-1    |    | Piping, valves   | \$0.00              | \$638.00           |
| <b>PHASE 1 Subtotal</b> |   |    |  | <b>\$156,300.00</b> | <b>\$95,585.00</b> |

Note 1: The Engineer's Estimate does not include the methanol tank; Parada includes the cost for coating the tank.

Note 2: Phase 1 Engineer's Estimate did not include prices for Chlorine Facility (No. 28); Mixed Liquor Scum Pump #3 (No. 33); and Pressure Reducing Station #1 (No. 34)

#### GROUP 2

| Item # | Item                                | Bldg | Description   | Engineer's Estimate | Parada Cost |
|--------|-------------------------------------|------|---|---------------------|-------------|
| 1      | Primary Pump Room                   | 180  | Pumps, piping, valves & skimming pump, piping, valves.            | \$30,000.00         |             |
| 2      | Included in primary pump room       | 180  | Also concrete repair & coating/painting of walls, ceiling & floor | \$0.00              |             |
| 3      | Dept. 55 Storage Bldg.              | 120  | Entire building   | \$3,000.00          |             |
| 4      | Dept. 55 Metal Storage (large)      |      | Entire structure  | \$1,800.00          |             |
| 5      | Dept. 55 Metal Storage (small)      |      | Entire structure  | \$1,400.00          |             |
| 6      | Collections Shop                    | 150  | Entire building   | \$14,400.00         |             |
| 7      | Dept. 40 Storage Bldg.              | 145  | Entire building   | \$0.00              |             |
| 8      | Purchasing Storage Bldg.            | 140  | Entire building   | \$3,000.00          |             |
| 9      | Dept. 40 Storage Shack              | 130  | Entire structure  | \$1,200.00          |             |
| 10     | Dept. 40 Shoring Storage Containers | 135  | Entire structures   | \$1,400.00          |             |

|                         |  |    |  |                     |               |
|-------------------------|--|----|--|---------------------|---------------|
| 11                      | Water Quality Storage Containers (near FEB)  |    | Entire structure   | \$1,200.00          |               |
| 12                      | Blower Control Room                          | 80 | Interior door  | \$400.00            |               |
| 13                      | RAS/Air Pipe Gallery                         |    | Doors  | \$800.00            |               |
| 14                      | Rectangular Secondary Clarifier Scum Pump #1 |    | Piping, valves   | \$12,000.00         |               |
| 15                      | RAS Pump Room                                |    | Door, roof vent, RAS pumps, piping, valves & WAS pump piping | \$2,400.00          |               |
| 16                      | Circular Clarifier Bridge                    |    | Trim   | \$3,200.00          |               |
| 17                      | FPS- 2 Pumps                                 |    | Pumps, piping, valves  | \$8,000.00          |               |
| 18                      | Filter Cell (internal piping)                |    | air piping, valves   | \$3,200.00          |               |
| 19                      | Groundwater Pumps #7/#8 Piezometer Cabinet   |    | Cabinet  | \$1,600.00          |               |
| 20                      | Disaster Alarm                               |    | Post   | \$8,000.00          |               |
| 21                      | Groundwater Pumps #6/#7 Piezometer Cabinet   |    | Cabinet  | \$0.00              |               |
| 22                      | Line A/B Basement                            |    | Piping, valves   | \$4,800.00          |               |
| <b>PHASE 2 Subtotal</b> |  |    |  | <b>\$101,800.00</b> | <b>\$0.00</b> |

**PHASE 3**

| Item # | Item                   | Bldg | Description                               | Engineer's Estimate | Parada Cost |
|--------|------------------------|------|---|---------------------|-------------|
| 1      | Switch Gear            | 200  | Entire building                           | \$2,400.00          |             |
| 2      | Generator Control Room | 220  | Entire building                           | \$3,000.00          |             |
| 3      | Generator Enclosure    | 220  | Entire enclosure                          | \$0.00              |             |
| 4      | Transformer T-1        |      | Transformer and feeders                   | \$2,400.00          |             |
| 5      | MPS-1                  | 180  | Exterior doors, interior door, roof vents | \$12,000.00         |             |
| 6      | Transformer T-2        |      | Transformer and feeders                   | \$3,000.00          |             |
| 7      | Transformer T-9        |      | Transformer and feeders                   | \$2,400.00          |             |
| 8      | Transformer T-4        |      | Transformer and feeders                   | \$3,000.00          |             |

|                         |                 |  |                         |                    |               |
|-------------------------|-----------------|--|-------------------------|--------------------|---------------|
| 9                       | Transformer T-3 |  | Transformer and feeders | \$2,400.00         |               |
| 10                      | Transformer T-5 |  | Transformer and feeders | \$8,000.00         |               |
| 11                      | Transformer T-6 |  | Transformer and feeders | \$4,400.00         |               |
| <b>GROUP 3 Subtotal</b> |                 |  |                         | <b>\$43,000.00</b> | <b>\$0.00</b> |

| <b>GROUP</b>              |  |  | <b>Engineer's Estimate</b> | <b>Parada Cost</b> |
|---------------------------|--|--|----------------------------|--------------------|
| GROUP 1 Subtotal          |  |  | \$156,300.00               | \$95,585.00        |
| GROUP 2 Subtotal          |  |  | \$101,800.00               | Not Bid            |
| GROUP 3 Subtotal          |  |  | \$43,000.00                | Not Bid            |
| <b>TOTAL - All PHASES</b> |  |  | <b>\$301,100.00</b>        | <b>\$95,585.00</b> |

# IRVINE RANCH WATER DISTF

# EXHIBIT "B"

## Expenditure Authorization

Project Name: COATING MWRP  
 EPMS Project No: 21123 EA No: 1  
 Oracle Project No: 3799  
 Project Manager: MALLOY, STEVEN  
 Project Engineer: STEWART, WILLIAM  
 Request Date: October 3, 2012

ID Split: Miscellaneous

### Improvement District (ID) Allocations

| ID No.       | Allocation %  | Source of Funds  |
|--------------|---------------|------------------|
| 210          | 100.0         | REPLACEMENT FUND |
| <b>Total</b> | <b>100.0%</b> |                  |

### Summary of Direct Cost Authorizations

|                                       |                  |
|---------------------------------------|------------------|
| Previously Approved EA Requests:      | \$0              |
| This Request:                         | \$350,000        |
| <b>Total EA Requests:</b>             | <b>\$350,000</b> |
| Previously Approved Budget:           | \$350,000        |
| Budget Adjustment Requested this EA:  | \$0              |
| <b>Updated Budget:</b>                | <b>\$350,000</b> |
| <b>Budget Remaining After This EA</b> | <b>\$0</b>       |

Comments:

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget  | Updated Budget   | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|------------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 5,000            | 0                    | 5,000               | 0                   | 5,000            | 5,000            | 7/12  | 6/13   |
| ENGINEERING DESIGN - OUTSIDE             | 5,000            | 0                    | 5,000               | 0                   | 5,000            | 5,000            | 7/12  | 6/13   |
| DESIGN STAFF FIELD SUPPORT               | 0                | 0                    | 0                   | 0                   | 0                | 0                | 7/12  | 6/13   |
| ENGINEERING - CA&I IRWD                  | 35,000           | 0                    | 35,000              | 35,000              | 0                | 35,000           | 7/12  | 6/13   |
| ENGINEERING - CA&I OUTSIDE               | 75,000           | 0                    | 75,000              | 75,000              | 0                | 75,000           | 7/12  | 6/13   |
| CONSTRUCTION FIELD SUPPORT               | 0                | 0                    | 0                   | 0                   | 0                | 0                | 7/12  | 6/13   |
| CONSTRUCTION                             | 230,000          | 0                    | 230,000             | (110,000)           | 340,000          | 230,000          | 7/12  | 6/13   |
| LEGAL                                    | 0                | 0                    | 0                   | 0                   | 0                | 0                | 7/12  | 6/13   |
| Contingency - % Subtotal                 | \$0              | \$0                  | \$0                 | \$0                 | \$0              | \$0              |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$350,000</b> | <b>\$0</b>           | <b>\$350,000</b>    | <b>\$0</b>          | <b>\$350,000</b> | <b>\$350,000</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$72,000         | \$0                  | \$72,000            | \$63,000            | \$9,000          | \$72,000         |       |        |
| <b>Total</b>                             | <b>\$422,000</b> | <b>\$0</b>           | <b>\$422,000</b>    | <b>\$63,000</b>     | <b>\$359,000</b> | <b>\$422,000</b> |       |        |
| Direct Labor                             | \$40,000         | \$0                  | \$40,000            | \$35,000            | \$5,000          | \$40,000         |       |        |

\*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:

*Steve Malloy* 10/3/12

Department Director:

*Ken L Burt* 10-4-12

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 \$431,000. 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.



October 22, 2012  
Prepared by: K. Lew/M. Cortez  
Submitted by: K. Burton  
Approved by: Paul Cook

## CONSENT CALENDAR

### HERITAGE FIELDS DISTRICT 8 IRVINE BOULEVARD AND RIDGE VALLEY CAPITAL FACILITIES

#### SUMMARY:

Heritage Fields El Toro, LLC (Heritage Fields) is beginning development of the District 8 neighborhood of Planning Area (PA) 51 (Great Park) which includes the construction of streets, storm drains, domestic water, sewer, and recycled water improvements. As part of the project Heritage Fields will construct the IRWD capital facilities under a Supplemental Reimbursement Agreement to the Master Reimbursement Agreement dated August 13, 2012. Staff recommends that the Board:

- Authorize the addition of Projects 11664, 21664, 31664, and 30386 to the FY 2012-13 Capital Budget in the amounts of \$453,200, \$171,600, \$276,100, and \$431,200, respectively;
- Approve Expenditure Authorizations for Projects 11664, 21664, 31664, and 30386 in the amounts of \$453,200, \$171,600, \$276,100, and \$431,200, respectively; and
- Authorize the General Manager to execute a Supplemental Reimbursement Agreement with Heritage Fields for PA 51 District 8 Irvine Boulevard and Ridge Valley capital facilities.

#### BACKGROUND:

District 8 of PA 51 Great Park is bound by Portola Parkway to the north, the Foothill Transportation Corridor to the west, Irvine Boulevard to the south, and Ridge Valley to the east. The District 8 Site Map is shown in Exhibit "A". The required IRWD domestic water, sewer, and recycled water capital facilities are documented in the PA 30 and 51 Sub-Area Master Plan, as prepared in September 2011 and shown in the system maps in Exhibit "B".

The IRWD capital facilities required for the District 8 neighborhood include approximately 1,100 feet of 12-inch diameter domestic water pipeline, 130 feet of 15-inch sewer, and 4,100 feet of 6-inch, 12-inch, and 16-inch diameter recycled water pipeline. The design and construction of the IRWD facilities will be performed under the terms of the Master Reimbursement Agreement between Heritage Fields and IRWD approved by the Board in August 2012, and as further defined in the Supplemental Reimbursement Agreement. The Supplemental Reimbursement Agreement, attached as Exhibit "C", has been reviewed by IRWD's legal counsel.

#### Irvine Boulevard Capital Facilities

Heritage Fields retained Hunsaker & Associates to prepare the Irvine Boulevard Capital Improvement plans in the amount of \$20,200. Heritage Fields received responsive bids from five contractors on September 27, 2012. Heritage Fields recommends awarding the construction contract to the lowest bidder, Kana Pipeline, for a bid amount of \$475,397 as shown in

addition, Heritage Fields has received proposals for geotechnical soils testing from Engeo Incorporated and engineering services/surveying during construction from Hunsaker in the respective amounts of \$46,700 and \$22,200. Staff has reviewed the consultant proposals and the construction bids and found the amounts to be acceptable.

Ridge Valley Capital Facilities

Heritage Fields retained Hunsaker & Associates to prepare the Ridge Valley Capital Improvement Plans in the amount of \$26,800. Heritage Fields received responsive bids from five contractors on September 27, 2012. Heritage Fields recommends awarding the construction contract to the lowest bidder FYDAQ for a bid amount of \$164,099.50 as shown in Exhibit “E”. In addition, Heritage Fields has received proposals for geotechnical soils testing from Engeo Incorporated and engineering services/surveying during construction from Hunsaker in the respective amounts of \$44,400 and \$13,200. Staff has reviewed the consultant proposals and the construction bids and found the amounts to be acceptable.

FISCAL IMPACTS:

Funding for IRWD’s capital facilities will require the addition of Projects 11664 (4094), 21664 (4095), 31664 (4096), and 30386 (4097) to the FY 2012-13 Capital Budget and approval of Expenditure Authorizations in the amounts 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   |
|--------------|----------------|----------------------|--------------------|--------------|--------------------|--------------------|
| 11664 (4094) | \$-0-          | \$453,200            | \$453,200          | \$-0-        | \$453,200          | \$453,200          |
| 21664 (4095) | \$-0-          | \$171,600            | \$171,600          | \$-0-        | \$171,600          | \$171,600          |
| 31664 (4096) | \$-0-          | \$276,100            | \$276,100          | \$-0-        | \$276,100          | \$276,100          |
| 30386 (4097) | \$-0-          | \$431,200            | \$431,200          | \$-0-        | \$431,200          | \$431,200          |
| <b>TOTAL</b> | <b>\$-0-</b>   | <b>\$1,332,100</b>   | <b>\$1,332,100</b> | <b>\$-0-</b> | <b>\$1,332,100</b> | <b>\$1,332,100</b> |

The above funding provides for the reimbursement costs to Heritage Fields for the design and construction of IRWD capital facilities, staff time, and consultant support during construction.

ENVIRONMENTAL COMPLIANCE:

Activities such as executing reimbursement agreements arenot subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3), in that CEQA applies only to projects which have the potential for causing a significant effect on the environment.

Construction of capital domestic water, sewer, and recycled water facilities for the Great Park Development is subject to CEQA. In conformance with the California Code of Regulations Title 14, Chapter 3, Article 7 an Environmental Impact Report was certified by the City of Irvine on April 4, 2012 (2002101020).

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on October 16, 2012.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF PROJECTS 11664 (4094), 21664 (4095), 31664 (4096), AND 30386 (4097) TO THE FY 2012-13 CAPITAL BUDGET IN THE AMOUNTS OF \$453,200, \$171,600, \$276,100, AND \$431,200, RESPECTIVELY; APPROVE EXPENDITURE AUTHORIZATIONS FOR PROJECTS 11664 (4094), 21664 (4095), 31664 (4096), AND 30386 (4097) IN THE AMOUNTS OF \$453,200, \$171,600, \$276,100, AND \$431,200, RESPECTIVELY; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A SUPPLEMENTAL REIMBURSEMENT AGREEMENT WITH HERITAGE FIELDS EL TORO LLC FOR THE DESIGN AND CONSTRUCTION OF THE IRWD FACILITIES WITHIN PLANNING AREA 51 DISTRICT 8, PROJECTS 11664 (4094), 21664 (4095), 31664 (4096), AND 30386 (4097).

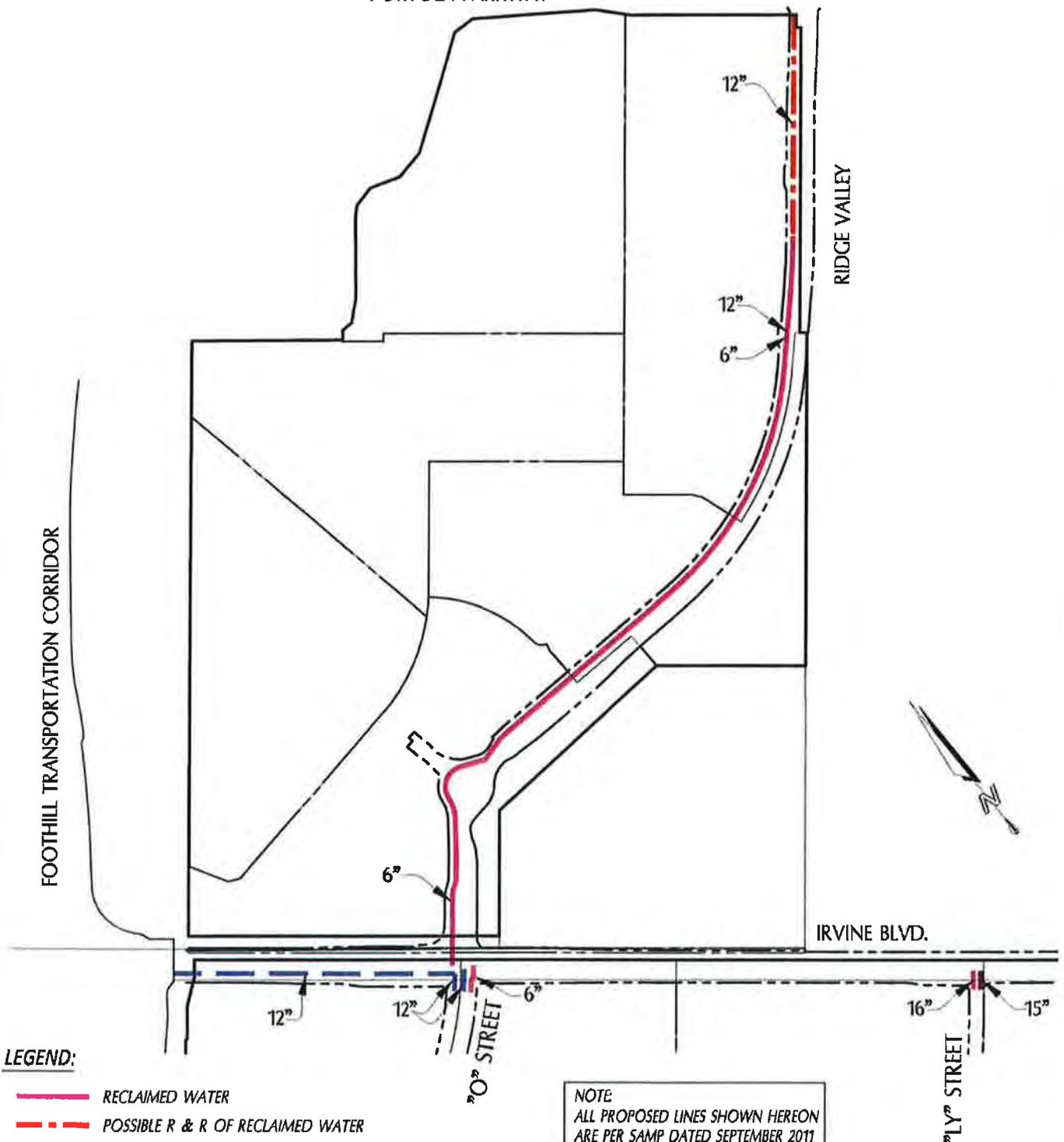
LIST OF EXHIBITS:

- Exhibit "A" – District 8 Location Map
- Exhibit "B" – Capital System Maps
- Exhibit "C" – Supplemental Reimbursement Agreement
- Exhibit "D" – Bid Summary for Irvine Boulevard Capital Facilities
- Exhibit "E" – Bid Summary for Ridge Valley Capital Facilities
- Exhibit "F" – Expenditure Authorizations



# EXHIBIT "A"

## IRWD CAPITAL IMPROVEMENTS JOINT BACKBONE 2ND AMENDED 17008 Irvine Blvd. (Westerly Boundary to LY Street) and Ridge Valley (Irvine Blvd. to Portola Pkwy.) PORTOLA PARKWAY



**LEGEND:**

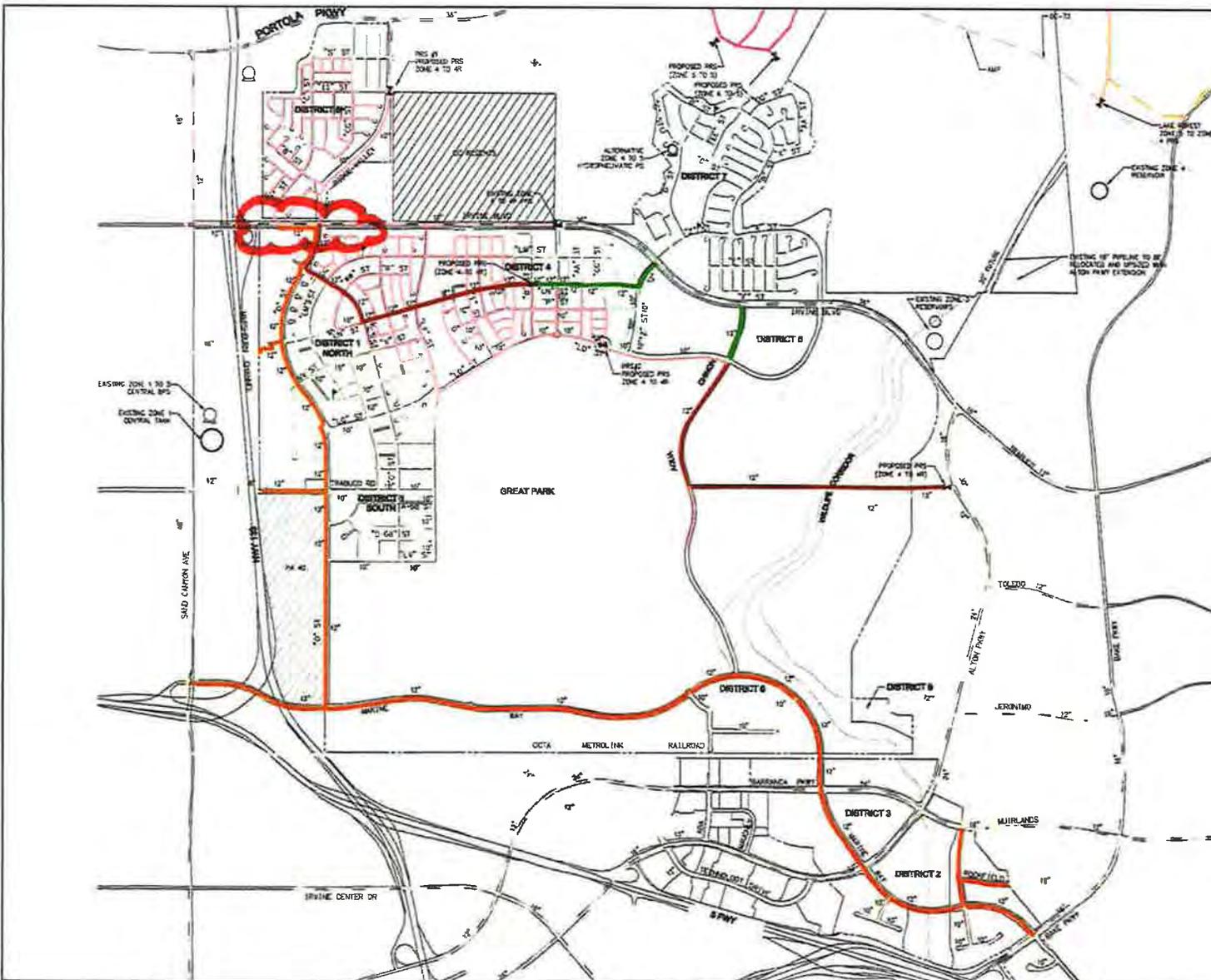
- RECLAIMED WATER
- - - POSSIBLE R & R OF RECLAIMED WATER
- DOMESTIC WATER
- SEWER

**NOTE:**  
ALL PROPOSED LINES SHOWN HEREON  
ARE PER SAMP DATED SEPTEMBER 2011

**PREPARED FOR:**  
Heritage Fields El Toro, LLC  
**Great Park**  
NEIGHBORHOODS.  
25 Enterprise, Suite 400  
Aliso Viejo CA 92666

**PREPARED BY:**  
**HUNSAKER & ASSOCIATES**  
IRVINE, INC.  
PLANNING ■ ENGINEERING ■ SURVEYING  
Three Hughes ■ Irvine, CA 92618 ■ PH: (949) 583-1010 ■ FX: (949) 583-0759  
DATE: MARCH 21, 2012





- NOTES:**
1. THE DOMESTIC WATER FACILITIES WITHIN THE GREAT PARK ARE NOT SHOWN ON THIS FIGURE. AT THE TIME OF THE SAMP PREPARATION, THE REQUIRED DOMESTIC WATER DISTRIBUTION FACILITIES WERE NOT KNOWN. ONCE THE LAND USE PLAN IS FINALIZED, THE DOMESTIC WATER DISTRIBUTION SYSTEM WILL REQUIRE ANALYSIS AND APPROPRIATE LEVEL OF SAMP UPDATE OR ADDENDUM WILL BE REQUIRED. ADDITIONALLY, AT THE TIME, A DETERMINATION WILL BE MADE AS TO WHICH FACILITIES WILL BE PUBLIC AND WHICH WILL BE PRIVATE.
  2. AS PART OF THE AGREEMENT WITH THE DEPARTMENT OF DEFENSE, THE LEAD ENTITY CONSTRUCTING BURIED PIPELINES WITHIN THE FORMER MARINE CORPS AIR STATION, EL TORO MUST SUBMIT A PROJECT ENVIRONMENT REVIEW FORM (PERF) TO THE NAVY AND THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES
  3. ALL PIPELINES ARE 8" UNLESS SHOWN

| LEGEND  | PROPOSED | EXISTING |
|---|----------|----------|
| ZONE 8 (850 HGL)                                    |          |          |
| ZONE 5 (735 HGL)                                    |          |          |
| ZONE 4 (640 HGL)                                    |          |          |
| ZONE 4R (540 HGL)                                   |          |          |
| ZONE 3 (470 HGL)                                    |          |          |
| SECONDARY PRESSURE REDUCING STATION                 |          |          |
| PRIMARY PRESSURE REDUCING STATION W/ TELEMETRY      |          |          |
| WATER QUALITY SAMPLING STATION (TENTATIVE LOCATION) |          |          |

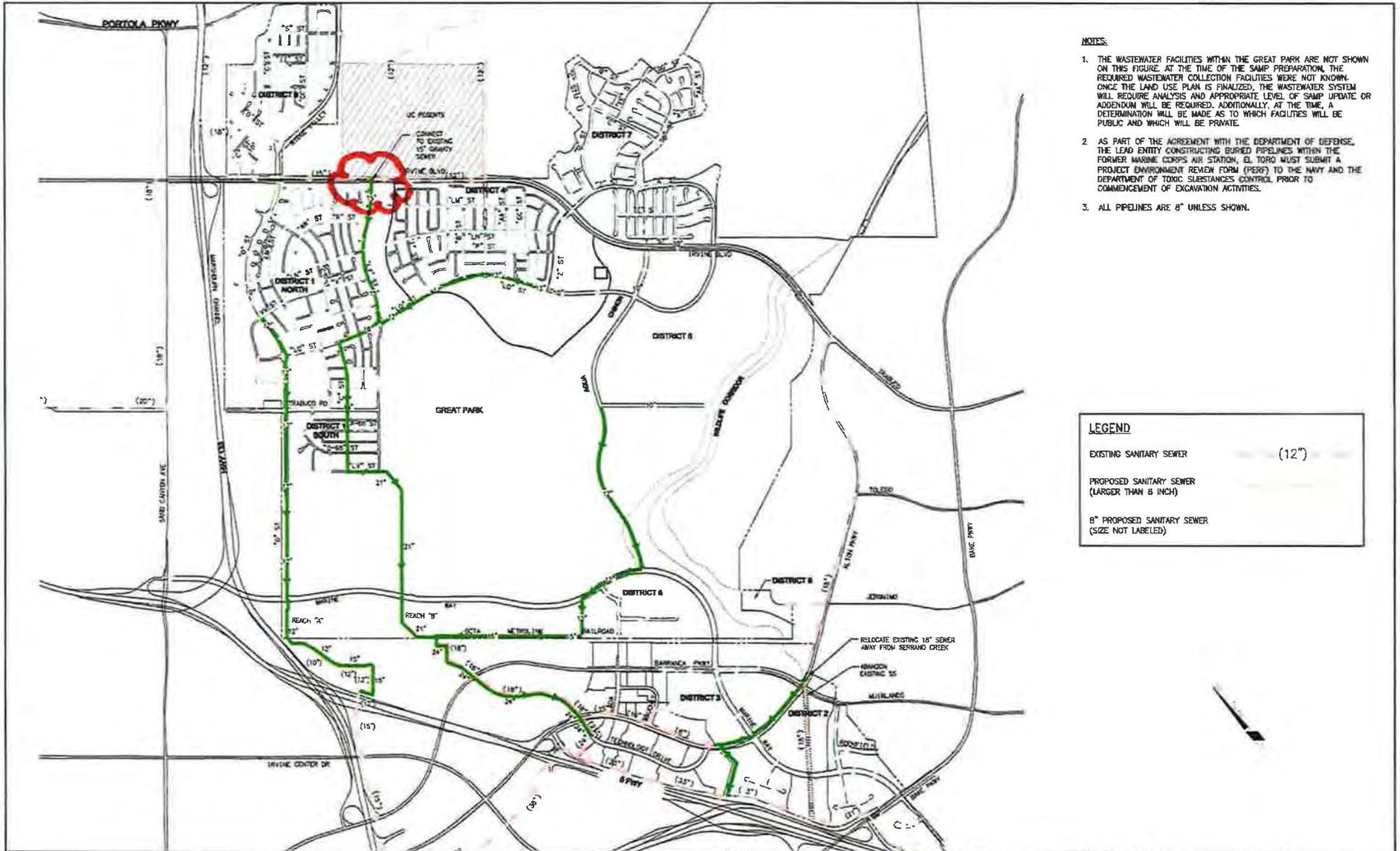
**RBF CONSULTING** PLANNING • DESIGN • CONSTRUCTION  
 1079 ALDERSHEDD RD. SUITE 200  
 IRVINE, CALIFORNIA 92618-3677  
 949.220.0006 • FAX 949.220.0122 • www.rbf.com

PREPARED FOR  
**IRVINE RANCH WATER DISTRICT**



IRVINE RANCH WATER DISTRICT  
 GREAT PARK / GREAT PARK NEIGHBORHOODS  
 SUB-AREA MASTER PLAN  
 (2011 UPDATE)  
**PROPOSED DOMESTIC WATER FACILITIES**

FIG. 3-3



- NOTES:**
1. THE WASTEWATER FACILITIES WITHIN THE GREAT PARK ARE NOT SHOWN ON THIS FIGURE. AT THE TIME OF THE SAMP PREPARATION, THE REQUIRED WASTEWATER COLLECTION FACILITIES WERE NOT KNOWN. ONCE THE LAND USE PLAN IS FINALIZED, THE WASTEWATER SYSTEM WILL REQUIRE ANALYSIS AND APPROPRIATE LEVEL OF SAMP UPDATE OR ADDENDUM WILL BE REQUIRED. ADDITIONALLY, AT THE TIME, A DETERMINATION WILL BE MADE AS TO WHICH FACILITIES WILL BE PUBLIC AND WHICH WILL BE PRIVATE.
  2. AS PART OF THE AGREEMENT WITH THE DEPARTMENT OF DEFENSE, THE LEAD ENTITY CONSTRUCTING BURIED PIPELINES WITHIN THE FORMER MARINE CORPS AIR STATION, EL TORO MUST SUBMIT A PROJECT ENVIRONMENT REVIEW FORM (PERF) TO THE NAVY AND THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES.
  3. ALL PIPELINES ARE 8" UNLESS SHOWN.

**LEGEND**

EXISTING SANITARY SEWER (12")

PROPOSED SANITARY SEWER (LARGER THAN 8 INCH)

8" PROPOSED SANITARY SEWER (SIZE NOT LABELED)

DATE: 01/11/2011  
 TIME: 10:00 AM  
 PROJECT: GREAT PARK / GREAT PARK NEIGHBORHOODS SUB-AREA MASTER PLAN (2011 UPDATE)  
 DRAWING: PROPOSED SEWER COLLECTION FACILITIES  
 SHEET: B-2 OF 2  
 SCALE: AS SHOWN  
 AUTHOR: RBF CONSULTING  
 CHECKED: RBF CONSULTING  
 APPROVED: RBF CONSULTING

**RBF CONSULTING**

PLANNING • DESIGN • CONSTRUCTION

1470 ALTON PARKWAY  
IRVINE, CALIFORNIA 92614-3037  
TEL: 949.261.8800 • FAX: 949.261.8801 • WWW.RBF.COM

PROPOSED RFP

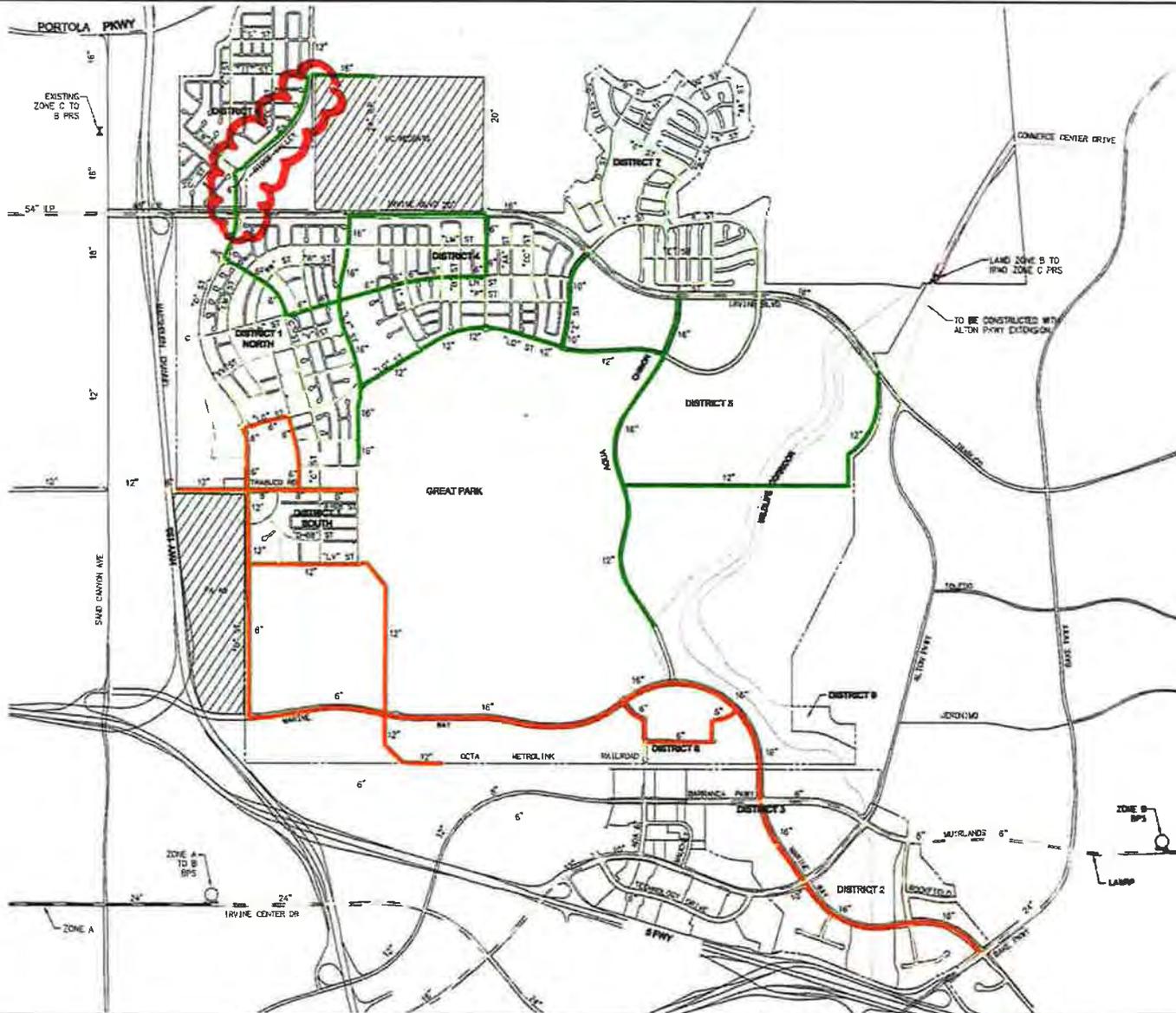
**IRVINE RANCH WATER DISTRICT**

IRVINE RANCH WATER DISTRICT  
 GREAT PARK / GREAT PARK NEIGHBORHOODS  
 SUB-AREA MASTER PLAN  
 (2011 UPDATE)

**PROPOSED SEWER COLLECTION FACILITIES**

FIG. 4-1

PREPARED FOR: IRVINE RANCH WATER DISTRICT  
 DATE: 11/11/11  
 DRAWN BY: J. L. LEE  
 CHECKED BY: J. L. LEE  
 SCALE: AS SHOWN  
 PROJECT NO.: 11-001



- NOTES:**
1. THE RECLAIMED WATER FACILITIES WITHIN THE GREAT PARK ARE NOT SHOWN ON THIS FIGURE. AT THE TIME OF THE SAMP PREPARATION, THE REQUIRED RECLAIMED WATER DISTRIBUTION FACILITIES WERE NOT KNOWN. ONCE THE LAND USE PLAN IS FINALIZED, THE RECLAIMED WATER DISTRIBUTION SYSTEM WILL REQUIRE ANALYSIS AND APPROPRIATE LEVEL OF SAMP UPDATE OR ADDENDUM WILL BE REQUIRED. ADDITIONALLY, AT THE TIME A DETERMINATION WILL BE MADE AS TO WHICH FACILITIES WILL BE PUBLIC AND WHICH WILL BE PRIVATE.
  2. AS PART OF THE AGREEMENT WITH THE DEPARTMENT OF DEFENSE, THE LEAD ENTITY CONSTRUCTING BURIED PIPELINES WITHIN THE FORMER MARINE CORPS AIR STATION, EL TORO MUST SUBMIT A PROJECT ENVIRONMENT REVIEW FORM (PERF) TO THE NAVY AND THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL PRIOR TO COMMENCEMENT OF EXCAVATION ACTIVITIES.
  3. ALL PIPELINES ARE 4" UNLESS SHOWN.

| LEGEND            | PROPOSED          | EXISTING |
|-------------------|-------------------|----------|
|                   | ZONE D (850 HGL.) |          |
| ZONE C (640 HGL.) |                   |          |
| ZONE B (460 HGL.) |                   |          |
| LAND ZONE B       |                   |          |

**RBF CONSULTING**  
 PLANNING • DESIGN • CONSTRUCTION  
 11775 ALTON PARKWAY  
 SUITE 200 CALIFORNIA IRVINE 92617  
 949.73.5502 • FAX 949.471.8122 • WWW.RBF.COM

PREPARED FOR  
**IRVINE RANCH WATER DISTRICT**



IRVINE RANCH WATER DISTRICT  
 GREAT PARK / GREAT PARK NEIGHBORHOODS  
 SUB-AREA MASTER PLAN  
 (2011 UPDATE)  
**PROPOSED NON-POTABLE WATER FACILITIES**

FIG. 5-3



# Exhibit "C"

## EXHIBIT "A" to Reimbursement Agreement

### SUPPLEMENTAL REIMBURSEMENT AGREEMENT BY AND BETWEEN IRVINE RANCH WATER DISTRICT AND HERITAGE FIELDS EL TORO, LLC

This SUPPLEMENTAL REIMBURSEMENT AGREEMENT ("Agreement") is entered into as of this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between Irvine Ranch Water District, a California water district formed and existing pursuant to the California Water District Law of the State of California ("IRWD"), and Heritage Fields El Toro, LLC, a Delaware limited liability company ("COMPANY"). All capitalized terms used herein and not otherwise defined shall have the meanings given such terms in the Reimbursement Agreement.

WHEREAS, IRWD and COMPANY have previously entered into that certain Reimbursement Agreement dated \_\_\_\_\_ ("Reimbursement Agreement") respecting construction of Capital Facilities; and

WHEREAS, said Reimbursement Agreement made reference to the fact that certain supplemental agreements would be entered into by the parties regarding construction of Capital Facilities and reimbursement therefor consistent with the provisions of said Reimbursement Agreement; and

WHEREAS, the parties now wish to enter this Agreement regarding the construction of Capital Facilities described below, subject to all of the terms of the Reimbursement Agreement, except as provided herein.

NOW, THEREFORE, the parties agree, in consideration of the mutual promises and covenants hereinafter set forth, do agree as follows:

1. Except as provided herein, the parties hereby incorporate by reference all of the terms and conditions of the Reimbursement Agreement into this Agreement.

2. The name of the Project to which this Agreement pertains is: Irvine Boulevard Recycled Water, Domestic Water, and Sanitary Sewer Capital Facilities and Ridge Valley Recycled Water Capital Facilities.

The Project is depicted on Exhibit 1 attached to this Agreement.

3. The Capital Facilities to be constructed pursuant to this Agreement are as follows: Approximately 1,100 lineal feet of 12-inch domestic water, 130 lineal feet of 15-inch sewer, and 4,100 lineal feet of 6-inch, 12-inch, and 16-inch recycled water pipelines as shown in Exhibit 1.

4. The total costs for the Capital Facilities shall include, but not limited to, the actual costs for construction, surveying, compaction testing, permits, construction bonds, legal fees and an administration fee equal to one percent (1%) of the actual cost of construction (all such actual costs are collectively referred to as the "Costs"). The estimated amount of the Costs is \$850,000.

5. The following special terms apply to the construction of the Capital Facilities under this Agreement and supersede the provisions of the original Reimbursement Agreement referenced above: None.

6. In accordance with Section 10 of the Reimbursement Agreement, COMPANY is executing concurrently herewith an Assignment Agreement in the form of Exhibit 2, to be effective upon the Effective Date specified in the Assignment Agreement.

IN WITNESS WHEREOF, the parties have entered this Agreement as of the date set forth above.

IRVINE RANCH WATER DISTRICT

By: \_\_\_\_\_  
General Manager

[SIGNATURES CONTINUED]

**HERITAGE FIELDS EL TORO, LLC,**  
a Delaware limited liability company

**By: Heritage Fields El Toro Sole Member LLC,**  
a Delaware limited liability company  
Its: Sole Member

**By: Heritage Fields LLC,**  
a Delaware limited liability company  
Its: Sole Member

**By: Lennar Heritage Fields, LLC,**  
a California limited liability company  
Its: Administrative Member

**By: Lennar Homes of California, Inc.,**  
a California corporation  
Its: Sole Member

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

**Print Name:** \_\_\_\_\_

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

**EXHIBIT "1"**  
to  
Supplemental Reimbursement Agreement

Irvine Boulevard (Westerly boundary to L Y Street) and  
Ridge Valley (Irvine Blvd. to Portola Pkwy)

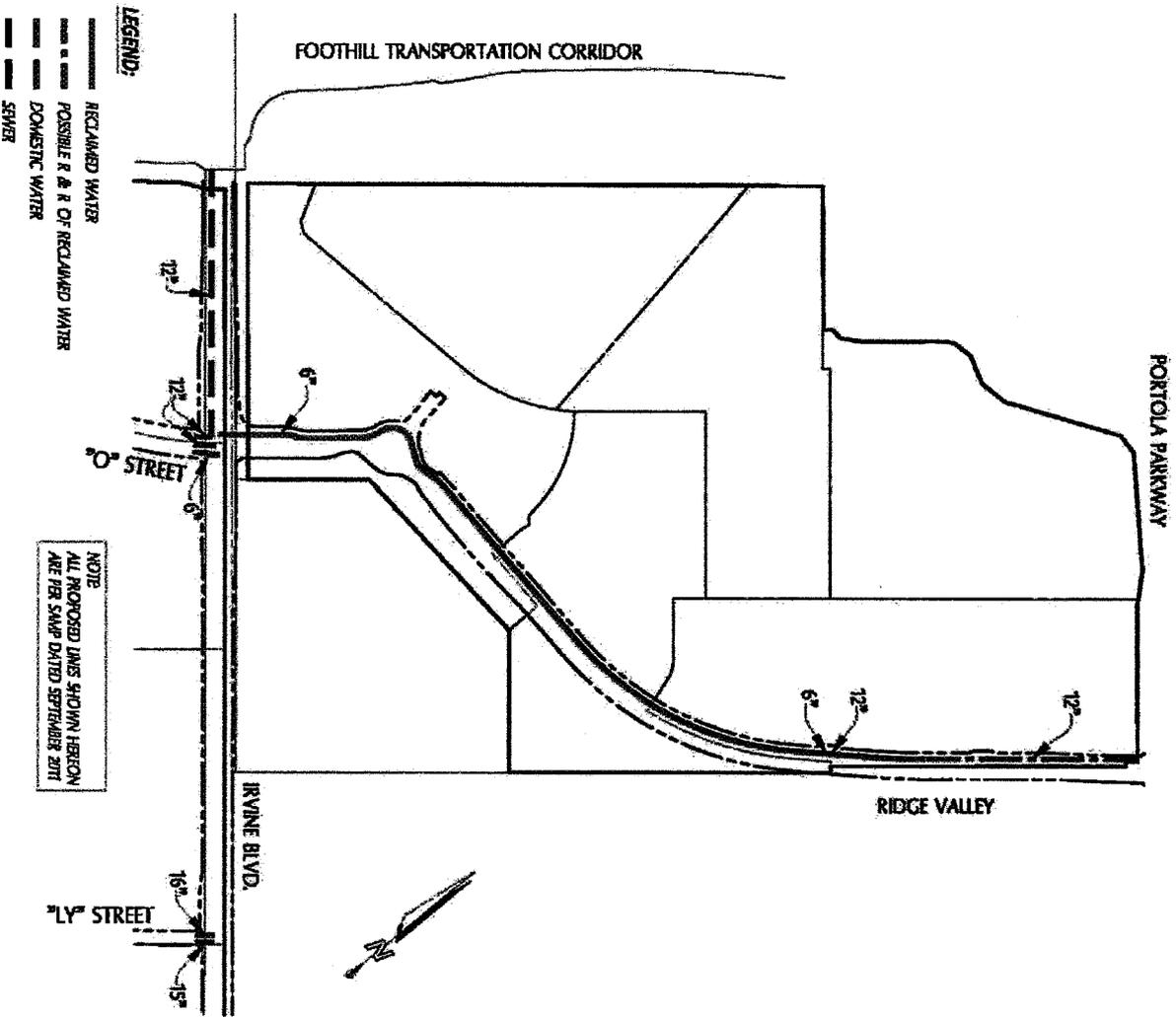


EXHIBIT "2"

to

Supplemental Reimbursement Agreement

Assignment Agreement

This Assignment Agreement is made as of \_\_\_\_\_, 20\_\_\_, by and between HERITAGE FIELDS EL TORO, LLC, a Delaware limited liability company ("Assignor"), to IRVINE RANCH WATER DISTRICT, a California water district formed and existing pursuant to the California Water District Law of the State of California ("Assignee") based upon the following recitals:

- A. Assignor has previously (or will, prior to the Effective Date hereof, have) entered into that certain Construction Contract to the Project and Capital Facilities identified in Schedule A hereto (the "Construction Contract").
- B. Assignee desires to acquire (I) Assignor's right, title and interest in and to the Capital Facilities constructed under the Construction Contract, and (II) the warranty rights of Assignor as to the Capital Facilities under the Construction Contract, and Assignor desires to assign such rights to Assignee.

NOW, THEREFORE, in consideration of the foregoing, the covenants and agreements contained herein and other valuable consideration, receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. ASSIGNMENT. Effective upon the date specified in Section 2 hereof (the "Effective Date"), Assignor assigns and transfers to Assignee all of Assignor's right, title, claim and interest in and to (a) the Capital Facilities constructed pursuant to the Construction Contract, and (b) the warranties and guarantees of contractor as to the Capital Facilities constructed pursuant to the Construction Contract. This Assignment is made by Assignor pursuant to the provisions of Section 10, entitled "Assignment of Interest", contained in that certain Reimbursement Agreement between Assignor and Assignee dated as of \_\_\_\_\_.
2. EFFECTIVE DATE. The Effective Date shall be the date of the filing of the Notice of Completion for the Construction Contract unless a different date is inserted in the following space: \_\_\_\_\_.
3. TRANSFER OF DOCUMENTATION. On or prior to the Effective Date, Assignor shall provide Assignee with a copy of the Construction Contract.

IN WITNESS WHEREOF, Assignor has executed this Assignment Agreement as of the date first above written.

ASSIGNOR:

HERITAGE FIELDS EL TORO, LLC,  
a Delaware limited liability company

By: Heritage Fields El Toro Sole Member LLC,  
a Delaware limited liability company  
Its: Sole Member

By: Heritage Fields LLC,  
a Delaware limited liability company  
Its: Sole Member

By: Lennar Heritage Fields, LLC,  
a California limited liability company  
Its: Administrative Member

By: Lennar Homes of California, Inc.,  
a California corporation  
Its: Sole Member

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

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_

Schedule A  
to  
Assignment Agreement

This Schedule A to Assignment Agreement relates to the assignment of certain matters pursuant to the Supplemental Reimbursement Agreement between Assignor and Assignee dated \_\_\_\_\_ ("Supplemental Reimbursement Agreement").

Insert name of Project from Section 2 of Supplemental Reimbursement Agreement: \_\_\_\_\_

Insert description of Capital Facilities from Section 3 of Supplemental Reimbursement Agreement: \_\_\_\_\_

Contractor's Name: \_\_\_\_\_

License No.: \_\_\_\_\_

Address: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Contact Person: \_\_\_\_\_



Bid Analysis  
CONTRACT PRICE SCHEDULE (CPS)

DISTRICT 8 (PLANNING AREA 51) - IRWD CIP IMPROVEMENTS

CITY OF IRVINE, ORANGE COUNTY, CALIFORNIA  
IRVINE BOULEVARD, RECYCLED WATER, DOMESTIC, AND SANITARY SEWER  
IRWD CAPITAL IMPROVEMENT PROGRAM,

| FPC SPREAD<br>LOW BID<br>NON-RESPONSIVE BID               |   | Engineer's Cost Estimate<br>Irvine Boulevard |      |            |                    | FYDAQ       |                      | L & S        |                      | KANA        |                      | CLEARWATER  |                      | KENNEDY     |                      | YOUNG & ASSOC |                      |
|---|---|--|------|------------|--------------------|-------------|----------------------|--------------|----------------------|-------------|----------------------|-------------|----------------------|-------------|----------------------|---------------|----------------------|
| Item  | Description   | Estimated Quantity                           | Unit | Unit Price | Total              | Unit Price  | Total                | Unit Price   | Total                | Unit Price  | Total                | Unit Price  | Total                | Unit Price  | Total                | Unit Price    | Total                |
| <b>I. IRWD CAPITAL</b>                                    |   |  |      |            |                    |             |                      |              |                      |             |                      |             |                      |             |                      |               |                      |
| <b>A. GENERAL - IRWD CAPITAL ITEMS</b>                    |   |  |      |            |                    |             |                      |              |                      |             |                      |             |                      |             |                      |               |                      |
| 1   | MOBILIZATION (NOT TO EXCEED 2% OF CONTRACT PRICE OF SECTIONS A-D)   | 1  | LS   | \$6,400.00 | \$6,400.00         | \$750.00    | \$ 750.00            | \$ 10,000.00 | \$ 10,000.00         | \$5,000.00  | \$ 5,000.00          | \$25,000.00 | \$ 25,000.00         | \$1,500.00  | \$ 1,500.00          | \$15,000.00   | \$ 15,000.00         |
| 2   | PAYMENT AND PERFORMANCE BONDS - (SECTIONS A-D)  | 1  | LS   | \$3,200.00 | \$3,200.00         | \$7,471.00  | \$ 7,471.00          | \$ 8,600.00  | \$ 8,600.00          | \$7,000.00  | \$ 7,000.00          | \$20,000.00 | \$ 20,000.00         | \$7,800.00  | \$ 7,800.00          | \$18,900.00   | \$ 18,900.00         |
| 3   | DEVELOP CONSTRUCTION WATER (SECTIONS A-D)   | 1  | LS   | \$4,800.00 | \$4,800.00         | \$750.00    | \$ 750.00            | \$ 1,000.00  | \$ 1,000.00          | \$5,000.00  | \$ 5,000.00          | \$5,000.00  | \$ 5,000.00          | \$2,000.00  | \$ 2,000.00          | \$5,000.00    | \$ 5,000.00          |
| 4   | TRAFFIC CONTROL (SECTIONS A-D) - NOT SHOWN ON PROJECT TRAFFIC CONTROL PLAN  | 1  | LS   | \$4,800.00 | \$4,800.00         | \$10,000.00 | \$ 10,000.00         | \$ 6,500.00  | \$ 6,500.00          | \$2,000.00  | \$ 2,000.00          | \$15,000.00 | \$ 15,000.00         | \$2,500.00  | \$ 2,500.00          | \$19,000.00   | \$ 19,000.00         |
| <b>GENERAL - IRWD CAPITAL ITEMS Subtotal</b>              |   |  |      |            | <b>\$19,200.00</b> |             | <b>\$18,971.00</b>   |              | <b>\$26,100.00</b>   |             | <b>\$19,000.00</b>   |             | <b>\$65,000.00</b>   |             | <b>\$13,800.00</b>   |               | <b>\$57,000.00</b>   |
| <b>B. IRWD SANITARY SEWER CAPITAL IMPROVEMENTS</b>        |   |  |      |            |                    |             |                      |              |                      |             |                      |             |                      |             |                      |               |                      |
| 5   | SAWCUT, REMOVE, DISPOSE AND REPLACE EXISTING PAVEMENT PER CITY OF IRVINE STD 223, ALT "A"   | 122  | LF   | \$5.00     | \$610.00           | \$35.00     | \$ 4,270.00          | \$ 45.00     | \$ 5,490.00          | \$88.00     | \$ 10,736.00         | \$100.00    | \$ 12,200.00         | \$320.00    | \$ 46,360.00         | \$56.00       | \$ 6,832.00          |
| 6   | CONSTRUCT 15" SDR-35 PVC SEWER MAIN W/ BEDDING PER IRWD STD NO S-6  | 122  | LF   | \$79.00    | \$9,638.00         | \$488.00    | \$ 56,836.00         | \$ 375.00    | \$ 45,750.00         | \$284.00    | \$ 34,648.00         | \$375.00    | \$ 45,750.00         | \$320.00    | \$ 39,040.00         | \$389.00      | \$ 46,878.00         |
| 7   | CONSTRUCT 48" MANHOLE W/ T-LOCK LINER, RAVEN COATING, OR ZEBRON PER IRWD STD NO S-1 & IRWD STD SPECIFICATIONS   | 1  | EA   | \$4,000.00 | \$4,000.00         | \$4,200.00  | \$ 4,200.00          | \$ 5,100.00  | \$ 5,100.00          | \$14,123.00 | \$ 14,123.00         | \$25,000.00 | \$ 25,000.00         | \$9,000.00  | \$ 9,000.00          | \$4,000.00    | \$ 4,000.00          |
| 8   | CONSTRUCT 60" MANHOLE W/ T-LOCK LINER, RAVEN COATING, OR ZEBRON PER IRWD STD NO S-1 & IRWD STD SPECIFICATIONS   | 1  | EA   | \$6,500.00 | \$6,500.00         | \$7,200.00  | \$ 7,200.00          | \$ 12,000.00 | \$ 12,000.00         | \$18,945.00 | \$ 18,945.00         | \$35,000.00 | \$ 35,000.00         | \$13,000.00 | \$ 13,000.00         | \$8,788.00    | \$ 8,788.00          |
| 9   | CHANNEL MANHOLE BASE PER DETAIL ON PLAN   | 1  | EA   | \$8,297.00 | \$8,297.00         | \$750.00    | \$ 750.00            | \$ 5,500.00  | \$ 5,500.00          | \$1,000.00  | \$ 1,000.00          | \$15,000.00 | \$ 15,000.00         | \$2,500.00  | \$ 2,500.00          | \$3,500.00    | \$ 3,500.00          |
| 10  | INSTALL TEMP TERMINAL CLEANOUT PER IRWD STD S-5   | 1  | EA   | \$650.00   | \$650.00           | \$1,200.00  | \$ 1,200.00          | \$ 950.00    | \$ 950.00            | \$1,005.00  | \$ 1,005.00          | \$5,000.00  | \$ 5,000.00          | \$850.00    | \$ 850.00            | \$1,500.00    | \$ 1,500.00          |
| 11  | PREMIUM FOR STAGING OF SEWER CONSTRUCTION AS REQUIRED BY PROJECT MILESTONES   | 1  | LS   | \$5,000.00 | \$5,000.00         | \$2,000.00  | \$ 2,000.00          | \$ 4,900.00  | \$ 4,900.00          | \$3,000.00  | \$ 3,000.00          | \$25,000.00 | \$ 25,000.00         | \$2,000.00  | \$ 2,000.00          | \$10,000.00   | \$ 10,000.00         |
| <b>IRWD SANITARY SEWER CAPITAL IMPROVEMENTS Sub-Total</b> |   |  |      |            | <b>\$34,695.00</b> |             | <b>\$79,156.00</b>   |              | <b>\$79,690.00</b>   |             | <b>\$83,457.00</b>   |             | <b>\$162,950.00</b>  |             | <b>\$112,750.00</b>  |               | <b>\$84,198.00</b>   |
| <b>C. IRWD DOMESTIC WATER CAPITAL IMPROVEMENTS</b>        |   |  |      |            |                    |             |                      |              |                      |             |                      |             |                      |             |                      |               |                      |
| 12  | SAWCUT, REMOVE, DISPOSE AND REPLACE EXISTING PAVEMENT PER CITY OF IRVINE STD 223, ALT "A"   | 1,289  | LF   | \$5.00     | \$6,445.00         | \$35.00     | \$ 45,115.00         | \$ 45.00     | \$ 58,005.00         | \$88.00     | \$ 113,432.00        | \$100.00    | \$ 128,900.00        | \$320.00    | \$ 412,480.00        | \$56.00       | \$ 72,184.00         |
| 13  | CONST 12" AWWA C-900 PVC, DR14 WATER LINE W/ TRENCH & BEDDING PER IRWD STD NO W-17  | 1,096  | LF   | \$51.00    | \$55,896.00        | \$200.00    | \$ 219,200.00        | \$ 125.00    | \$ 137,000.00        | \$69.00     | \$ 75,624.00         | \$125.00    | \$ 137,000.00        | \$280.00    | \$ 305,880.00        | \$289.00      | \$ 316,744.00        |
| 14  | CONST 12" DIP CL 350 SPOOL, FEXFE, W/ TRENCH & BEDDING PER IRWD STD NO W-17   | 1  | EA   | \$75.00    | \$75.00            | \$1,500.00  | \$ 1,500.00          | \$ 1,500.00  | \$ 1,500.00          | \$2,309.00  | \$ 2,309.00          | \$3,500.00  | \$ 3,500.00          | \$1,000.00  | \$ 1,000.00          | \$1,800.00    | \$ 1,800.00          |
| 15  | INSTALL 12" BUTTERFLY VALVE, CL 150 FLD, VALVE BOX PER IRWD STD NO W-22   | 1  | EA   | \$2,500.00 | \$2,500.00         | \$2,600.00  | \$ 2,600.00          | \$ 2,800.00  | \$ 2,800.00          | \$2,100.00  | \$ 2,100.00          | \$3,600.00  | \$ 3,600.00          | \$3,500.00  | \$ 3,500.00          | \$2,875.00    | \$ 2,875.00          |
| 16  | INSTALL 20"x12" D1 ECCENTRIC REDUCER (SOFFIT FLAT), FLD   | 1  | EA   | \$1,845.00 | \$1,845.00         | \$500.00    | \$ 500.00            | \$ 950.00    | \$ 950.00            | \$3,247.00  | \$ 3,247.00          | \$5,000.00  | \$ 5,000.00          | \$1,000.00  | \$ 1,000.00          | \$2,500.00    | \$ 2,500.00          |
| 17  | INSTALL 12" D1 BEND WITH THRUST BLOCK PER IRWD STD W-16   | 8  | EA   | \$350.00   | \$2,800.00         | \$250.00    | \$ 2,000.00          | \$ 450.00    | \$ 3,600.00          | \$893.00    | \$ 7,144.00          | \$1,000.00  | \$ 8,000.00          | \$750.00    | \$ 6,000.00          | \$650.00      | \$ 5,200.00          |
| 18  | INSTALL 12" DI FEXFO ADAPTER  | 2  | EA   | \$250.00   | \$500.00           | \$250.00    | \$ 500.00            | \$ 410.00    | \$ 820.00            | \$608.00    | \$ 1,216.00          | \$800.00    | \$ 1,600.00          | \$350.00    | \$ 700.00            | \$500.00      | \$ 1,000.00          |
| 19  | INSTALL 1" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY PER IRWD STD NO W-11  | 1  | EA   | \$2,000.00 | \$2,000.00         | \$3,500.00  | \$ 3,500.00          | \$ 4,500.00  | \$ 4,500.00          | \$3,765.00  | \$ 3,765.00          | \$3,500.00  | \$ 3,500.00          | \$1,500.00  | \$ 1,500.00          | \$6,000.00    | \$ 6,000.00          |
| 20  | INSTALL 2" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY PER IRWD STD NO W-11  | 2  | EA   | \$2,000.00 | \$4,000.00         | \$4,500.00  | \$ 9,000.00          | \$ 6,800.00  | \$ 13,600.00         | \$4,681.00  | \$ 9,362.00          | \$7,500.00  | \$ 15,000.00         | \$2,000.00  | \$ 4,000.00          | \$7,500.00    | \$ 15,000.00         |
| 21  | INSTALL TEMPORARY FLUSH-OUT ASSEMBLY PER IRWD STD W-13  | 2  | EA   | \$2,170.00 | \$4,340.00         | \$1,500.00  | \$ 3,000.00          | \$ 1,500.00  | \$ 3,000.00          | \$3,475.00  | \$ 6,950.00          | \$3,500.00  | \$ 7,000.00          | \$1,000.00  | \$ 2,000.00          | \$1,800.00    | \$ 3,600.00          |
| 22  | INSTALL 12"x12"x12" D1 CUT-IN TEE FOR PVC, WITH 12" BUTTERFLY VALVES, CL 150, FLD, W/ THRUST BLOCK PER IRWD STD NOS W-16 & W-19 (LIMIT ONE VALVE ON MAINLINE)   | 1  | EA   | \$5,978.00 | \$5,978.00         | \$6,500.00  | \$ 6,500.00          | \$ 7,500.00  | \$ 7,500.00          | \$9,386.00  | \$ 9,386.00          | \$15,000.00 | \$ 15,000.00         | \$8,500.00  | \$ 8,500.00          | \$30,000.00   | \$ 30,000.00         |
| 23  | REMOVE EXIST AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY   | 2  | EA   | \$1,000.00 | \$2,000.00         | \$2,000.00  | \$ 4,000.00          | \$ 1,500.00  | \$ 3,000.00          | \$1,208.00  | \$ 2,416.00          | \$5,000.00  | \$ 10,000.00         | \$2,000.00  | \$ 4,000.00          | \$2,000.00    | \$ 4,000.00          |
| 24  | REMOVE BLIND FLANGE & JOIN EXIST 20" CML&CSP  | 1  | EA   | \$1,000.00 | \$1,000.00         | \$2,500.00  | \$ 2,500.00          | \$ 5,000.00  | \$ 5,000.00          | \$1,978.00  | \$ 1,978.00          | \$15,000.00 | \$ 15,000.00         | \$2,000.00  | \$ 2,000.00          | \$2,000.00    | \$ 2,000.00          |
| <b>IRWD DOMESTIC WATER CAPITAL IMPROVEMENTS Sub-Total</b> |   |  |      |            | <b>\$89,379.00</b> |             | <b>\$ 289,815.00</b> |              | <b>\$ 240,675.00</b> |             | <b>\$ 238,729.00</b> |             | <b>\$ 352,400.00</b> |             | <b>\$ 753,580.00</b> |               | <b>\$ 482,863.00</b> |
| <b>D. IRWD RECYCLED WATER CAPITAL IMPROVEMENTS</b>        |   |  |      |            |                    |             |                      |              |                      |             |                      |             |                      |             |                      |               |                      |
| 25  | SAWCUT, REMOVE, DISPOSE AND REPLACE EXISTING PAVEMENT PER CITY OF IRVINE STD 223, ALT "A"   | 425  | LF   | \$5.00     | \$2,125.00         | \$35.00     | \$ 14,875.00         | \$ 45.00     | \$ 19,125.00         | \$88.00     | \$ 37,400.00         | \$100.00    | \$ 42,500.00         | \$400.00    | \$ 170,000.00        | \$56.00       | \$ 23,800.00         |
| 26  | CONST 6" AWWA C-900 PURPLE PVC, DR14, W/ TRENCH & BEDDING PER IRWD STD NO W-17  | 323  | LF   | \$32.00    | \$10,336.00        | \$175.00    | \$ 56,525.00         | \$ 105.00    | \$ 33,915.00         | \$93.00     | \$ 30,039.00         | \$55.00     | \$ 17,765.00         | \$380.00    | \$ 116,280.00        | \$225.00      | \$ 72,675.00         |
| 27  | CONST 16" AWWA C-905 PURPLE PVC, DR18, W/ TRENCH & BEDDING PER IRWD STD NO W-17   | 110  | LF   | \$79.00    | \$8,690.00         | \$225.00    | \$ 24,750.00         | \$ 250.00    | \$ 27,500.00         | \$184.00    | \$ 20,240.00         | \$125.00    | \$ 13,750.00         | \$420.00    | \$ 46,200.00         | \$289.00      | \$ 32,860.00         |
| 28  | CONST 6" DIP CL350, SPOOL, FEXFE, W/ TRENCH & BEDDING PER IRWD STD NO W-17  | 1  | EA   | \$600.00   | \$600.00           | \$3,000.00  | \$ 3,000.00          | \$ 800.00    | \$ 800.00            | \$750.00    | \$ 750.00            | \$1,500.00  | \$ 1,500.00          | \$2,000.00  | \$ 2,000.00          | \$500.00      | \$ 500.00            |
| 29  | HOT TAP TO EXISTING 48" CCP RECYCLED WATER LINE. INSTALL 48"x6" TAPPING SLEEVE (ROMAC FTS 445 OR EQUIVALENT) & 6" TAPPING VALVE, FEXFE (CL 150), W/ VALVE BOX PER IRWD STD W-22, IRWD STD SPECS, AWWA M9 MANUAL & DETAIL ON PLANS | 2  | EA   | \$4,613.00 | \$9,226.00         | \$7,000.00  | \$ 14,000.00         | \$ 20,000.00 | \$ 40,000.00         | \$8,000.00  | \$ 16,000.00         | \$25,000.00 | \$ 50,000.00         | \$8,500.00  | \$ 17,000.00         | \$50,000.00   | \$ 100,000.00        |

D-1

EXHIBIT "D"

FPC SPREAD

LOW BID

NON-RESPONSIVE BID

| Item | Description   | Engineer's Cost Estimate<br>Irvine Boulevard |      |                     |             | FYDAQ               |              | L & S               |              | KANA                |              | CLEARWATER          |              | KENNEDY               |              | YOUNG & ASSOC       |              |
|------|---|--|------|---------------------|-------------|---------------------|--------------|---------------------|--------------|---------------------|--------------|---------------------|--------------|-----------------------|--------------|---------------------|--------------|
|      |   | Estimated<br>Quantity                        | Unit | Unit Price          | Total       | Unit Price          | Total        | Unit Price          | Total        | Unit Price          | Total        | Unit Price          | Total        | Unit Price            | Total        | Unit Price          | Total        |
| 30   | COLD TAP TO EXISTING 48" CCP RECYCLED WATER LINE. INSTALL 48"x16" TAPPING SLEEVE (ROMAC FTS445 OR EQUIVALENT) & 16" BUTTERFLY VALVE, F&E (CL 150), W/ VALVE BOX PER IRWD STD W-22, IRWD STD SPECS. AWWA M9 MANUAL & DETAIL ON PLANS | 1 EA   |      | \$30,750.00         | \$30,750.00 | \$10,000.00         | \$ 10,000.00 | \$ 15,000.00        | \$ 15,000.00 | \$12,000.00         | \$ 12,000.00 | \$20,000.00         | \$ 20,000.00 | \$25,000.00           | \$ 25,000.00 | \$75,000.00         | \$ 75,000.00 |
| 31   | INSTALL 6" DI BEND WITH THRUST BLOCK PER IRWD STD W-16  | 4 EA   |      | \$200.00            | \$800.00    | \$150.00            | \$ 600.00    | \$ 350.00           | \$ 1,400.00  | \$314.00            | \$ 1,256.00  | \$500.00            | \$ 2,000.00  | \$850.00              | \$ 3,400.00  | \$300.00            | \$ 1,200.00  |
| 32   | INSTALL 6" DI FEPO ADAPTER  | 1 EA   |      | \$150.00            | \$150.00    | \$150.00            | \$ 150.00    | \$ 250.00           | \$ 250.00    | \$280.00            | \$ 280.00    | \$500.00            | \$ 500.00    | \$500.00              | \$ 500.00    | \$275.00            | \$ 275.00    |
| 33   | INSTALL 16" DI FEPO ADAPTER   | 1 EA   |      | \$300.00            | \$300.00    | \$200.00            | \$ 200.00    | \$ 200.00           | \$ 200.00    | \$1,140.00          | \$ 1,140.00  | \$1,500.00          | \$ 1,500.00  | \$1,200.00            | \$ 1,200.00  | \$1,500.00          | \$ 1,500.00  |
| 34   | INSTALL 2" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY PER IRWD STD. NO. W-11  | 1 EA   |      | \$2,000.00          | \$2,000.00  | \$4,500.00          | \$ 4,500.00  | \$ 6,500.00         | \$ 6,500.00  | \$4,681.00          | \$ 4,681.00  | \$9,500.00          | \$ 9,500.00  | \$2,000.00            | \$ 2,000.00  | \$7,500.00          | \$ 7,500.00  |
| 35   | INSTALL TEMPORARY FLUSH-OUT ASSEMBLY PER IRWD STD. W-13   | 3 EA   |      | \$2,170.00          | \$6,510.00  | \$1,500.00          | \$ 4,500.00  | \$ 1,500.00         | \$ 4,500.00  | \$3,475.00          | \$ 10,425.00 | \$3,500.00          | \$ 10,500.00 | \$1,500.00            | \$ 4,500.00  | \$1,800.00          | \$ 5,400.00  |
|      | <b>IRWD RECYCLED WATER CAPITAL IMPROVEMENTS Sub-Total</b>   |  |      | <b>\$71,487.00</b>  |             | <b>\$132,100.00</b> |              | <b>\$149,190.00</b> |              | <b>\$134,211.00</b> |              | <b>\$189,515.00</b> |              | <b>\$388,080.00</b>   |              | <b>\$320,740.00</b> |              |
|      | <b>TOTAL IRWD CAPITAL PRICE (SECTIONS A-D)</b>  |  |      | <b>\$214,761.00</b> |             | <b>\$331,142.00</b> |              | <b>\$465,655.00</b> |              | <b>\$475,397.00</b> |              | <b>\$749,865.00</b> |              | <b>\$1,268,190.00</b> |              | <b>\$926,741.00</b> |              |
| F.   | <b>SUPPORTING UNIT PRICES</b><br>The following Supporting Unit Prices may be used by Owner at its sole discretion, for the purpose of increasing or decreasing the scope of work  |  |      |                     |             |                     |              |                     |              |                     |              |                     |              |                       |              |                     |              |
| 1    | UNSUITABLE MATERIAL TRENCH OVEREXCAVATION   | 0-5,000 CY                                   |      |                     | \$4.00      |                     | \$ 4.00      |                     | \$30.00      |                     | \$ -         |                     | \$5.25       |                       | \$100.00     |                     |              |
| 2    | UNSUITABLE MATERIAL TRENCH OVEREXCAVATION   | 5,000-25,000 CY                              |      |                     | \$4.00      |                     | \$ 4.00      |                     | \$30.00      |                     | \$ -         |                     | \$4.25       |                       | \$65.00      |                     |              |
| 3    | UNSUITABLE MATERIAL TRENCH OVEREXCAVATION   | 25,000-50,000 CY                             |      |                     | \$4.00      |                     | \$ 4.00      |                     | \$30.00      |                     | \$ -         |                     | \$4.00       |                       | \$65.00      |                     |              |
| 4    | UNCLASSIFIED EXCAVATION   | 0-5,000 CY                                   |      |                     | \$6.00      |                     | \$ 6.00      |                     | \$30.00      |                     | \$ -         |                     | \$15.00      |                       | \$150.00     |                     |              |
| 5    | UNCLASSIFIED EXCAVATION   | 5,000-25,000 CY                              |      |                     | \$6.00      |                     | \$ 6.00      |                     | \$30.00      |                     | \$ -         |                     | \$15.00      |                       | \$125.00     |                     |              |
| 6    | UNCLASSIFIED EXCAVATION   | 25,000-50,000 CY                             |      |                     | \$6.00      |                     | \$ 6.00      |                     | \$30.00      |                     | \$ -         |                     | \$15.00      |                       | \$65.00      |                     |              |
| 7    | SELECT TRENCH BACKFILL  | 0-5,000 CY                                   |      |                     | \$10.00     |                     | \$ 20.00     |                     | \$13.00      |                     | \$ -         |                     | \$15.30      |                       | \$100.00     |                     |              |
| 8    | SELECT TRENCH BACKFILL  | 5,000-25,000 CY                              |      |                     | \$10.00     |                     | \$ 20.00     |                     | \$13.00      |                     | \$ -         |                     | \$15.00      |                       | \$85.00      |                     |              |
| 9    | SELECT TRENCH BACKFILL  | 25,000-50,000 CY                             |      |                     | \$10.00     |                     | \$ 20.00     |                     | \$13.00      |                     | \$ -         |                     | \$14.50      |                       | \$65.00      |                     |              |
| 10   | REMOVE EXISTING ASBESTOS CEMENT PIPE  | 0-1,000 LF                                   |      |                     | \$30.00     |                     | \$ 37.00     |                     | \$35.00      |                     | \$ -         |                     | \$60.00      |                       | \$125.00     |                     |              |
| 11   | REMOVE EXISTING ASBESTOS CEMENT PIPE  | 1,000-5,000 LF                               |      |                     | \$30.00     |                     | \$ 34.00     |                     | \$35.00      |                     | \$ -         |                     | \$40.00      |                       | \$100.00     |                     |              |
| 12   | REMOVE EXISTING ASBESTOS CEMENT PIPE  | 5,000-10,000 LF                              |      |                     | \$30.00     |                     | \$ 32.00     |                     | \$35.00      |                     | \$ -         |                     | \$28.00      |                       | \$85.00      |                     |              |
| 13   | SELECT TRENCH BEDDING   | 0-5,000 CY                                   |      |                     | \$11.00     |                     | \$ 29.00     |                     | \$30.00      |                     | \$ -         |                     | \$27.00      |                       | \$125.00     |                     |              |
| 14   | SELECT TRENCH BEDDING   | 5,000-25,000 CY                              |      |                     | \$11.00     |                     | \$ 29.00     |                     | \$30.00      |                     | \$ -         |                     | \$27.00      |                       | \$100.00     |                     |              |
| 15   | SELECT TRENCH BEDDING   | 25,000-50,000 CY                             |      |                     | \$11.00     |                     | \$ 29.00     |                     | \$30.00      |                     | \$ -         |                     | \$27.00      |                       | \$85.00      |                     |              |
| 16   | WET REMOVALS, SPECIAL HANDLING, EXCAVATION AND RECOMPACTION   | 0-25,000 CY                                  |      |                     | \$20.00     |                     | \$ 25.00     |                     | \$70.00      |                     | \$ -         |                     | \$39.00      |                       | \$80.00      |                     |              |
| 17   | BREAK-UP, REMOVE AND DISPOSE OF IN OWNER'S STOCKPILE (WITHIN 3 MILES OF PROJECT) EXISTING CEMENTED BASE MATERIAL  | 0-5,000 CY                                   |      |                     | \$25.00     |                     | \$ 25.00     |                     | \$75.00      |                     | \$ -         |                     | \$190.00     |                       | \$50.00      |                     |              |
| 18   | ADJUST MANHOLES/CLEANOUT TO INTERIM GRADE   | 1-100 EA                                     |      |                     | \$350.00    |                     | \$ 450.00    |                     | \$380.00     |                     | \$ -         |                     | \$500.00     |                       | \$500.00     |                     |              |
| 19   | ADJUST WATER VALVE BOXES TO INTERIM GRADE   | 1-100 EA                                     |      |                     | \$325.00    |                     | \$ 350.00    |                     | \$200.00     |                     | \$ -         |                     | \$400.00     |                       | \$300.00     |                     |              |
| 20   | CURB/CURB & GUTTER REMOVE & REPLACE (NO TRAFFIC CONTROL)  | 0-500 LF                                     |      |                     | \$25.00     |                     | \$ 42.00     |                     | \$40.00      |                     | \$ -         |                     | \$15.00      |                       | \$50.00      |                     |              |
| 21   | CURB/CURB & GUTTER REMOVE & REPLACE (TRAFFIC CONTROL)   | 0-500 LF                                     |      |                     | \$50.00     |                     | \$ 53.00     |                     | \$60.00      |                     | \$ -         |                     | \$25.00      |                       | \$100.00     |                     |              |
| 22   | SIDEWALK REMOVE AND REPLACE   | 0-2500 SF                                    |      |                     | \$8.00      |                     | \$ 10.00     |                     | \$20.00      |                     | \$ -         |                     | \$18.00      |                       | \$35.00      |                     |              |
| 23   | INSTALL TEMPORARY 18" CSP/HDPE DRAIN PIPE PER CITY OF IRVINE STD PLAN 319 AT END OF RCP   | 0-500 LF                                     |      |                     | \$20.00     |                     | \$ 38.00     |                     | \$48.00      |                     | \$ -         |                     | \$80.00      |                       | \$75.00      |                     |              |
| 24   | INSTALL TEMPORARY 24" CSP/HDPE DRAIN PIPE PER CITY OF IRVINE STD PLAN 319 AT END OF RCP   | 0-500 LF                                     |      |                     | \$22.00     |                     | \$ 48.00     |                     | \$55.00      |                     | \$ -         |                     | \$90.00      |                       | \$80.00      |                     |              |
| 25   | INSTALL TEMPORARY 30" CSP/HDPE DRAIN PIPE PER CITY OF IRVINE STD PLAN 319 AT END OF RCP   | 0-500 LF                                     |      |                     | \$28.00     |                     | \$ 62.00     |                     | \$75.00      |                     | \$ -         |                     | \$95.00      |                       | \$85.00      |                     |              |
| 26   | INSTALL TEMPORARY 24" CSP/HDPE RISER PER CITY OF IRVINE STD PLAN 319  | 0-50 EA                                      |      |                     | \$2,500.00  |                     | \$ 2,700.00  |                     | \$4,000.00   |                     | \$ -         |                     | \$5,800.00   |                       | \$3,000.00   |                     |              |
| 27   | INSTALL TEMPORARY 30" CSP/HDPE RISER PER CITY OF IRVINE STD PLAN 319  | 0-50 EA                                      |      |                     | \$3,000.00  |                     | \$ 3,600.00  |                     | \$5,000.00   |                     | \$ -         |                     | \$7,200.00   |                       | \$3,300.00   |                     |              |
| 28   | INSTALL TEMPORARY 36" CSP/HDPE RISER PER CITY OF IRVINE STD PLAN 319  | 0-50 EA                                      |      |                     | \$3,500.00  |                     | \$ 4,500.00  |                     | \$8,000.00   |                     | \$ -         |                     | \$7,500.00   |                       | \$3,600.00   |                     |              |

D-2

**BID ANALYSIS  
CONTRACT PRICE SCHEDULE (CPS)  
DISTRICT 8 (PLANNING AREA 51) - IRWD CIP IMPROVEMENTS**

CITY OF IRVINE, ORANGE COUNTY, CALIFORNIA  
RIDGE VALLEY, RECYCLED WATER  
IRWD CAPITAL IMPROVEMENT PROGRAM,

| FPC SPREAD<br>LOW BID<br>NON-RESPONSIVE BID   |   | ENGINEERS COST ESTIMATE<br>RIDGE VALLEY |      |            |                     | FYDAQ       |                      | L & S       |                      | KANA         |                      | CLEARWATER   |                      | KENNEDY     |                      | YOUNG & ASSOCIATES |                      |             |
|---|---|---|------|------------|---------------------|-------------|----------------------|-------------|----------------------|--------------|----------------------|--------------|----------------------|-------------|----------------------|--------------------|----------------------|-------------|
| Item  | Description   | Estimated Quantity                      | Unit | Unit Price | Total               | Unit Price  | Total                | Unit Price  | Total                | Unit Price   | Total                | Unit Price   | Total                | Unit Price  | Total                | Unit Price         | Total                |             |
| <b>I. IRWD CAPITAL</b>  |   |   |      |            |                     |             |                      |             |                      |              |                      |              |                      |             |                      |                    |                      |             |
| <b>A. GENERAL - IRWD CAPITAL ITEMS</b>  |   |   |      |            |                     |             |                      |             |                      |              |                      |              |                      |             |                      |                    |                      |             |
| 1   | MOBILIZATION (NOT TO EXCEED 2% OF CONTRACT PRICE OF SECTIONS A-B)   | 1                                       | LS   | \$4,100    | \$4,100             | \$ 750.00   | \$ 750.00            | \$ 4,800.00 | \$ 4,800.00          | \$ 3,000.00  | \$ 3,000.00          | \$ 15,000.00 | \$ 15,000.00         | \$ 1,250.00 | \$ 1,250.00          | \$ 7,000.00        | \$ 7,000.00          |             |
| 2   | PAYMENT AND PERFORMANCE BONDS - (SECTIONS A-B)  | 1                                       | LS   | \$2,050    | \$2,050             | \$ 2,329.50 | \$ 2,329.50          | \$ 4,000.00 | \$ 4,000.00          | \$ 3,500.00  | \$ 3,500.00          | \$ 7,500.00  | \$ 7,500.00          | \$ 4,200.00 | \$ 4,200.00          | \$ 5,300.00        | \$ 5,300.00          |             |
| 3   | DEVELOP CONSTRUCTION WATER (SECTIONS A-B)   | 1                                       | LS   | \$3,075    | \$3,075             | \$ 750.00   | \$ 750.00            | \$ 3,350.00 | \$ 3,350.00          | \$ 3,000.00  | \$ 3,000.00          | \$ 6,000.00  | \$ 6,000.00          | \$ 2,000.00 | \$ 2,000.00          | \$ 4,000.00        | \$ 4,000.00          |             |
| 4   | TRAFFIC CONTROL (SECTIONS A-B) - NOT SHOWN ON PROJECT TRAFFIC CONTROL PLAN  | 1                                       | LS   | \$3,075    | \$3,075             | \$ -        | \$ -                 | \$ 3,650.00 | \$ 3,650.00          | \$ 1,500.00  | \$ 1,500.00          | \$ 2,500.00  | \$ 2,500.00          | \$ 3,000.00 | \$ 3,000.00          | \$ 1,000.00        | \$ 1,000.00          |             |
| <b>GENERAL - IRWD CAPITAL ITEMS Sub-Total</b>   |   |   |      |            | <b>\$12,300</b>     |             | <b>\$ 3,829.50</b>   |             | <b>\$ 15,800.00</b>  |              | <b>\$ 11,000.00</b>  |              | <b>\$ 30,000.00</b>  |             | <b>\$ 10,450.00</b>  |                    | <b>\$ 17,300.00</b>  |             |
|   |   |   |      |            |                     |             | <b>0.00%</b>         |             | <b>75.76%</b>        |              | <b>65.19%</b>        |              | <b>67.24%</b>        |             | <b>65.30%</b>        |                    |                      |             |
| <b>B. IRWD RECYCLED WATER CAPITAL IMPROVEMENTS</b>  |   |   |      |            |                     |             |                      |             |                      |              |                      |              |                      |             |                      |                    |                      |             |
| 5   | REMOVE AND DISPOSE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER   | 1                                       | LS   | \$500.00   | \$500.00            | \$ 2,000.00 | \$ 2,000.00          | \$ 1,730.00 | \$ 1,730.00          | \$ 1,800.00  | \$ 1,800.00          | \$ 5,000.00  | \$ 5,000.00          | \$ 1,000.00 | \$ 1,000.00          | \$ 2,000.00        | \$ 2,000.00          |             |
| 6   | SHUTDOWN, DRAIN, CUT, CAP, REMOVE & SALVAGE EXIST 16" HDPE RECYCLED WATER LINE AND RETURN TO IRWD MICHELSON PLANT | 454                                     | LF   | \$39.50    | \$17,938.00         | \$ 15.00    | \$ 6,810.00          | \$ 21.00    | \$ 9,534.00          | \$ 15.00     | \$ 6,810.00          | \$ 125.00    | \$ 56,750.00         | \$ 35.00    | \$ 15,850.00         | \$ 40.00           | \$ 18,160.00         |             |
| 7   | CONST 16" AWWA C-905 PURPLE PVC, DR18, W/ TRENCH & BEDDING PER RECYCLED WATER LINE PROTECTED IN PLACE             | 1                                       | LS   | \$5,000.00 | \$5,000.00          | \$ 2,500.00 | \$ 2,500.00          | \$ 6,000.00 | \$ 6,000.00          | \$ 5,280.00  | \$ 5,280.00          | \$ 25,000.00 | \$ 25,000.00         | \$ 2,000.00 | \$ 2,000.00          | \$ 20,000.00       | \$ 20,000.00         |             |
| 8   | CONST 6" AWWA C-900 PURPLE PVC, DR14, W/ TRENCH & BEDDING PER IRWD STD NO W-17                                    | 3,074                                   | LF   | \$32.00    | \$98,368.00         | \$ 18.00    | \$ 55,332.00         | \$ 22.50    | \$ 69,165.00         | \$ 23.00     | \$ 70,702.00         | \$ 30.00     | \$ 92,220.00         | \$ 35.00    | \$ 107,070.00        | \$ 25.00           | \$ 76,850.00         |             |
| 9   | CONST 12" AWWA C-900 PURPLE PVC, DR14, W/ TRENCH & BEDDING PER IRWD STD NO W-17                                   | 442                                     | LF   | \$51.00    | \$22,542.00         | \$ 40.00    | \$ 17,680.00         | \$ 45.00    | \$ 19,890.00         | \$ 62.00     | \$ 27,404.00         | \$ 75.00     | \$ 33,150.00         | \$ 65.00    | \$ 28,730.00         | \$ 44.00           | \$ 19,448.00         |             |
| 10  | CONST 16" AWWA C-905 PURPLE PVC, DR18, W/ TRENCH & BEDDING PER IRWD STD NO W-17                                   | 98                                      | LF   | \$79.00    | \$7,742.00          | \$ 125.50   | \$ 12,289.00         | \$ 81.00    | \$ 5,978.00          | \$ 95.00     | \$ 9,310.00          | \$ 105.00    | \$ 10,290.00         | \$ 75.00    | \$ 7,350.00          | \$ 80.00           | \$ 6,880.00          |             |
| 11  | INSTALL 6" BUTTERFLY VALVE, CL 150, FLGD, VALVE BOX PER IRWD STD W-22   | 3                                       | EA   | \$1,500.00 | \$4,500.00          | \$ 1,496.50 | \$ 4,489.50          | \$ 1,500.00 | \$ 4,500.00          | \$ 1,800.00  | \$ 5,400.00          | \$ 2,500.00  | \$ 7,500.00          | \$ 1,800.00 | \$ 5,400.00          | \$ 1,100.00        | \$ 3,300.00          |             |
| 12  | INSTALL 12" GATE VALVE, CL 150, FLGD, VALVE BOX PER IRWD STD W-22   | 2                                       | EA   | \$2,500.00 | \$5,000.00          | \$ 2,810.00 | \$ 5,620.00          | \$ 3,900.00 | \$ 7,800.00          | \$ 3,272.00  | \$ 6,544.00          | \$ 3,500.00  | \$ 7,000.00          | \$ 3,000.00 | \$ 6,000.00          | \$ 2,900.00        | \$ 5,800.00          |             |
| 13  | INSTALL 16" BUTTERFLY VALVE, CL 150, FLGD, VALVE BOX PER IRWD STD W-22  | 1                                       | EA   | \$5,170.00 | \$5,170.00          | \$ 4,066.00 | \$ 4,066.00          | \$ 5,100.00 | \$ 5,100.00          | \$ 7,438.00  | \$ 7,438.00          | \$ 8,500.00  | \$ 8,500.00          | \$ 2,800.00 | \$ 2,800.00          | \$ 7,900.00        | \$ 7,900.00          |             |
| 14  | INSTALL 6"X8"X4" D1 TEE, FLGD, W/ THRUST BLOCK PER IRWD STD W-16  | 2                                       | EA   | \$900.00   | \$900.00            | \$ 150.00   | \$ 300.00            | \$ 300.00   | \$ 600.00            | \$ 425.00    | \$ 850.00            | \$ 500.00    | \$ 1,000.00          | \$ 500.00   | \$ 1,000.00          | \$ 800.00          | \$ 1,600.00          |             |
| 15  | INSTALL 12"X12"X12" D1 TEE, FLGD, W/ THRUST BLOCK PER IRWD STD W-16   | 1                                       | EA   | \$450.00   | \$450.00            | \$ 150.00   | \$ 150.00            | \$ 600.00   | \$ 600.00            | \$ 1,048.00  | \$ 1,048.00          | \$ 2,000.00  | \$ 2,000.00          | \$ 900.00   | \$ 900.00            | \$ 1,950.00        | \$ 1,950.00          |             |
| 16  | INSTALL 6" D1 BEND WITH THRUST BLOCK PER IRWD STD W-16  | 7                                       | EA   | \$200.00   | \$1,400.00          | \$ 150.00   | \$ 1,050.00          | \$ 220.00   | \$ 1,540.00          | \$ 314.00    | \$ 2,198.00          | \$ 500.00    | \$ 3,500.00          | \$ 500.00   | \$ 3,500.00          | \$ 350.00          | \$ 2,450.00          |             |
| 17  | INSTALL 12" D1 BEND WITH THRUST BLOCK PER IRWD STD W-16   | 2                                       | EA   | \$350.00   | \$700.00            | \$ 150.00   | \$ 300.00            | \$ 250.00   | \$ 500.00            | \$ 690.00    | \$ 1,380.00          | \$ 1,000.00  | \$ 2,000.00          | \$ 850.00   | \$ 1,700.00          | \$ 500.00          | \$ 1,000.00          |             |
| 18  | INSTALL 16" D1 BEND WITH THRUST BLOCK PER IRWD STD W-16   | 2                                       | EA   | \$400.00   | \$800.00            | \$ 150.00   | \$ 300.00            | \$ 1,100.00 | \$ 2,200.00          | \$ 1,990.00  | \$ 3,980.00          | \$ 1,900.00  | \$ 3,800.00          | \$ 750.00   | \$ 1,500.00          | \$ 800.00          | \$ 1,600.00          |             |
| 19  | INSTALL 12"X6" D1 ECCENTRIC REDUCER, FLGD   | 1                                       | EA   | \$1,845.00 | \$1,845.00          | \$ 150.00   | \$ 150.00            | \$ 550.00   | \$ 550.00            | \$ 600.00    | \$ 600.00            | \$ 1,000.00  | \$ 1,000.00          | \$ 600.00   | \$ 600.00            | \$ 2,000.00        | \$ 2,000.00          |             |
| 20  | INSTALL 16"X12" D1 ECCENTRIC REDUCER, FLGD  | 1                                       | EA   | \$1,845.00 | \$1,845.00          | \$ 150.00   | \$ 150.00            | \$ 850.00   | \$ 850.00            | \$ 1,414.00  | \$ 1,414.00          | \$ 1,500.00  | \$ 1,500.00          | \$ 700.00   | \$ 700.00            | \$ 500.00          | \$ 500.00            |             |
| 21  | INSTALL 6" DI FEPO ADAPTER  | 5                                       | EA   | \$150.00   | \$750.00            | \$ 150.00   | \$ 750.00            | \$ 170.00   | \$ 850.00            | \$ 290.00    | \$ 1,450.00          | \$ 250.00    | \$ 1,250.00          | \$ 250.00   | \$ 1,250.00          | \$ 1,250.00        | \$ 6,250.00          |             |
| 22  | INSTALL 12" DI FEPO ADAPTER   | 1                                       | EA   | \$250.00   | \$250.00            | \$ 150.00   | \$ 150.00            | \$ 220.00   | \$ 220.00            | \$ 620.00    | \$ 620.00            | \$ 500.00    | \$ 500.00            | \$ 450.00   | \$ 450.00            | \$ 300.00          | \$ 300.00            |             |
| 23  | INSTALL 16" DI FEPO ADAPTER   | 2                                       | EA   | \$300.00   | \$600.00            | \$ 150.00   | \$ 300.00            | \$ 350.00   | \$ 700.00            | \$ 1,140.00  | \$ 2,280.00          | \$ 1,250.00  | \$ 2,500.00          | \$ 550.00   | \$ 1,100.00          | \$ 900.00          | \$ 1,800.00          |             |
| 24  | INSTALL 1" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY PER IRWD STD NO W-11                                      | 3                                       | EA   | \$1,500.00 | \$4,500.00          | \$ 2,873.50 | \$ 8,620.50          | \$ 3,000.00 | \$ 9,000.00          | \$ 3,765.00  | \$ 11,295.00         | \$ 3,500.00  | \$ 10,500.00         | \$ 1,200.00 | \$ 3,600.00          | \$ 2,900.00        | \$ 8,700.00          |             |
| 25  | INSTALL 2" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY PER IRWD STD NO W-11                                      | 1                                       | EA   | \$2,000.00 | \$2,000.00          | \$ 3,975.00 | \$ 3,975.00          | \$ 3,850.00 | \$ 3,850.00          | \$ 4,387.00  | \$ 4,387.00          | \$ 7,500.00  | \$ 7,500.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 3,100.00        | \$ 3,100.00          |             |
| 26  | INSTALL 2" AIRVAC PER IRWD STD NO W-11 CONNECT TO 16" DIP PER IRWD STD NO W-3                                     | 1                                       | EA   | \$2,000.00 | \$2,000.00          | \$ 4,200.00 | \$ 4,200.00          | \$ 4,100.00 | \$ 4,100.00          | \$ 4,387.00  | \$ 4,387.00          | \$ 9,500.00  | \$ 9,500.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 3,100.00        | \$ 3,100.00          |             |
| 27  | INSTALL 4" BLOWOFF/BOTTOM DRAIN ASSEMBLY PER IRWD STD W-14  | 1                                       | EA   | \$2,000.00 | \$2,000.00          | \$ 4,078.00 | \$ 4,078.00          | \$ 4,100.00 | \$ 4,100.00          | \$ 11,069.00 | \$ 11,069.00         | \$ 7,500.00  | \$ 7,500.00          | \$ 4,000.00 | \$ 4,000.00          | \$ 4,800.00        | \$ 4,800.00          |             |
| 28  | INSTALL 4 WIRE CPTS ASSEMBLY PER IRWD STD NO CP-2   | 1                                       | EA   | \$1,000.00 | \$1,000.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 2,000.00 | \$ 2,000.00          | \$ 1,931.00  | \$ 1,931.00          | \$ 2,500.00  | \$ 2,500.00          | \$ 1,000.00 | \$ 1,000.00          | \$ 4,895.00        | \$ 4,895.00          |             |
| 29  | REMOVE TEMPORARY FLUSH-OUT ASSEMBLY AND JOIN EXISTING RW PIPE   | 1                                       | EA   | \$5,978.00 | \$5,978.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 2,800.00 | \$ 2,800.00          | \$ 1,890.00  | \$ 1,890.00          | \$ 3,500.00  | \$ 3,500.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 1,800.00        | \$ 1,800.00          |             |
| 30  | INSTALL 16" D1 SPOOL, FLGD (LENGTH AS REQUIRED)   | 3                                       | EA   | \$500.00   | \$1,500.00          | \$ 3,000.00 | \$ 9,000.00          | \$ 2,850.00 | \$ 8,550.00          | \$ 3,475.00  | \$ 10,425.00         | \$ 5,000.00  | \$ 15,000.00         | \$ 850.00   | \$ 2,550.00          | \$ 1,300.00        | \$ 3,900.00          |             |
| 31  | CUT & JOIN EXIST 16" HDPE ABOVE GROUND PIPE W/ 16" HDPE FLANGE ADAPTER & D1 BACKUP RING                           | 1                                       | EA   | \$5,978.00 | \$5,978.00          | \$ 3,500.00 | \$ 3,500.00          | \$ 7,000.00 | \$ 7,000.00          | \$ 4,798.00  | \$ 4,798.00          | \$ 3,500.00  | \$ 3,500.00          | \$ 2,500.00 | \$ 2,500.00          | \$ 5,000.00        | \$ 5,000.00          |             |
| 32  | REMOVE EXISTING BLOWOFF ASSEMBLY AND JOIN EXISTING RW PIPE  | 1                                       | EA   | \$1,085.00 | \$1,085.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 2,600.00 | \$ 2,600.00          | \$ 2,481.00  | \$ 2,481.00          | \$ 3,500.00  | \$ 3,500.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 1,500.00        | \$ 1,500.00          |             |
| 33  | REMOVE EXIST 4" BLOWOFF/BOTTOM DRAIN ASSEMBLY   | 1                                       | EA   | \$1,085.00 | \$1,085.00          | \$ 2,500.00 | \$ 2,500.00          | \$ 1,600.00 | \$ 1,600.00          | \$ 2,584.00  | \$ 2,584.00          | \$ 2,500.00  | \$ 2,500.00          | \$ 800.00   | \$ 800.00            | \$ 2,000.00        | \$ 2,000.00          |             |
| 34  | REMOVE EXIST 1" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY  | 2                                       | EA   | \$1,000.00 | \$2,000.00          | \$ 1,500.00 | \$ 3,000.00          | \$ 900.00   | \$ 1,800.00          | \$ 1,292.00  | \$ 2,584.00          | \$ 2,500.00  | \$ 5,000.00          | \$ 500.00   | \$ 1,000.00          | \$ 1,500.00        | \$ 3,000.00          | \$ 3,000.00 |
| 35  | REMOVE EXIST 2" AIR RELEASE AND VACUUM RELIEF VALVE ASSEMBLY  | 1                                       | EA   | \$1,000.00 | \$1,000.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 900.00   | \$ 900.00            | \$ 1,292.00  | \$ 1,292.00          | \$ 2,500.00  | \$ 2,500.00          | \$ 500.00   | \$ 500.00            | \$ 1,800.00        | \$ 1,800.00          |             |
| 36  | REMOVE EXIST 4 WIRE CPTS ASSEMBLY   | 1                                       | EA   | \$500.00   | \$500.00            | \$ 1,000.00 | \$ 1,000.00          | \$ 900.00   | \$ 900.00            | \$ 648.00    | \$ 648.00            | \$ 2,500.00  | \$ 2,500.00          | \$ 1,500.00 | \$ 1,500.00          | \$ 2,000.00        | \$ 2,000.00          |             |
| <b>IRWD RECYCLED WATER CAPITAL IMPROVEMENTS Sub-Total</b>   |   |   |      |            | <b>\$206,621.00</b> |             | <b>\$ 160,276.00</b> |             | <b>\$ 187,507.00</b> |              | <b>\$ 217,216.00</b> |              | <b>\$ 339,160.00</b> |             | <b>\$ 273,090.00</b> |                    | <b>\$ 222,573.00</b> |             |
|   |   |   |      |            |                     |             | <b>0.00%</b>         |             | <b>79.25%</b>        |              | <b>66.22%</b>        |              | <b>67.25%</b>        |             | <b>61.48%</b>        |                    |                      |             |
| <b>TOTAL IRWD CAPITAL PRICE (SECTIONS A-B)</b>  |   |   |      |            | <b>\$218,921.00</b> |             | <b>\$ 164,099.50</b> |             | <b>\$ 200,307.00</b> |              | <b>\$ 238,216.00</b> |              | <b>\$ 369,160.00</b> |             | <b>\$ 284,340.00</b> |                    | <b>\$ 239,873.00</b> |             |
|   |   |   |      |            |                     |             | <b>0.00%</b>         |             | <b>75.89%</b>        |              | <b>62.07%</b>        |              | <b>62.60%</b>        |             | <b>59.27%</b>        |                    |                      |             |
| <b>D. SUPPORTING UNIT PRICES</b>  |   |   |      |            |                     |             |                      |             |                      |              |                      |              |                      |             |                      |                    |                      |             |
| The following Supporting Unit Prices may be used by Owner at its sole discretion, for the purpose of increasing or decreasing the scope of work |   |   |      |            |                     |             |                      |             |                      |              |                      |              |                      |             |                      |                    |                      |             |
| 1   | UNSUITABLE MATERIAL TRENCH OVEREXCAVATION   | 0.5-0.00                                | CY   |            |                     | \$ 4.00     |                      | \$ 4.00     |                      | \$ 30.00     |                      | \$ -         |                      | \$ 5.25     |                      | \$ 100.00          |                      |             |

E-1

EXHIBIT "E"

FPC SPREAD  
**LOW BID**  
 NON-RESPONSIVE BID

| Item | Description  | ENGINEERS COST ESTIMATE<br>RIDGE VALLEY |      |            |       | FYDAQ       |       | L & S      |       | KANA       |       | CLEARWATER |       | KENNEDY     |       | YOUNG & ASSOCIATES |       |
|------|--|---|------|------------|-------|-------------|-------|------------|-------|------------|-------|------------|-------|-------------|-------|--------------------|-------|
|      |  | Estimated Quantity                      | Unit | Unit Price | Total | Unit Price  | Total | Unit Price | Total | Unit Price | Total | Unit Price | Total | Unit Price  | Total | Unit Price         | Total |
| 2.   | UNSUITABLE MATERIAL TRENCH OVEREXCAVATION  | 5,000-25,000                            | CY   |            |       | \$ 4.00     |       | \$4.00     |       | \$30.00    |       | \$ -       |       | \$ 4.25     |       | \$ 85.00           |       |
| 3.   | UNSUITABLE MATERIAL TRENCH OVEREXCAVATION  | 25,000-50,000                           | CY   |            |       | \$ 4.00     |       | \$4.00     |       | \$30.00    |       | \$ -       |       | \$ 4.00     |       | \$ 85.00           |       |
| 4.   | UNCLASSIFIED EXCAVATION  | 0-5,000                                 | CY   |            |       | \$ 6.00     |       |            |       | \$30.00    |       | \$ -       |       | \$ 15.00    |       | \$ 150.00          |       |
| 5.   | UNCLASSIFIED EXCAVATION  | 5,000-25,000                            | CY   |            |       | \$ 6.00     |       |            |       | \$30.00    |       | \$ -       |       | \$ 15.00    |       | \$ 125.00          |       |
| 6.   | UNCLASSIFIED EXCAVATION  | 25,000-50,000                           | CY   |            |       | \$ 6.00     |       |            |       | \$30.00    |       | \$ -       |       | \$ 15.00    |       | \$ 85.00           |       |
| 7.   | SELECT TRENCH BACKFILL   | 0-5,000                                 | CY   |            |       | \$ 10.00    |       | \$20.00    |       | \$13.00    |       | \$ -       |       | \$ 15.30    |       | \$ 100.00          |       |
| 8.   | SELECT TRENCH BACKFILL   | 5,000-25,000                            | CY   |            |       | \$ 10.00    |       | \$20.00    |       | \$13.00    |       | \$ -       |       | \$ 15.00    |       | \$ 85.00           |       |
| 9.   | SELECT TRENCH BACKFILL   | 25,000-50,000                           | CY   |            |       | \$ 10.00    |       | \$20.00    |       | \$13.00    |       | \$ -       |       | \$ 14.50    |       | \$ 85.00           |       |
| 10.  | REMOVE EXISTING ASBESTOS CEMENT PIPE   | 0-1,000                                 | LF   |            |       | \$ 30.00    |       | \$37.00    |       | \$35.00    |       | \$ -       |       | \$ 60.00    |       | \$ 125.00          |       |
| 11.  | REMOVE EXISTING ASBESTOS CEMENT PIPE   | 1,000-5,000                             | LF   |            |       | \$ 30.00    |       | \$34.00    |       | \$35.00    |       | \$ -       |       | \$ 40.00    |       | \$ 100.00          |       |
| 12.  | REMOVE EXISTING ASBESTOS CEMENT PIPE   | 5,000-10,000                            | LF   |            |       | \$ 30.00    |       | \$32.00    |       | \$35.00    |       | \$ -       |       | \$ 28.00    |       | \$ 85.00           |       |
| 13.  | SELECT TRENCH BEDDING  | 0-5,000                                 | CY   |            |       | \$ 11.00    |       | \$29.00    |       | \$30.00    |       | \$ -       |       | \$ 27.00    |       | \$ 125.00          |       |
| 14.  | SELECT TRENCH BEDDING  | 5,000-25,000                            | CY   |            |       | \$ 11.00    |       | \$29.00    |       | \$30.00    |       | \$ -       |       | \$ 27.00    |       | \$ 100.00          |       |
| 15.  | SELECT TRENCH BEDDING  | 25,000-50,000                           | CY   |            |       | \$ 11.00    |       | \$29.00    |       | \$30.00    |       | \$ -       |       | \$ 27.00    |       | \$ 85.00           |       |
| 16.  | WET REMOVALS SPECIAL HANDLING, EXCAVATION AND RECOMPACTION   | 0-25,000                                | CY   |            |       | \$ 20.00    |       | \$25.00    |       | \$70.00    |       | \$ -       |       | \$ 39.00    |       | \$ 80.00           |       |
| 17.  | BREAK-UP, REMOVE AND DISPOSE OF IN OWNER'S STOCKPILE (WITHIN 3 MILES OF PROJECT) EXISTING CEMENTED BASE MATERIAL | 0-5,000                                 | CY   |            |       | \$ 25.00    |       | \$25.00    |       | \$75.00    |       | \$ -       |       | \$ 190.00   |       | \$ 50.00           |       |
| 18.  | ADJUST MAN-HOLES/CLEANOUT TO INTERIM GRADE   | 1-100                                   | EA   |            |       | \$ 350.00   |       | \$450.00   |       | \$390.00   |       | \$ -       |       | \$ 500.00   |       | \$ 500.00          |       |
| 19.  | ADJUST WATER VALVE BOXES TO INTERIM GRADE  | 1-100                                   | EA   |            |       | \$ 325.00   |       | \$350.00   |       | \$200.00   |       | \$ -       |       | \$ 400.00   |       | \$ 300.00          |       |
| 20.  | CURB/CURB & GUTTER REMOVE & REPLACE (NO TRAFFIC CONTROL)   | 0-500                                   | LF   |            |       | \$ 25.00    |       | \$42.00    |       | \$40.00    |       | \$ -       |       | \$ 15.00    |       | \$ 50.00           |       |
| 21.  | CURB/CURB & GUTTER REMOVE & REPLACE (TRAFFIC CONTROL)  | 0-500                                   | LF   |            |       | \$ 50.00    |       | \$53.00    |       | \$60.00    |       | \$ -       |       | \$ 25.00    |       | \$ 100.00          |       |
| 22.  | SIDEWALK REMOVE AND REPLACE  | 0-2500                                  | SF   |            |       | \$ 6.00     |       | \$10.00    |       | \$20.00    |       | \$ -       |       | \$ 25.00    |       | \$ 35.00           |       |
| 23.  | INSTALL TEMPORARY 18" CSP/HDPE DRAIN PIPE PER CITY OF IRVINE STD PLAN 319 AT END OF RCP                          | 0-500                                   | LF   |            |       | \$ 20.00    |       | \$38.00    |       | \$48.00    |       | \$ -       |       | \$ 80.00    |       | \$ 75.00           |       |
| 24.  | INSTALL TEMPORARY 24" CSP/HDPE DRAIN PIPE PER CITY OF IRVINE STD PLAN 319 AT END OF RCP                          | 0-500                                   | LF   |            |       | \$ 22.00    |       | \$48.00    |       | \$55.00    |       | \$ -       |       | \$ 90.00    |       | \$ 80.00           |       |
| 25.  | INSTALL TEMPORARY 30" CSP/HDPE DRAIN PIPE PER CITY OF IRVINE STD PLAN 319 AT END OF RCP                          | 0-500                                   | LF   |            |       | \$ 26.00    |       | \$52.00    |       | \$75.00    |       | \$ -       |       | \$ 95.00    |       | \$ 85.00           |       |
| 26.  | INSTALL TEMPORARY 24" CSP/HDPE RISER PER CITY OF IRVINE STD PLAN 319   | 0-50                                    | EA   |            |       | \$ 2,500.00 |       | \$2,700.00 |       | \$4,000.00 |       | \$ -       |       | \$ 5,600.00 |       | \$ 3,000.00        |       |
| 27.  | INSTALL TEMPORARY 30" CSP/HDPE RISER PER CITY OF IRVINE STD PLAN 319   | 0-50                                    | EA   |            |       | \$ 3,000.00 |       | \$3,800.00 |       | \$5,000.00 |       | \$ -       |       | \$ 7,200.00 |       | \$ 3,300.00        |       |
| 28.  | INSTALL TEMPORARY 36" CSP/HDPE RISER PER CITY OF IRVINE STD PLAN 319   | 0-50                                    | EA   |            |       | \$ 3,500.00 |       | \$4,500.00 |       | \$6,000.00 |       | \$ -       |       | \$ 7,500.00 |       | \$ 3,600.00        |       |

# IRVINE RANCH WATER DISTRICT

# EXHIBIT "F"

## Expenditure Authorization

**Project Name:** PA 51 IRVINE BLVD DW FACILITIES  
**EPMS Project No:** 11664 **EA No:** 1  
**Oracle Project No:** 4094  
**Project Manager:** CORTEZ, MALCOLM  
**Project Engineer:** LEW, KELLY  
**Request Date:** October 2, 2012

**ID Split:** Miscellaneous

**Improvement District (ID) Allocations**

| ID No.       | Allocation %  | Source of Funds        |
|--------------|---------------|------------------------|
| 112          | 100.0         | BONDS YET TO BE SOLD** |
| <b>Total</b> | <b>100.0%</b> |                        |

### Summary of Direct Cost Authorizations

|   |           |
|---|-----------|
| <b>Previously Approved EA Requests:</b>     | \$0       |
| <b>This Request:</b>                        | \$453,200 |
| <b>Total EA Requests:</b>                   | \$453,200 |
| <b>Previously Approved Budget:</b>          | \$0       |
| <b>Budget Adjustment Requested this EA:</b> | \$453,200 |
| <b>Updated Budget:</b>                      | \$453,200 |
| <b>Budget Remaining After This EA</b>       | \$0       |

Comments:

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget | Updated Budget   | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|-----------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 1/12  | 9/12   |
| ENGINEERING DESIGN - OUTSIDE             | 25,000           | 0                    | 25,000              | 25,000              | 0               | 25,000           | 1/12  | 9/12   |
| DESIGN STAFF FIELD SUPPORT               | 5,000            | 0                    | 5,000               | 5,000               | 0               | 5,000            | 1/12  | 9/12   |
| ENGINEERING - CA&I IRWD                  | 40,000           | 0                    | 40,000              | 40,000              | 0               | 40,000           | 10/12 | 7/13   |
| ENGINEERING - CA&I OUTSIDE               | 50,000           | 0                    | 50,000              | 50,000              | 0               | 50,000           | 10/12 | 7/13   |
| CONSTRUCTION FIELD SUPPORT               | 5,000            | 0                    | 5,000               | 5,000               | 0               | 5,000            | 10/12 | 7/13   |
| CONSTRUCTION                             | 270,000          | 0                    | 270,000             | 270,000             | 0               | 270,000          | 10/12 | 7/13   |
| LEGAL                                    | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 8/13   |
| <b>Contingency - 10.00% Subtotal</b>     | <b>\$41,200</b>  | <b>\$0</b>           | <b>\$41,200</b>     | <b>\$41,200</b>     | <b>\$0</b>      | <b>\$41,200</b>  |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$453,200</b> | <b>\$0</b>           | <b>\$453,200</b>    | <b>\$453,200</b>    | <b>\$0</b>      | <b>\$453,200</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$117,000        | \$0                  | \$117,000           | \$117,000           | \$0             | \$117,000        |       |        |
| <b>Total</b>                             | <b>\$570,200</b> | <b>\$0</b>           | <b>\$570,200</b>    | <b>\$570,200</b>    | <b>\$0</b>      | <b>\$570,200</b> |       |        |
| <b>Direct Labor</b>                      | <b>\$65,000</b>  | <b>\$0</b>           | <b>\$65,000</b>     | <b>\$65,000</b>     | <b>\$0</b>      | <b>\$65,000</b>  |       |        |

\*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:** Kelly Lew 10/3/12  
**Department Director:** Rain L. Burt 10/4/12  
**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 \$587,000. The above captioned project is further described in the attached staff report and additional documents, if any, which are hereby incorporated by reference. This project is made under Treasury Regulation Section 1.150-

# IRVINE RANCH WATER DISTRICT

## Expenditure Authorization

Project Name: PA 51 IRVINE BLVD SS FACILITIES  
 EPMS Project No: 21664 EA No: 1  
 Oracle Project No: 4095  
 Project Manager: CORTEZ, MALCOLM  
 Project Engineer: LEW, KELLY  
 Request Date: October 2, 2012

ID Split: Miscellaneous

### Improvement District (ID) Allocations

| ID No.       | Allocation %  | Source of Funds        |
|--------------|---------------|------------------------|
| 212          | 100.0         | BONDS YET TO BE SOLD** |
| <b>Total</b> | <b>100.0%</b> |                        |

### Summary of Direct Cost Authorizations

|                                       |                  |
|---------------------------------------|------------------|
| Previously Approved EA Requests:      | \$0              |
| This Request:                         | \$171,600        |
| <b>Total EA Requests:</b>             | <b>\$171,600</b> |
| Previously Approved Budget:           | \$0              |
| Budget Adjustment Requested this EA:  | \$171,600        |
| <b>Updated Budget:</b>                | <b>\$171,600</b> |
| <b>Budget Remaining After This EA</b> | <b>\$0</b>       |

Comments:

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget | Updated Budget   | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|-----------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 10,000           | 0                    | 10,000              | 10,000              | 0               | 10,000           | 1/12  | 9/12   |
| ENGINEERING DESIGN - OUTSIDE             | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 1/12  | 9/12   |
| DESIGN STAFF FIELD SUPPORT               | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 9/12   |
| ENGINEERING - CA&I IRWD                  | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 10/12 | 7/13   |
| ENGINEERING - CA&I OUTSIDE               | 20,000           | 0                    | 20,000              | 20,000              | 0               | 20,000           | 10/12 | 7/13   |
| CONSTRUCTION FIELD SUPPORT               | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 10/12 | 7/13   |
| CONSTRUCTION                             | 90,000           | 0                    | 90,000              | 90,000              | 0               | 90,000           | 10/12 | 7/13   |
| LEGAL                                    | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 8/13   |
| Contingency - 10.00% Subtotal            | \$15,600         | \$0                  | \$15,600            | \$15,600            | \$0             | \$15,600         |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$171,600</b> | <b>\$0</b>           | <b>\$171,600</b>    | <b>\$171,600</b>    | <b>\$0</b>      | <b>\$171,600</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$52,200         | \$0                  | \$52,200            | \$52,200            | \$0             | \$52,200         |       |        |
| <b>Total</b>                             | <b>\$223,800</b> | <b>\$0</b>           | <b>\$223,800</b>    | <b>\$223,800</b>    | <b>\$0</b>      | <b>\$223,800</b> |       |        |
| Direct Labor                             | \$29,000         | \$0                  | \$29,000            | \$29,000            | \$0             | \$29,000         |       |        |

\*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:

*Kelly Lew*

10/13/12

Department Director:

*Ron L. Burton*

10/4/12

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 \$770,000. The above-captioned project is further described in the attached staff report and additional documents, if any, which are hereby incorporated by reference. The project is made under Treasury Regulation Section 1.15

# IRVINE RANCH WATER DISTRICT

## Expenditure Authorization

**Project Name:** PA 51 IRVINE BLVD RW FACILITIES  
**EPMS Project No:** 31664    **EA No:** 1  
**Oracle Project No:** 4096  
**Project Manager:** CORTEZ, MALCOLM  
**Project Engineer:** LEW, KELLY  
**Request Date:** October 2, 2012

**ID Split:** Miscellaneous

**Improvement District (ID) Allocations**

| ID No.       | Allocation %  | Source of Funds        |
|--------------|---------------|------------------------|
| 212          | 100.0         | BONDS YET TO BE SOLD** |
| <b>Total</b> | <b>100.0%</b> |                        |

**Summary of Direct Cost Authorizations**

|   |           |
|---|-----------|
| <b>Previously Approved EA Requests:</b>     | \$0       |
| <b>This Request:</b>                        | \$276,100 |
| <b>Total EA Requests:</b>                   | \$276,100 |
| <b>Previously Approved Budget:</b>          | \$0       |
| <b>Budget Adjustment Requested this EA:</b> | \$276,100 |
| <b>Updated Budget:</b>                      | \$276,100 |
| <b>Budget Remaining After This EA</b>       | \$0       |

**Comments:**

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget | Updated Budget   | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|-----------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 10,000           | 0                    | 10,000              | 10,000              | 0               | 10,000           | 1/12  | 9/12   |
| ENGINEERING DESIGN - OUTSIDE             | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 1/12  | 9/12   |
| DESIGN STAFF FIELD SUPPORT               | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 9/12   |
| ENGINEERING - CA&I IRWD                  | 20,000           | 0                    | 20,000              | 20,000              | 0               | 20,000           | 10/12 | 7/13   |
| ENGINEERING - CA&I OUTSIDE               | 30,000           | 0                    | 30,000              | 30,000              | 0               | 30,000           | 10/12 | 7/13   |
| CONSTRUCTION FIELD SUPPORT               | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 10/12 | 7/13   |
| CONSTRUCTION                             | 170,000          | 0                    | 170,000             | 170,000             | 0               | 170,000          | 10/12 | 7/13   |
| LEGAL                                    | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 8/13   |
| Contingency - 10.00% Subtotal            | <b>\$25,100</b>  | \$0                  | \$25,100            | \$25,100            | \$0             | \$25,100         |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$276,100</b> | <b>\$0</b>           | <b>\$276,100</b>    | <b>\$276,100</b>    | <b>\$0</b>      | <b>\$276,100</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$61,200         | \$0                  | \$61,200            | \$61,200            | \$0             | \$61,200         |       |        |
| <b>Total</b>                             | <b>\$337,300</b> | <b>\$0</b>           | <b>\$337,300</b>    | <b>\$337,300</b>    | <b>\$0</b>      | <b>\$337,300</b> |       |        |
| Direct Labor                             | \$34,000         | \$0                  | \$34,000            | \$34,000            | \$0             | \$34,000         |       |        |

\*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:**

*Kelly Lew* \_\_\_\_\_ 10/3/12

**Department Director:**

*Kevin L. Burton* \_\_\_\_\_ 10/4/12

**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 additional documents, if any, which are hereby incorporated into this project is further described in the attached staff report and project is made under Treasury Regulation Section 1.1

# IRVINE RANCH WATER DISTRICT

## Expenditure Authorization

**Project Name:** PA 51 RIDGE VALLEY RW FACILITIES  
**EPMS Project No:** 30386 EA No: 1  
**Oracle Project No:** 4097  
**Project Manager:** CORTEZ, MALCOLM  
**Project Engineer:** LEW, KELLY  
**Request Date:** October 2, 2012

**ID Split:** Miscellaneous

### Improvement District (ID) Allocations

| ID No.       | Allocation %  | Source of Funds        |
|--------------|---------------|------------------------|
| 212          | 100.0         | BONDS YET TO BE SOLD** |
| <b>Total</b> | <b>100.0%</b> |                        |

### Summary of Direct Cost Authorizations

|                                       |                  |
|---------------------------------------|------------------|
| Previously Approved EA Requests:      | \$0              |
| This Request:                         | \$431,200        |
| <b>Total EA Requests:</b>             | <b>\$431,200</b> |
| Previously Approved Budget:           | \$0              |
| Budget Adjustment Requested this EA:  | \$431,200        |
| <b>Updated Budget:</b>                | <b>\$431,200</b> |
| <b>Budget Remaining After This EA</b> | <b>\$0</b>       |

Comments:

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget | Updated Budget   | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|-----------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 1/12  | 9/12   |
| ENGINEERING DESIGN - OUTSIDE             | 25,000           | 0                    | 25,000              | 25,000              | 0               | 25,000           | 1/12  | 9/12   |
| DESIGN STAFF FIELD SUPPORT               | 5,000            | 0                    | 5,000               | 5,000               | 0               | 5,000            | 1/12  | 9/12   |
| ENGINEERING - CA&I IRWD                  | 40,000           | 0                    | 40,000              | 40,000              | 0               | 40,000           | 10/12 | 7/13   |
| ENGINEERING - CA&I OUTSIDE               | 80,000           | 0                    | 80,000              | 80,000              | 0               | 80,000           | 10/12 | 7/13   |
| CONSTRUCTION FIELD SUPPORT               | 5,000            | 0                    | 5,000               | 5,000               | 0               | 5,000            | 10/12 | 7/13   |
| CONSTRUCTION                             | 220,000          | 0                    | 220,000             | 220,000             | 0               | 220,000          | 10/12 | 7/13   |
| LEGAL                                    | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 8/13   |
| Contingency - 10.00% Subtotal            | <b>\$39,200</b>  | \$0                  | \$39,200            | \$39,200            | \$0             | \$39,200         |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$431,200</b> | \$0                  | <b>\$431,200</b>    | <b>\$431,200</b>    | \$0             | <b>\$431,200</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$117,000        | \$0                  | \$117,000           | \$117,000           | \$0             | \$117,000        |       |        |
| <b>Total</b>                             | <b>\$548,200</b> | \$0                  | <b>\$548,200</b>    | <b>\$548,200</b>    | \$0             | <b>\$548,200</b> |       |        |
| <b>Direct Labor</b>                      | <b>\$65,000</b>  | \$0                  | <b>\$65,000</b>     | <b>\$65,000</b>     | \$0             | <b>\$65,000</b>  |       |        |

\*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:

*Kelly Lew*

10/3/12

Department Director:

*Kevin Z. Bush*

10/4/12

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 \$500,000. The project is further described in the attached staff report and additional documents, if any, which are hereby incorporated by reference. The project is made under Treasury Regulation Section 1.151.

October 22, 2012  
Prepared by: K. Lew/M. Cortez  
Submitted by: K. Burton  
Approved by: Paul Cook

CONSENT CALENDAR

CITY OF LAKE FOREST SPORTS PARK CAPITAL FACILITIES  
BUDGET ADJUSTMENTS AND EXPENDITURE AUTHORIZATIONS

SUMMARY:

The City of Lake Forest is moving forward with the construction of the Sports Park Mass Grading and Drainage Project. IRWD capital domestic water and recycled water facilities will be constructed as part of the project under the terms of an existing Reimbursement Agreement. Staff recommends that the Board:

- Authorize the addition of Project 11663 in the amount of \$354,200 to the FY 2012-13 Capital Budget;
- Authorize a budget reduction to the FY 2012-13 Capital Budget for Project 30352 in the amount of \$614,700, from \$1,186,200 to \$571,500;
- Approve an Expenditure Authorization for Project 11663 in the amount of \$354,200; and
- Approve an Expenditure Authorization reduction for Project 30352 in the amount of \$614,700.

BACKGROUND:

The City of Lake Forest is moving forward with the construction of the Sports Park located south of Rancho Parkway and west of Portola Parkway as shown in Exhibit "A". The project will require the relocation of an existing 16-inch diameter Zone C recycled water transmission main that runs across the park property and a new 12-inch domestic water pipeline identified in the Lake Forest Area Sub-Area Master Plan, as prepared in October 2011 and as shown in the capital system maps in Exhibit "B". The capital facilities consist of approximately 1,300 feet of 12-inch diameter domestic water pipeline and 2,000 feet of 16-inch diameter recycled water pipeline. IRWD capital facilities will be constructed under the terms of a Reimbursement Agreement with the City of Lake Forest approved by the Board in August 2010.

The City of Lake Forest received bids from 10 contractors on July 26, 2012 for the Sports Park Mass Grading and Drainage project as shown in Exhibit "C". The low bidder for the entire project including IRWD facilities was Road Builders, Inc. with a bid of \$4,917,000. Bids for IRWD's portion of the work ranged from \$456,455 to \$871,550; the engineer's estimate was \$540,810. Road Builders' bid for IRWD's portion of the work at \$504,453 is the fifth lowest and under the engineer's estimate. The pipeline subcontractor is L&S Construction who has extensive experience on IRWD projects. Staff has reviewed the construction bids and finds Road Builders' bid to be acceptable.

**FISCAL IMPACTS:**

Project 30352 (1732) is included in the FY 2012-13 Capital Budget and is being reduced based on the construction bid amount and the source of funds is being revised from Replacement Fund to Capital Fund. Funding for IRWD’s domestic water capital facilities will require the addition of Project 11663 (4033) to the FY 2012-13 Capital Budget and approval of an Expenditure Authorization in the amount shown in the table below and in Exhibit “D”.

| Project No.  | Current Budget     | Addition <Reduction>     | Total Budget     | Existing EA        | This EA Request          | Total EA Request |
|--------------|--------------------|--------------------------|------------------|--------------------|--------------------------|------------------|
| 11663 (4033) | \$-0-              | \$354,200                | \$354,200        | \$-0-              | \$354,200                | \$354,200        |
| 30352 (1732) | \$1,106,200        | <\$614,700>              | \$571,500        | \$1,106,200        | <\$614,700>              | \$571,500        |
| <b>TOTAL</b> | <b>\$1,106,200</b> | <b>&lt;\$260,500&gt;</b> | <b>\$925,700</b> | <b>\$1,106,200</b> | <b>&lt;\$260,500&gt;</b> | <b>\$925,700</b> |

The above funding provides for the reimbursement costs to the City of Lake Forest for construction of IRWD capital facilities, staff time, and consultant support during construction.

**ENVIRONMENTAL COMPLIANCE:**

This City of Lake Forest Sports Park and Recreation Center Project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, the City of Lake Forest (lead agency) prepared and certified an Environmental Impact Report (EIR) (State Clearinghouse No. 2009061020) in 2009. In August of 2012, Addendum No. 1 to the City of Lake Forest Sports Park and Recreation Center Project was prepared and approved by Irvine Ranch Water District (responsible agency) which analyzes impacts associated with relocation of domestic and recycled water pipelines not previously analyzed in the EIR.

**COMMITTEE STATUS:**

This item was reviewed by the Engineering and Operations Committee on October 16, 2012.

**RECOMMENDATION:**

THAT THE BOARD AUTHORIZE THE ADDITION OF PROJECT 11663 (4033) IN THE AMOUNT OF \$354,200 TO THE FY 2012-13 CAPITAL BUDGET; AUTHORIZE A BUDGET REDUCTION TO THE FY 2012-13 CAPITAL BUDGET FOR PROJECT 30352 (1732) IN THE AMOUNT OF \$614,700, FROM \$1,186,200 TO \$571,500; APPROVE AN EXPENDITURE AUTHORIZATION FOR PROJECT 11663 (4033) IN THE AMOUNT OF \$354,200; AND APPROVE AN EXPENDITURE AUTHORIZATION REDUCTION FOR PROJECT 30352 (1732) IN THE AMOUNT OF \$614,700 FOR THE CITY OF LAKE FOREST SPORTS PARK CAPITAL FACILITIES PROJECT.

LIST OF EXHIBITS:

- Exhibit "A" – Sports Park Location Map
- Exhibit "B" – Lake Forest Area Sub-Area Master Plan Capital System Maps
- Exhibit "C" – Bid Summary for the Lake Forest Sports Park Mass Grading and Drainage
- Exhibit "D" – Expenditure Authorizations





**Rancho Pkwy  
Extension**

**RW LF Zone  
C Pump  
Station**

**Exist 16" RW  
Pipeline to  
be Relocated**

**City of  
Lake Forest  
Sports Park**

**LOCATION MAP  
CITY OF LAKE FOREST SPORTS PARK**

**EXHIBIT "A"**



B-1

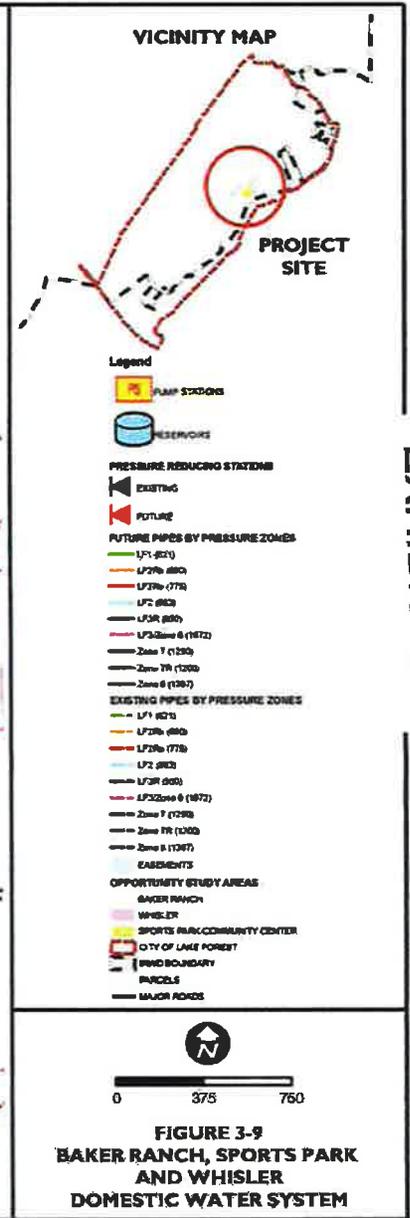
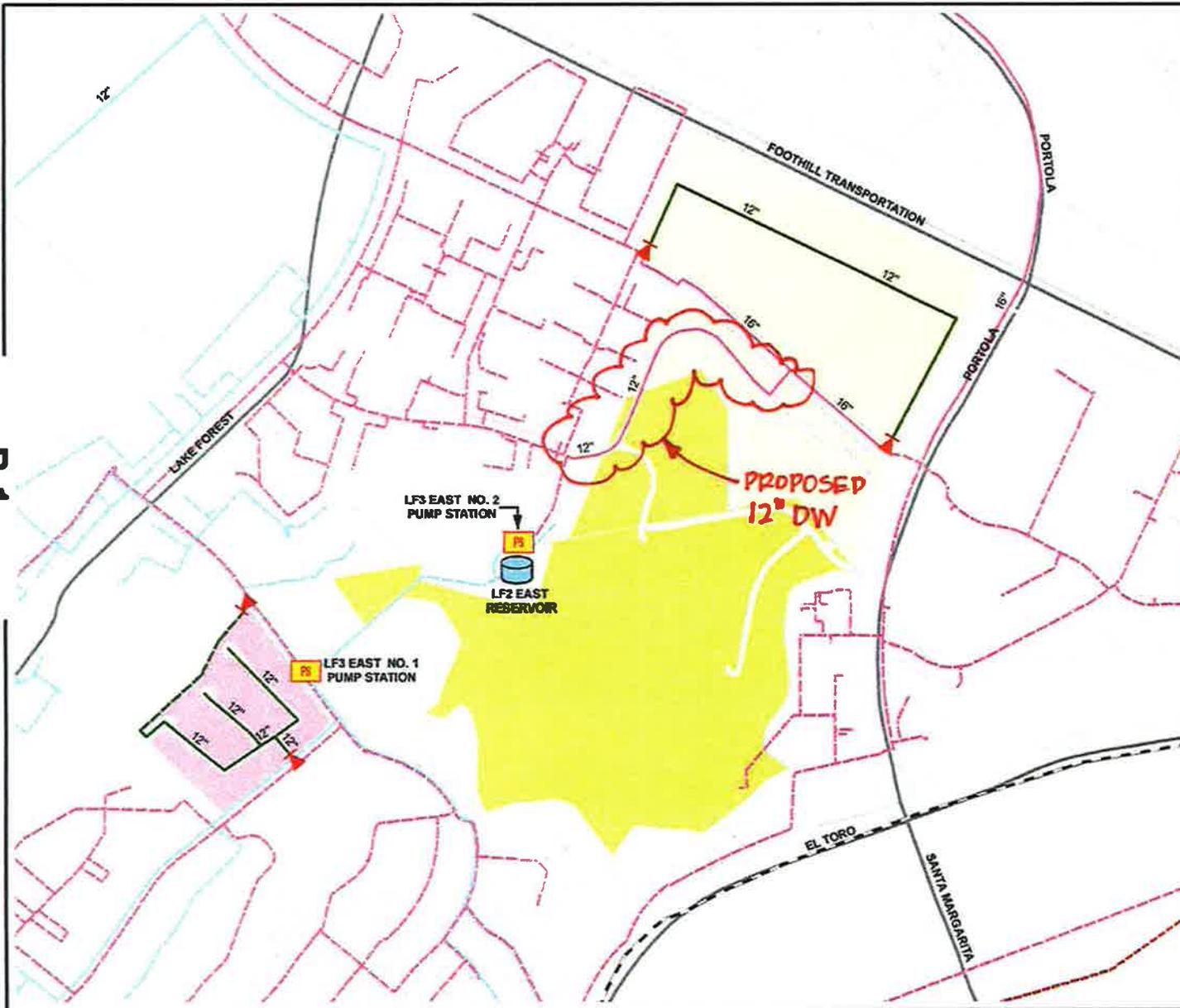


EXHIBIT "B"

B-2

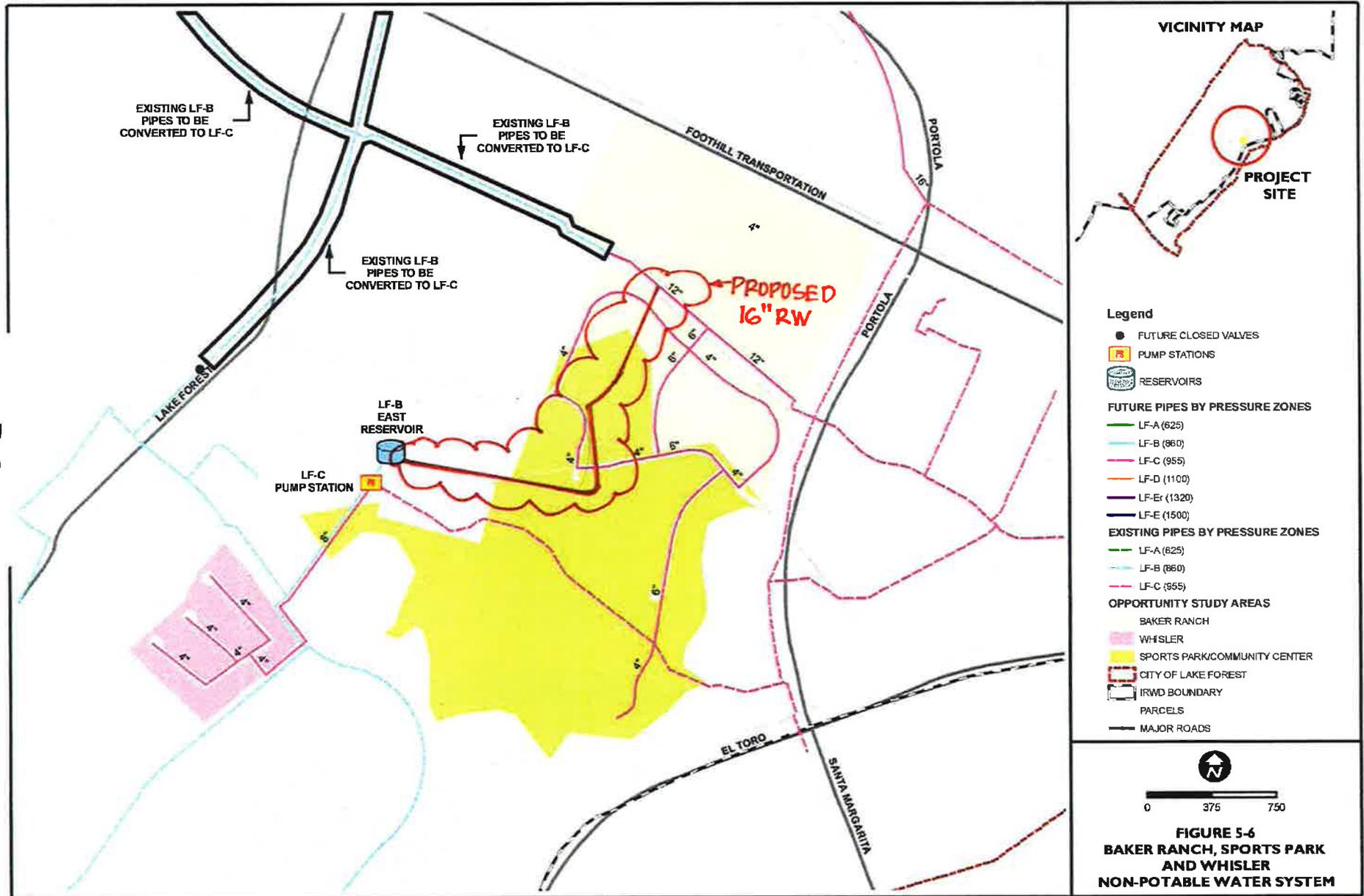


FIGURE 5-6  
BAKER RANCH, SPORTS PARK  
AND WHISLER  
NON-POTABLE WATER SYSTEM

BID ANALYSIS  
LAKE FOREST SPORTS PARK GRADING AND DRAINAGE

Bid Opening : July 26, 2012  
Prepared By: AF  
Checked By: CT

| Item No.   | Item   | Estimated Quantity | Unit | Engineer's Estimate |                 | Road Builders, Inc. |                 | Harper Contracting Co., Inc. |                 | Suka Construction, Inc. |                 | Crew, Inc.      |                 | GMC Engineering |                 | Sica Company, Inc. |                 |  |
|--|--|--------------------|------|---------------------|-----------------|---------------------|-----------------|------------------------------|-----------------|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------|-----------------|--|
|  |  |                    |      | Unit Price          | Extended Amount | Unit Price          | Extended Amount | Unit Price                   | Extended Amount | Unit Price              | Extended Amount | Unit Price      | Extended Amount | Unit Price      | Extended Amount | Unit Price         | Extended Amount |  |
| <b>BID SCHEDULE "A" FOR RANCHO PARKWAY ROADWAY</b> |  |                    |      |                     |                 |                     |                 |                              |                 |                         |                 |                 |                 |                 |                 |                    |                 |  |
| 1  | Installation / Demolition (See 2% of Bid Schedule A Contract Cost) |                    | LS   | 150,000.00          | \$ 150,000.00   | 90,000.00           | \$ 90,000.00    | 97,417.00                    | \$ 97,417.00    | \$ 105,000.00           | \$ 105,000.00   | \$ 65,000.00    | \$ 65,000.00    | \$ 126,000.00   | \$ 126,000.00   | \$ 100,000.00      | \$ 100,000.00   |  |
| 2  | SWPPP Imperviousness and Monitoring                                |                    | LS   | 12,000.00           | \$ 42,000.00    | 16,000.00           | \$ 46,000.00    | 5,000.00                     | \$ 15,000.00    | \$ 117,000.00           | \$ 117,000.00   | \$ 25,000.00    | \$ 25,000.00    | \$ 50,965.00    | \$ 50,965.00    | \$ 346,500.00      | \$ 346,500.00   |  |
| 3  | Drinking Water Connections   |                    | LS   | 20,000.00           | \$ 20,000.00    | 75,000.00           | \$ 75,000.00    | 203,000.00                   | \$ 203,000.00   | \$ 149,000.00           | \$ 149,000.00   | \$ 25,000.00    | \$ 25,000.00    | \$ 107,000.00   | \$ 107,000.00   | \$ 42,000.00       | \$ 42,000.00    |  |
| 4  | Joint Creek Tree Removal   |                    | LS   | 5,000.00            | \$ 5,000.00     | 1,000.00            | \$ 1,000.00     | 22,882.00                    | \$ 22,882.00    | \$ 5,000.00             | \$ 5,000.00     | \$ 5,000.00     | \$ 5,000.00     | \$ 7,000.00     | \$ 7,000.00     | \$ 5,000.00        | \$ 5,000.00     |  |
| 5  | Constructive Surveying   |                    | LS   | 250,000.00          | \$ 250,000.00   | 75,000.00           | \$ 75,000.00    | 69,000.00                    | \$ 69,000.00    | \$ 67,000.00            | \$ 67,000.00    | \$ 50,000.00    | \$ 50,000.00    | \$ 60,800.00    | \$ 60,800.00    | \$ 70,000.00       | \$ 70,000.00    |  |
| 6  | Traffic Control  |                    | LS   | 5,000.00            | \$ 5,000.00     | 5,000.00            | \$ 5,000.00     | 18,599.06                    | \$ 18,599.06    | \$ 4,000.00             | \$ 4,000.00     | \$ 5,000.00     | \$ 5,000.00     | \$ 3,200.00     | \$ 3,200.00     | \$ 10,000.00       | \$ 10,000.00    |  |
| 7  | Unexcavated Estimates  |                    | LS   | 2,400,000.00        | \$ 2,400,000.00 | 1,150,000.00        | \$ 1,150,000.00 | 387,000.00                   | \$ 387,000.00   | \$ 1,586,000.00         | \$ 1,586,000.00 | \$ 1,768,500.00 | \$ 1,768,500.00 | \$ 2,250,000.00 | \$ 2,250,000.00 | \$ 2,271,480.00    | \$ 2,271,480.00 |  |
| 8  | Impact Contingency   | 1                  | CY   | 10.00               | \$ 500,000.00   | 1.00                | \$ 50,000.00    | 0.63                         | \$ 31,500.00    | \$ 0.01                 | \$ 500.00       | \$ 5.00         | \$ 250,000.00   | \$ 6.75         | \$ 337,500.00   | \$ 6.77            | \$ 338,500.00   |  |
| 8A   | Impact Contingency   | 50,000             | CY   | 10.00               | \$ 500,000.00   | 0.10                | \$ 5,000.00     | 0.85                         | \$ 42,500.00    | \$ 0.01                 | \$ 500.00       | \$ 2.30         | \$ 100,000.00   | \$ 0.75         | \$ 37,500.00    | \$ 0.01            | \$ 500.00       |  |
| 9  | Overexcavation   | 60,000             | CY   | 2.00                | \$ 120,000.00   | 0.30                | \$ 17,400.00    | 1.15                         | \$ 59,700.00    | \$ 1.65                 | \$ 81,900.00    | \$ 1.05         | \$ 52,500.00    | \$ 1.25         | \$ 63,750.00    | \$ 0.80            | \$ 40,800.00    |  |
| 9A   | Overexcavation   | 364,000            | CY   | 2.50                | \$ 910,000.00   | 0.65                | \$ 239,400.00   | 1.28                         | \$ 628,800.00   | \$ 1.30                 | \$ 484,100.00   | \$ 1.10         | \$ 400,400.00   | \$ 1.50         | \$ 541,200.00   | \$ 0.80            | \$ 360,800.00   |  |
| 10   | Structures / In Subdrainage  |                    | LS   | 150,000.00          | \$ 150,000.00   | 177,000.00          | \$ 177,000.00   | 150,000.00                   | \$ 150,000.00   | \$ 77,000.00            | \$ 77,000.00    | \$ 145,000.00   | \$ 145,000.00   | \$ 143,200.00   | \$ 143,200.00   | \$ 77,780.00       | \$ 77,780.00    |  |
| 11   | Utility Subdrain   | 4,330              | LF   | 35.00               | \$ 1,225.00     | 30.00               | \$ 1,050.00     | 40.65                        | \$ 1,422.75     | \$ 28.00                | \$ 980.00       | \$ 30.00        | \$ 1,050.00     | \$ 19.00        | \$ 665.00       | \$ 24.07           | \$ 838.35       |  |
| 12   | Cleaning and Grouting  |                    | LS   | 300,000.00          | \$ 300,000.00   | 4,000.00            | \$ 4,000.00     | 81,000.00                    | \$ 81,000.00    | \$ 127,000.00           | \$ 127,000.00   | \$ 40,000.00    | \$ 40,000.00    | \$ 40,000.00    | \$ 40,000.00    | \$ 33,000.00       | \$ 33,000.00    |  |
| 13   | Asphalt Concrete Pavement  | 74                 | TON  | 50.00               | \$ 6,840.00     | 85.00               | \$ 11,265.00    | 110.48                       | \$ 14,362.56    | \$ 180.00               | \$ 23,400.00    | \$ 35.00        | \$ 4,575.00     | \$ 125.00       | \$ 16,250.00    | \$ 9.50            | \$ 1,235.00     |  |
| 14   | Crushed Miscellaneous Stone (CMS)                                  | 40                 | CY   | 5.00                | \$ 200.00       | 68.00               | \$ 2,720.00     | 47.00                        | \$ 1,880.00     | \$ 106.00               | \$ 4,240.00     | \$ 3.00         | \$ 120.00       | \$ 115.00       | \$ 4,600.00     | \$ 25.00           | \$ 1,000.00     |  |
| 15   | 3" Yucca Gravel  | 2,550              | SF   | 6.00                | \$ 15,300.00    | 11.00               | \$ 26,650.00    | 3.70                         | \$ 9,155.00     | \$ 4.00                 | \$ 11,700.00    | \$ 5.00         | \$ 12,750.00    | \$ 5.00         | \$ 12,750.00    | \$ 2.97            | \$ 7,575.00     |  |
| 16   | PVC SDR 35 Storm Drain Pipe  | 305                | LF   | 35.00               | \$ 1,225.00     | 19.00               | \$ 665.00       | 17.00                        | \$ 600.50       | \$ 72.00                | \$ 2,520.00     | \$ 21.00        | \$ 735.00       | \$ 20.50        | \$ 715.75       | \$ 24.00           | \$ 840.00       |  |
| 17   | PVC SDR 35 Storm Drain Pipe  | 710                | LF   | 40.00               | \$ 1,400.00     | 23.00               | \$ 805.00       | 22.00                        | \$ 770.00       | \$ 52.00                | \$ 1,804.00     | \$ 27.00        | \$ 909.00       | \$ 21.00        | \$ 819.00       | \$ 25.00           | \$ 875.00       |  |
| 18   | PVC SDR 35 Storm Drain Pipe  | 1,750              | LF   | 50.00               | \$ 1,750.00     | 30.00               | \$ 1,050.00     | 33.00                        | \$ 1,155.00     | \$ 35.00                | \$ 1,225.00     | \$ 29.00        | \$ 970.00       | \$ 24.00        | \$ 816.00       | \$ 28.00           | \$ 952.00       |  |
| 19   | PVC SDR 35 Storm Drain Pipe  | 430                | LF   | 70.00               | \$ 2,450.00     | 34.00               | \$ 1,190.00     | 36.00                        | \$ 1,260.00     | \$ 61.00                | \$ 2,135.00     | \$ 32.00        | \$ 1,136.00     | \$ 32.00        | \$ 1,136.00     | \$ 35.00           | \$ 1,195.00     |  |
| 20   | PVC SDR 35 Storm Drain Pipe  | 1,140              | LF   | 80.00               | \$ 2,800.00     | 39.00               | \$ 1,521.00     | 35.00                        | \$ 1,365.00     | \$ 44.00                | \$ 1,564.00     | \$ 32.00        | \$ 1,280.00     | \$ 35.00        | \$ 1,225.00     | \$ 40.00           | \$ 1,400.00     |  |
| 21   | PVC SDR 35 Storm Drain Pipe  | 880                | LF   | 90.00               | \$ 3,150.00     | 46.00               | \$ 1,618.00     | 44.00                        | \$ 1,564.00     | \$ 53.00                | \$ 1,871.00     | \$ 37.00        | \$ 1,401.00     | \$ 47.00        | \$ 1,615.00     | \$ 48.00           | \$ 1,656.00     |  |
| 22   | PVC SDR 35 Storm Drain Pipe  | 255                | LF   | 15.00               | \$ 525.00       | 22.00               | \$ 726.00       | 38.00                        | \$ 1,254.00     | \$ 6.00                 | \$ 210.00       | \$ 22.00        | \$ 726.00       | \$ 5.00         | \$ 165.00       | \$ 28.00           | \$ 924.00       |  |
| 23   | Perforated PVC Gas Ventilation Subdrain                            | 3,000              | LF   | 20.00               | \$ 700.00       | 15.00               | \$ 525.00       | 38.00                        | \$ 1,254.00     | \$ 4.70                 | \$ 156.60       | \$ 27.00        | \$ 891.00       | \$ 20.50        | \$ 715.75       | \$ 30.00           | \$ 1,020.00     |  |
| 24   | HDPE Storm Drain Pipe  | 1,130              | LF   | 150.00              | \$ 4,500.00     | 47.00               | \$ 1,410.00     | 45.00                        | \$ 1,350.00     | \$ 51.00                | \$ 1,530.00     | \$ 48.00        | \$ 1,440.00     | \$ 42.25        | \$ 1,265.25     | \$ 50.00           | \$ 1,500.00     |  |
| 25   | HDPE Storm Drain Pipe  | 1,345              | LF   | 110.00              | \$ 3,300.00     | 61.00               | \$ 1,830.00     | 59.00                        | \$ 1,771.00     | \$ 65.00                | \$ 1,955.00     | \$ 58.00        | \$ 1,740.00     | \$ 66.00        | \$ 1,980.00     | \$ 65.00           | \$ 1,925.00     |  |
| 26   | HDPE Storm Drain Pipe  | 7,265              | LF   | 120.00              | \$ 3,600.00     | 75.00               | \$ 2,250.00     | 73.00                        | \$ 2,190.00     | \$ 73.00                | \$ 2,190.00     | \$ 84.00        | \$ 2,520.00     | \$ 71.20        | \$ 2,564.00     | \$ 73.00           | \$ 2,565.00     |  |
| 27   | HDPE Storm Drain Pipe  | 800                | LF   | 130.00              | \$ 3,900.00     | 81.00               | \$ 2,430.00     | 80.00                        | \$ 2,400.00     | \$ 87.00                | \$ 2,610.00     | \$ 81.00        | \$ 2,430.00     | \$ 100.00       | \$ 3,000.00     | \$ 85.00           | \$ 2,550.00     |  |
| 28   | HDPE Pipe D-Load Per Plan  | 880                | LF   | 130.00              | \$ 3,900.00     | 83.00               | \$ 2,490.00     | 80.00                        | \$ 2,400.00     | \$ 88.00                | \$ 2,664.00     | \$ 83.00        | \$ 2,490.00     | \$ 93.00        | \$ 2,799.00     | \$ 140.00          | \$ 4,200.00     |  |
| 29   | HDPE Pipe D-Load Per Plan  | 480                | LF   | 140.00              | \$ 4,200.00     | 70.00               | \$ 2,100.00     | 68.00                        | \$ 2,040.00     | \$ 73.00                | \$ 2,166.00     | \$ 63.00        | \$ 1,890.00     | \$ 95.00        | \$ 2,850.00     | \$ 105.00          | \$ 3,150.00     |  |
| 30   | HDPE Pipe D-Load Per Plan  | 50                 | LF   | 180.00              | \$ 5,400.00     | 105.00              | \$ 3,150.00     | 100.00                       | \$ 3,000.00     | \$ 87.00                | \$ 2,610.00     | \$ 84.00        | \$ 2,520.00     | \$ 125.00       | \$ 3,750.00     | \$ 150.00          | \$ 4,500.00     |  |
| 31   | HDPE Pipe D-Load Per Plan  | 390                | LF   | 130.00              | \$ 3,900.00     | 128.00              | \$ 3,840.00     | 120.00                       | \$ 3,600.00     | \$ 103.00               | \$ 3,090.00     | \$ 100.00       | \$ 3,000.00     | \$ 155.00       | \$ 4,650.00     | \$ 165.00          | \$ 4,950.00     |  |
| 32   | Perforated PVC Gas Ventilation Subdrain                            | 12                 | EA   | 2,000.00            | \$ 20,000.00    | 1,500.00            | \$ 15,000.00    | 1,425.00                     | \$ 14,250.00    | \$ 1,070.00             | \$ 10,700.00    | \$ 1,000.00     | \$ 10,000.00    | \$ 1,297.00     | \$ 12,970.00    | \$ 1,600.00        | \$ 16,000.00    |  |
| 33   | Terrazo Drain  | 5,740              | LF   | 35.00               | \$ 1,225.00     | 18.00               | \$ 630.00       | 18.33                        | \$ 636.45       | \$ 20.00                | \$ 680.00       | \$ 18.00        | \$ 630.00       | \$ 20.00        | \$ 680.00       | \$ 18.70           | \$ 634.50       |  |
| 34   | Drain Drain  | 580                | LF   | 30.00               | \$ 900.00       | 26.00               | \$ 780.00       | 13,431.61                    | \$ 40,294.83    | \$ 28.00                | \$ 840.00       | \$ 26.00        | \$ 780.00       | \$ 26.00        | \$ 780.00       | \$ 28.95           | \$ 868.50       |  |
| 35   | Manhole Drain  | 1,800              | EA   | 30.00               | \$ 900.00       | 15.00               | \$ 450.00       | 15.68                        | \$ 470.40       | \$ 17.00                | \$ 510.00       | \$ 16.00        | \$ 480.00       | \$ 16.00        | \$ 480.00       | \$ 15.95           | \$ 478.50       |  |
| 36   | Manhole Drain  | 9                  | EA   | 1,000.00            | \$ 10,000.00    | 310.00              | \$ 3,100.00     | 299.00                       | \$ 2,990.00     | \$ 325.00               | \$ 3,250.00     | \$ 305.00       | \$ 3,050.00     | \$ 300.00       | \$ 3,000.00     | \$ 324.50          | \$ 3,244.50     |  |
| 37   | Hydraulic Mats (Per SWPPP)   | 16                 | EA   | 3,000.00            | \$ 9,000.00     | 1,400.00            | \$ 4,200.00     | 1,755.00                     | \$ 5,265.00     | \$ 1,960.00             | \$ 5,880.00     | \$ 1,875.00     | \$ 5,625.00     | \$ 2,000.00     | \$ 6,000.00     | \$ 2,519.00        | \$ 7,557.00     |  |
| 38   | Soil Berms (Per SWPPP)   | 38                 | EA   | 2,000.00            | \$ 6,000.00     | 700.00              | \$ 2,100.00     | 1,656.00                     | \$ 4,968.00     | \$ 1,180.00             | \$ 3,540.00     | \$ 1,200.00     | \$ 3,600.00     | \$ 706.00       | \$ 2,118.00     | \$ 813.12          | \$ 2,439.36     |  |
| 39   | Fiber Tent (Per SWPPP)   | 84,000             | LF   | 1.00                | \$ 84,000.00    | 2.20                | \$ 184,800.00   | 2.91                         | \$ 244,440.00   | \$ 2.20                 | \$ 184,800.00   | \$ 1.90         | \$ 159,600.00   | \$ 1.90         | \$ 159,600.00   | \$ 1.95            | \$ 163,800.00   |  |
| 40   | Constructive Estimate (Per SWPPP)                                  |                    | EA   | 5,000.00            | \$ 5,000.00     | 2,300.00            | \$ 2,300.00     | 2,250.19                     | \$ 2,250.19     | \$ 11,400.00            | \$ 11,400.00    | \$ 3,000.00     | \$ 3,000.00     | \$ 4,700.00     | \$ 4,700.00     | \$ 3,750.00        | \$ 3,750.00     |  |
| 41   | Constructive Estimate (Per SWPPP)                                  |                    | EA   | 1.00                | \$ 11,000.00    | 0.50                | \$ 5,500.00     | 0.30                         | \$ 3,300.00     | \$ 0.35                 | \$ 3,850.00     | \$ 0.70         | \$ 7,700.00     | \$ 0.70         | \$ 7,700.00     | \$ 0.71            | \$ 7,810.00     |  |
| 42   | Soil Fence (Per SWPPP)   | 111,000            | SF   | 7.00                | \$ 777,000.00   | 2.00                | \$ 220,000.00   | 4.15                         | \$ 459,450.00   | \$ 3.30                 | \$ 3,630.00     | \$ 3.60         | \$ 3,960.00     | \$ 1.80         | \$ 1,980.00     | \$ 1.82            | \$ 2,001.60     |  |
| 43   | Storm Drain Inlet Protection                                       | 75                 | EA   | 200.00              | \$ 6,000.00     | 145.00              | \$ 4,350.00     | 200.00                       | \$ 6,000.00     | \$ 97.00                | \$ 2,910.00     | \$ 100.00       | \$ 3,000.00     | \$ 345.00       | \$ 10,350.00    | \$ 121.00          | \$ 3,630.00     |  |
| 44   | Decorative Concrete Color  | 12                 | EA   | 1,000.00            | \$ 12,000.00    | 420.00              | \$ 5,040.00     | 400.00                       | \$ 4,800.00     | \$ 325.00               | \$ 3,900.00     | \$ 300.00       | \$ 3,600.00     | \$ 2,500.00     | \$ 30,000.00    | \$ 650.00          | \$ 7,800.00     |  |
| 44A  | Anchor Straps  | 3                  | EA   | 700.00              | \$ 3,500.00     | 685.00              | \$ 3,425.00     | 650.00                       | \$ 3,250.00     | \$ 306.00               | \$ 1,530.00     | \$ 1,500.00     | \$ 7,500.00     | \$ 4,500.00     | \$ 22,500.00    | \$ 1,250.00        | \$ 6,250.00     |  |
| 45   | Cast-in-place Pipe Allow   | 18                 | EA   | 1,500.00            | \$ 27,000.00    | 1,000.00            | \$ 18,000.00    | 950.00                       | \$ 17,100.00    | \$ 820.00               | \$ 14,760.00    | \$ 1,575.00     | \$ 28,350.00    | \$ 3,635.00     | \$ 66,030.00    | \$ 1,000.00        | \$ 18,000.00    |  |
| 46   | Cast-in-place Pipe Allow   | 1                  | EA   | 4,000.00            | \$ 8,000.00     | 5,400.00            | \$ 10,800.00    | 5,100.00                     | \$ 10,200.00    | \$ 5,350.00             | \$ 10,700.00    | \$ 4,200.00     | \$ 8,400.00     | \$ 3,600.00     | \$ 7,200.00     | \$ 3,550.00        | \$ 7,100.00     |  |
| 47   | Cast-in-place Pipe Allow   | 1                  | EA   | 6,000.00            | \$ 12,000.00    | 5,300.00            | \$ 10,600.00    | 4,975.00                     | \$ 9,950.00     | \$ 5,660.00             | \$ 11,320.00    | \$ 5,250.00     | \$ 10,500.00    | \$ 5,250.00     | \$ 10,500.00    | \$ 4,375.00        | \$ 8,750.00</   |  |

**BID ANALYSIS**  
**LAKE FOREST SPORTS PARK GRADING AND DRAINAGE**

Bid Opening : July 26, 2012  
Prepared By: AF  
Checked By: CT

C-2

| Item No.                                   | Item  | Estimated Quantity | Unit | Engineer's Estimate |                        | Road Builders, Inc. |                        | Harper Contracting Co., Inc. |                        | Sukul Construction, Inc. |                        | Craw, Inc. |                        | GMC Engineering |                        | Slice Company, Inc. |                        |
|--|---|--------------------|------|---------------------|------------------------|---------------------|------------------------|------------------------------|------------------------|--------------------------|------------------------|------------|------------------------|-----------------|------------------------|---------------------|------------------------|
|  |   |                    |      | Unit Price          | Extended Amount        | Unit Price          | Extended Amount        | Unit Price                   | Extended Amount        | Unit Price               | Extended Amount        | Unit Price | Extended Amount        | Unit Price      | Extended Amount        | Unit Price          | Extended Amount        |
| 50   | Concrete Headwall with Weirwalls  | 4                  | EA   | 5,000.00            | \$ 20,000.00           | 5,800.00            | \$ 23,200.00           | 5,500.00                     | \$ 22,000.00           | 5,300.00                 | \$ 21,200.00           | 4,200.00   | \$ 16,800.00           | 8,282.00        | \$ 33,128.00           | 12,900.00           | \$ 51,600.00           |
| 51   | Energy Dissipator Structure   | 3                  | EA   | 10,000.00           | \$ 30,000.00           | 30,000.00           | \$ 90,000.00           | 28,250.00                    | \$ 84,750.00           | 23,000.00                | \$ 69,000.00           | 16,000.00  | \$ 48,000.00           | 21,000.00       | \$ 63,000.00           | 44,000.00           | \$ 132,000.00          |
| 52   | Ingrip  | 325                | TON  | 80.00               | \$ 14,000.00           | 74.00               | \$ 13,320.00           | 100.00                       | \$ 18,000.00           | 22,500.00                | \$ 39,750.00           | 49,000.00  | \$ 82,200.00           | 100.00          | \$ 1,800.00            | 32,000.00           | \$ 57,600.00           |
| 53   | Rebar Protection Barrier  | 7                  | EA   | 3,000.00            | \$ 9,000.00            | 3,800.00            | \$ 11,400.00           | 4,775.00                     | \$ 14,325.00           | 4,642.00                 | \$ 13,926.00           | 2,100.00   | \$ 6,300.00            | 1,405.00        | \$ 4,215.00            | 5,100.00            | \$ 15,300.00           |
| 54   | Open Slope  | 1                  | EA   | 500.00              | \$ 500.00              | 1,700.00            | \$ 1,700.00            | 7,600.00                     | \$ 7,600.00            | 2,800.00                 | \$ 2,800.00            | 1,000.00   | \$ 1,000.00            | 2,400.00        | \$ 2,400.00            | 2,400.00            | \$ 2,400.00            |
| 55   | Flag Stone  | 1                  | EA   | 600.00              | \$ 600.00              | 3,000.00            | \$ 3,000.00            | 2,900.00                     | \$ 2,900.00            | 2,850.00                 | \$ 2,850.00            | 1,800.00   | \$ 1,800.00            | 2,200.00        | \$ 2,200.00            | 3,500.00            | \$ 3,500.00            |
| 56   | Impervious Sandstone Limer  | 84,000             | SF   | 0.40                | \$ 33,600.00           | 1.20                | \$ 100,800.00          | 1.14                         | \$ 95,760.00           | 1.57                     | \$ 131,880.00          | 14.00      | \$ 1,176,000.00        | 1.25            | \$ 105,000.00          | 1.27                | \$ 106,680.00          |
| 57   | 1/4 Crushed Rock  | 111,000            | CY   | 2.30                | \$ 255,300.00          | 1.40                | \$ 155,400.00          | 1.79                         | \$ 198,690.00          | 1.48                     | \$ 164,280.00          | 1.50       | \$ 166,500.00          | 1.66            | \$ 177,600.00          | 0.88                | \$ 97,680.00           |
| 58   | Soil/Gravel Soil Preparation  | 12,450             | CV   | 5.00                | \$ 62,000.00           | 4.50                | \$ 55,800.00           | 2.70                         | \$ 33,480.00           | 7.80                     | \$ 96,720.00           | 3.00       | \$ 37,200.00           | 3.15            | \$ 38,160.00           | 3.30                | \$ 40,320.00           |
| 59   | Flow Fabric   | 291,200            | SF   | 1.50                | \$ 436,500.00          | 0.25                | \$ 72,800.00           | 0.16                         | \$ 45,760.00           | 0.14                     | \$ 40,760.00           | 0.15       | \$ 43,680.00           | 0.15            | \$ 43,680.00           | 0.08                | \$ 23,296.00           |
| 70   | Graded Earth Limer  | 810/0              | LF   | 3.00                | \$ 9,270.00            | 4.00                | \$ 12,240.00           | 3.66                         | \$ 11,236.20           | 1.30                     | \$ 3,810.00            | 5.00       | \$ 15,350.00           | 2.50            | \$ 7,675.00            | 5.00                | \$ 15,350.00           |
| 71   | Reclamation of Ditch to Wetland Area  | 1/0                | LS   | 2,900.00            | \$ 2,900.00            | 4,000.00            | \$ 4,000.00            | 25,000.00                    | \$ 25,000.00           | 10,400.00                | \$ 10,400.00           | 7,000.00   | \$ 7,000.00            | 5,500.00        | \$ 5,500.00            | 8,000.00            | \$ 8,000.00            |
| 72   | Mitigation Area Ingrip  | 1                  | LS   | 67,300.00           | \$ 67,300.00           | 60,000.00           | \$ 60,000.00           | 57,120.00                    | \$ 57,120.00           | 61,000.00                | \$ 61,000.00           | 62,700.00  | \$ 62,700.00           | 67,200.00       | \$ 67,200.00           | 53,996.00           | \$ 53,996.00           |
| 73   | Overlays  | 1                  | LS   | 2,200.00            | \$ 2,200.00            | 5,400.00            | \$ 5,400.00            | 2,500.00                     | \$ 2,500.00            | 5,000.00                 | \$ 5,000.00            | 3,000.00   | \$ 3,000.00            | 13,500.00       | \$ 13,500.00           | 5,250.00            | \$ 5,250.00            |
| 74   | Installation of Erosion Control Netting   | 1                  | LS   | 7,200.00            | \$ 7,200.00            | 5,000.00            | \$ 5,000.00            | 5,000.00                     | \$ 5,000.00            | 4,300.00                 | \$ 4,300.00            | 5,000.00   | \$ 5,000.00            | 4,775.00        | \$ 4,775.00            | 3,388.00            | \$ 3,388.00            |
| 75   | Installation of Willow Riprap along Mts   | 1                  | LS   | 7,200.00            | \$ 7,200.00            | 4,000.00            | \$ 4,000.00            | 4,900.00                     | \$ 4,900.00            | 3,800.00                 | \$ 3,800.00            | 5,800.00   | \$ 5,800.00            | 1,145.00        | \$ 1,145.00            | 1,826.00            | \$ 1,826.00            |
| 76   | Installation of Wood Staked Seed Mats   | 1                  | LS   | 7,200.00            | \$ 7,200.00            | 6,400.00            | \$ 6,400.00            | 6,000.00                     | \$ 6,000.00            | 6,000.00                 | \$ 6,000.00            | 6,000.00   | \$ 6,000.00            | 5,195.00        | \$ 5,195.00            | 3,443.00            | \$ 3,443.00            |
| 77   | Installation of 1 Gallon Concrete Panels  | 400                | EA   | 9.00                | \$ 3,600.00            | 8.00                | \$ 3,200.00            | 6.00                         | \$ 2,400.00            | 8.00                     | \$ 3,200.00            | 10.00      | \$ 4,000.00            | 9.50            | \$ 3,800.00            | 24.20               | \$ 9,684.00            |
| 78   | Installation of D-48 Concrete Panels  | 50                 | EA   | 9.00                | \$ 450.00              | 8.00                | \$ 400.00              | 6.00                         | \$ 300.00              | 8.00                     | \$ 400.00              | 10.00      | \$ 500.00              | 9.50            | \$ 475.00              | 24.20               | \$ 1,210.00            |
| 79   | Removal of pavement and installation of locally sourced curbing   | 1                  | LS   | 3.75                | \$ 1,537.50            | 8.00                | \$ 2,400.00            | 6.00                         | \$ 2,400.00            | 6.00                     | \$ 2,400.00            | 6.00       | \$ 2,400.00            | 5.00            | \$ 2,075.00            | 4.96                | \$ 2,046.00            |
| 80   | Installation of Impervious Limer  | 1                  | LS   | 1,000.00            | \$ 1,000.00            | 3,000.00            | \$ 3,000.00            | 3,000.00                     | \$ 3,000.00            | 2,850.00                 | \$ 2,850.00            | 4,000.00   | \$ 4,000.00            | 17,650.00       | \$ 17,650.00           | 5,590.00            | \$ 5,590.00            |
| 81   | Installation of Impervious Limer  | 1                  | LS   | 25,000.00           | \$ 25,000.00           | 7,000.00            | \$ 7,000.00            | 6,000.00                     | \$ 6,000.00            | 6,400.00                 | \$ 6,400.00            | 6,900.00   | \$ 6,900.00            | 4,900.00        | \$ 4,900.00            | 700.00              | \$ 700.00              |
| 82   | Maintenance during 90 Day Final Inspection Period   | 1                  | LS   | 5,600.00            | \$ 5,600.00            | 18,000.00           | \$ 18,000.00           | 16,250.00                    | \$ 16,250.00           | 17,300.00                | \$ 17,300.00           | 17,350.00  | \$ 17,350.00           | 17,390.00       | \$ 17,390.00           | 2,885.00            | \$ 2,885.00            |
| 83   | Research for Archaeological & Paleontological Concerns  | 1                  | LS   | 25,000.00           | \$ 25,000.00           | 25,000.00           | \$ 25,000.00           | 25,000.00                    | \$ 25,000.00           | 25,000.00                | \$ 25,000.00           | 25,000.00  | \$ 25,000.00           | 25,000.00       | \$ 25,000.00           | 25,000.00           | \$ 25,000.00           |
| 84   | Project Migration   | 1                  | LS   | 10,000.00           | \$ 10,000.00           | 10,000.00           | \$ 10,000.00           | 20,000.00                    | \$ 20,000.00           | 1,000.00                 | \$ 1,000.00            | 45,000.00  | \$ 45,000.00           | 25,000.00       | \$ 25,000.00           | 100,000.00          | \$ 100,000.00          |
| 85   | Blanking, Shoring and Bracing of Equipment Method for Excavations, Pile Field or Dewatering   | 1                  | LS   | 10,000.00           | \$ 10,000.00           | 20,000.00           | \$ 20,000.00           | 25,000.00                    | \$ 25,000.00           | 10,000.00                | \$ 10,000.00           | 25,000.00  | \$ 25,000.00           | 13,000.00       | \$ 13,000.00           | 10,000.00           | \$ 10,000.00           |
| <b>TOTAL SCHEDULE "A" BID AMOUNT</b>       |   |                    |      |                     | <b>\$ 9,467,719.50</b> |                     | <b>\$ 4,418,807.00</b> |                              | <b>\$ 4,725,553.33</b> |                          | <b>\$ 5,431,593.00</b> |            | <b>\$ 4,807,734.00</b> |                 | <b>\$ 4,476,707.00</b> |                     | <b>\$ 4,384,176.00</b> |
| <b>BID SCHEDULE "B" FOR IRWD UTILITIES</b> |   |                    |      |                     |                        |                     |                        |                              |                        |                          |                        |            |                        |                 |                        |                     |                        |
| 1 (D)                                      | Materials and Demobilization  | 1                  | LS   | 26,000.00           | \$ 26,000.00           | 10,500.00           | \$ 10,500.00           | 12,000.00                    | \$ 12,000.00           | 12,000.00                | \$ 12,000.00           | 5,000.00   | \$ 5,000.00            | 8,000.00        | \$ 8,000.00            | 4,000.00            | \$ 4,000.00            |
| 1 (E)                                      | Obtain Required Permits   | 1                  | LS   | 4,000.00            | \$ 4,000.00            | 10,600.00           | \$ 10,600.00           | 2,500.00                     | \$ 2,500.00            | 2,500.00                 | \$ 2,500.00            | 1,000.00   | \$ 1,000.00            | 500.00          | \$ 500.00              | 100,000.00          | \$ 100,000.00          |
| 2 (D)                                      | Furnish Utility Verification Surveys  | 1                  | LS   | 6,000.00            | \$ 6,000.00            | 1,000.00            | \$ 1,000.00            | 7,500.00                     | \$ 7,500.00            | 8,500.00                 | \$ 8,500.00            | 7,400.00   | \$ 7,400.00            | 3,000.00        | \$ 3,000.00            | 5,000.00            | \$ 5,000.00            |
| 4 (D)                                      | Utility Control   | 1                  | LS   | 5,000.00            | \$ 5,000.00            | 110.00              | \$ 110.00              | 2,500.00                     | \$ 2,500.00            | 2,800.00                 | \$ 2,800.00            | 2,500.00   | \$ 2,500.00            | 750.00          | \$ 750.00              | 1,000.00            | \$ 1,000.00            |
| 6 (D)                                      | General Safety Plan   | 1                  | LS   | 3,000.00            | \$ 3,000.00            | 110.00              | \$ 110.00              | 1,000.00                     | \$ 1,000.00            | 100.00                   | \$ 100.00              | 5,000.00   | \$ 5,000.00            | 100.00          | \$ 100.00              | 500.00              | \$ 500.00              |
| 6 (E)                                      | Furnish trench safety technology per IRWD specifications  | 1                  | LS   | 10,000.00           | \$ 10,000.00           | 5,400.00            | \$ 5,400.00            | 5,000.00                     | \$ 5,000.00            | 100.00                   | \$ 100.00              | 5,800.00   | \$ 5,800.00            | 10,000.00       | \$ 10,000.00           | 6,000.00            | \$ 6,000.00            |
| 7 (D)                                      | Furnish pipeho pressure testing and certification per IRWD specifications   | 1                  | LS   | 10,000.00           | \$ 10,000.00           | 5,000.00            | \$ 5,000.00            | 5,500.00                     | \$ 5,500.00            | 11,000.00                | \$ 11,000.00           | 10,400.00  | \$ 10,400.00           | 10,000.00       | \$ 10,000.00           | 6,700.00            | \$ 6,700.00            |
| 7 (E)                                      | Furnish trench safety technology per IRWD specifications  | 1                  | LS   | 5,000.00            | \$ 5,000.00            | 5,000.00            | \$ 5,000.00            | 5,000.00                     | \$ 5,000.00            | 5,000.00                 | \$ 5,000.00            | 5,000.00   | \$ 5,000.00            | 5,000.00        | \$ 5,000.00            | 5,000.00            | \$ 5,000.00            |
| 8 (D)                                      | Furnish and install 12 inch diameter 12345 inch wall thickness CMU/AC block pipe with shafted joints and all fittings, including bedding, dewatering, bedding, backfill and resurfacing per IRWD standards and specifications | 1,000              | LF   | 95.00               | \$ 95,000.00           | 78.00               | \$ 78,000.00           | 75.00                        | \$ 75,000.00           | 82.00                    | \$ 82,000.00           | 79.00      | \$ 79,000.00           | 85.00           | \$ 85,000.00           | 70.00               | \$ 70,000.00           |
| 8 (E)                                      | Furnish and install 8 inch PVC 1200 pipe and all fittings, including bedding, dewatering, bedding, backfill and resurfacing per IRWD standards and specifications   | 1,000              | LF   | 75.00               | \$ 75,000.00           | 50.00               | \$ 50,000.00           | 49.00                        | \$ 49,000.00           | 74.00                    | \$ 74,000.00           | 42.00      | \$ 42,000.00           | 3,276.00        | \$ 3,276,000.00        | 40.00               | \$ 40,000.00           |
| 10 (D)                                     | Furnish and install 4 inch PVC 1200 pipe and all fittings, including bedding, dewatering, bedding, backfill and resurfacing per IRWD standards and specifications   | 1,000              | LF   | 65.00               | \$ 65,000.00           | 52.00               | \$ 52,000.00           | 50.00                        | \$ 50,000.00           | 65.00                    | \$ 65,000.00           | 32.00      | \$ 32,000.00           | 1,864.00        | \$ 1,864,000.00        | 34.00               | \$ 34,000.00           |
| 11 (C)                                     | Remove and dispose of existing pipe and fittings including bedding, dewatering, bedding, backfill and resurfacing per IRWD standards and specifications   | 1,000              | LF   | 2,000.00            | \$ 2,000.00            | 1,700.00            | \$ 1,700.00            | 1,600.00                     | \$ 1,600.00            | 2,000.00                 | \$ 2,000.00            | 2,500.00   | \$ 2,500.00            | 2,000.00        | \$ 2,000.00            | 2,350.00            | \$ 2,350.00            |
| 12 (C)                                     | Remove and dispose of existing pipe and fittings including bedding, dewatering, bedding, backfill and resurfacing per IRWD standards and specifications   | 1,000              | LF   | 2,500.00            | \$ 2,500.00            | 5,000.00            | \$ 5,000.00            | 10,000.00                    | \$ 10,000.00           | 4,800.00                 | \$ 4,800.00            | 2,000.00   | \$ 2,000.00            | 5,800.00        | \$ 5,800.00            | 6,000.00            | \$ 6,000.00            |
| 13 (D)                                     | Furnish and install 3 inch metal assembly per IRWD Standard Drawing W-7   | 1                  | EA   | 14,000.00           | \$ 14,000.00           | 23,000.00           | \$ 23,000.00           | 22,000.00                    | \$ 22,000.00           | 37,000.00                | \$ 37,000.00           | 18,000.00  | \$ 18,000.00           | 24,300.00       | \$ 24,300.00           | 37,500.00           | \$ 37,500.00           |
| 13 (E)                                     | Furnish and install 3 inch reduced pressure principle assembly per IRWD Standard Drawing W-7  | 1                  | EA   | 6,000.00            | \$ 6,000.00            | 3,600.00            | \$ 3,600.00            | 3,500.00                     | \$ 3,500.00            | 8,725.00                 | \$ 8,725.00            | 6,200.00   | \$ 6,200.00            | 5,200.00        | \$ 5,200.00            | 11,200.00           | \$ 11,200.00           |
| 14 (D)                                     | Furnish and install 6 inch reduced pressure principle assembly per IRWD Standard Drawing W-7  | 1                  | EA   | 15,000.00           | \$ 15,000.00           | 9,000.00            | \$ 9,000.00            | 9,000.00                     | \$ 9,000.00            | 11,600.00                | \$ 11,600.00           | 3,550.00   | \$ 3,550.00            | 9,950.00        | \$ 9,950.00            | 6,000.00            | \$ 6,000.00            |
| 15 (D)                                     | Furnish and install 12 inch Butterfly Valve per IRWD standards and specifications   | 1                  | EA   | 4,000.00            | \$ 4,000.00            | 3,600.00            | \$ 3,600.00            | 3,500.00                     | \$ 3,500.00            | 4,300.00                 | \$ 4,300.00            | 3,400.00   | \$ 3,400.00            | 3,400.00        | \$ 3,400.00            | 2,800.00            | \$ 2,800.00            |
| 16 (D)                                     | Furnish and install five hydrant assembly per IRWD Standard Drawing W-8   | 1                  | EA   | 7,200.00            | \$ 7,200.00            | 9,000.00            | \$ 9,000.00            | 8,500.00                     | \$ 8,500.00            | 8,250.00                 | \$ 8,250.00            | 6,000.00   | \$ 6,000.00            | 6,000.00        | \$ 6,000.00            | 6,000.00            | \$ 6,000.00            |

**BID ANALYSIS  
LAKE FOREST SPORTS PARK GRADING AND DRAINAGE**

Bid Opening : July 26, 2012  
Prepared By: AF  
Checked By: CT

| Item No.   | Item  | Estimated Quantity | Unit | Engineer's Estimate |                 | Road Builders, Inc. |                 | Harper Contracting Co., Inc. |                 | Sukut Construction, Inc. |                 | Crew, Inc.      |                 | GMC Engineering |                 | Slices Company, Inc. |                 |
|--|---|--------------------|------|---------------------|-----------------|---------------------|-----------------|------------------------------|-----------------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------|-----------------|
|  |   |                    |      | Unit Price          | Extended Amount | Unit Price          | Extended Amount | Unit Price                   | Extended Amount | Unit Price               | Extended Amount | Unit Price      | Extended Amount | Unit Price      | Extended Amount | Unit Price           | Extended Amount |
| 19 (C)   | Install 4" RWGV   | 1                  | EA   | 2,200.00            | \$ 2,200.00     | \$ 2,000.00         | \$ 2,000.00     | \$ 2,000.00                  | \$ 2,000.00     | \$ 2,500.00              | \$ 2,500.00     | \$ 2,400.00     | \$ 2,400.00     | \$ 1,800.00     | \$ 1,800.00     | \$ 3,100.00          | \$ 3,100.00     |
| 20 (C)   | Finish and install CP lead station per RWD Standard Drawing C-1   | 3                  | EA   | 1,800.00            | \$ 5,400.00     | \$ 1,800.00         | \$ 5,400.00     | \$ 1,800.00                  | \$ 5,700.00     | \$ 360.00                | \$ 1,140.00     | \$ 1,500.00     | \$ 4,500.00     | \$ 600.00       | \$ 2,400.00     | \$ 1,000.00          | \$ 3,000.00     |
| 21 (C)   | DI and plug/tee setting 16 inch PVC as shown on the project plans   | 7                  | EA   | 2,500.00            | \$ 17,500.00    | \$ 1,600.00         | \$ 11,200.00    | \$ 1,700.00                  | \$ 11,900.00    | \$ 480.00                | \$ 3,360.00     | \$ 2,200.00     | \$ 15,400.00    | \$ 600.00       | \$ 5,600.00     | \$ 1,900.00          | \$ 13,300.00    |
| 22 (C)   | Demolish existing 16 inch pipe to be abandoned and/or removed   | 2345               | LF   | 12.00               | \$ 28,540.00    | \$ 1.00             | \$ 2,345.00     | \$ 0.50                      | \$ 1,122.50     | \$ 3.00                  | \$ 6,735.00     | \$ 4.00         | \$ 9,380.00     | \$ 1.00         | \$ 2,345.00     | \$ 2.80              | \$ 6,570.00     |
| 22 (C)   | String 16 inch PVC pipe to be abandoned to place as shown on the project plans  | 1,420              | LF   | 20.00               | \$ 28,400.00    | \$ 7.00             | \$ 9,940.00     | \$ 6.50                      | \$ 9,230.00     | \$ 6.00                  | \$ 8,520.00     | \$ 11.00        | \$ 15,620.00    | \$ 8.00         | \$ 11,360.00    | \$ 9.00              | \$ 12,780.00    |
| 24 (C)   | Remove existing 16 inch pipe and fittings as shown on Sheet 5 of the project plans  | 1                  | LS   | 3,000.00            | \$ 3,000.00     | \$ 3,600.00         | \$ 3,600.00     | \$ 15,000.00                 | \$ 15,000.00    | \$ 2,600.00              | \$ 2,600.00     | \$ 10,500.00    | \$ 10,500.00    | \$ 15,000.00    | \$ 13,000.00    | \$ 5,700.00          | \$ 5,700.00     |
| 24 (C)   | Remove 16 inch string existing culvert. Furnish and install 180 degree, 18 inch block trenching desander bedding, backfill and reinfacing per RWD standards and specifications  | 1                  | LS   | 2,000.00            | \$ 2,000.00     | \$ 2,700.00         | \$ 2,700.00     | \$ 2,800.00                  | \$ 2,800.00     | \$ 10,500.00             | \$ 10,500.00    | \$ 8,500.00     | \$ 8,500.00     | \$ 1,800.00     | \$ 1,800.00     | \$ 18,300.00         | \$ 18,300.00    |
| 25 (C)   | Furnish and install 16 inch diameter (13M) 100% max thickness CM/SC steel pipe with welded joints, and all fittings, including trenching desander bedding, backfill and reinfacing per RWD standards and specifications               | 1                  | LS   | 106.00              | \$ 119,400.00   | \$ 110.00           | \$ 125,180.00   | \$ 107.00                    | \$ 121,766.00   | \$ 89.00                 | \$ 101,282.00   | \$ 100.00       | \$ 112,800.00   | \$ 115.00       | \$ 130,870.00   | \$ 100.00            | \$ 113,800.00   |
| 26 (C)   | Furnish and install 16 inch diameter (13M) 100% max thickness CM/SC steel pipe with welded joints, and all fittings, including slope washers trenching desander bedding, backfill and reinfacing per RWD standards and specifications | 1138               | LF   | 110.00              | \$ 64,350.00    | \$ 180.00           | \$ 105,300.00   | \$ 170.00                    | \$ 69,450.00    | \$ 116.00                | \$ 67,260.00    | \$ 121.00       | \$ 70,785.00    | \$ 161.00       | \$ 94,185.00    | \$ 235.00            | \$ 137,475.00   |
| 27 (C)   | Connect to existing recycled water pipe as shown on the project plans   | 585                | LF   | 2,600.00            | \$ 5,200.00     | \$ 6,500.00         | \$ 13,000.00    | \$ 6,500.00                  | \$ 13,000.00    | \$ 4,900.00              | \$ 9,900.00     | \$ 4,800.00     | \$ 9,600.00     | \$ 6,200.00     | \$ 12,400.00    | \$ 7,150.00          | \$ 14,500.00    |
| 28 (C)   | Install 18" Butterfly Valve   | 2                  | EA   | 5,000.00            | \$ 10,000.00    | \$ 6,300.00         | \$ 12,600.00    | \$ 8,000.00                  | \$ 16,000.00    | \$ 5,800.00              | \$ 11,600.00    | \$ 5,300.00     | \$ 10,600.00    | \$ 4,400.00     | \$ 8,800.00     | \$ 6,000.00          | \$ 12,000.00    |
| 30 (C)   | Install 6" RWGV   | 1                  | EA   | 1,700.00            | \$ 1,700.00     | \$ 2,000.00         | \$ 2,000.00     | \$ 2,000.00                  | \$ 2,000.00     | \$ 2,800.00              | \$ 2,800.00     | \$ 1,800.00     | \$ 1,800.00     | \$ 1,300.00     | \$ 1,300.00     | \$ 1,300.00          | \$ 1,300.00     |
| 31 (C)   | Construct 2 inch 18" diameter in-flow assembly per RWD standards and specifications   | 1                  | EA   | 5,300.00            | \$ 5,300.00     | \$ 3,300.00         | \$ 3,300.00     | \$ 3,300.00                  | \$ 3,300.00     | \$ 5,200.00              | \$ 5,200.00     | \$ 4,500.00     | \$ 4,500.00     | \$ 3,800.00     | \$ 3,800.00     | \$ 5,500.00          | \$ 5,500.00     |
| 32 (C)   | Construct 2 inch flow off assembly per RWD standards and specifications   | 1                  | EA   | 3,800.00            | \$ 3,800.00     | \$ 7,800.00         | \$ 7,800.00     | \$ 7,500.00                  | \$ 7,500.00     | \$ 6,800.00              | \$ 6,800.00     | \$ 6,000.00     | \$ 6,000.00     | \$ 3,800.00     | \$ 3,800.00     | \$ 6,250.00          | \$ 6,250.00     |
| 33 (C)   | Furnish and install CP lead station per RWD Standard Drawing C-1  | 3                  | EA   | 1,800.00            | \$ 5,400.00     | \$ 1,700.00         | \$ 5,100.00     | \$ 1,800.00                  | \$ 5,400.00     | \$ 578.00                | \$ 1,734.00     | \$ 1,600.00     | \$ 4,800.00     | \$ 600.00       | \$ 1,800.00     | \$ 1,000.00          | \$ 3,000.00     |
| <b>TOTAL SCHEDULE "B" BID AMOUNT</b>                   |   |                    |      | \$ 540,816.00       |                 | \$ 504,453.00       |                 | \$ 514,716.00                |                 | \$ 458,456.00            |                 | \$ 474,237.00   |                 | \$ 494,378.00   |                 | \$ 672,282.00        |                 |
| <b>BASE BID (Total Schedule &amp; Plan Schedule B)</b> |   |                    |      | \$ 10,006,523.50    |                 | \$ 4,817,100.00     |                 | \$ 4,817,100.00              |                 | \$ 5,888,038.00          |                 | \$ 6,577,872.00 |                 | \$ 6,888,000.00 |                 | \$ 7,288,400.00      |                 |

C-3

**BID ANALYSIS**  
**LAKE FOREST SPORTS PARK GRADING AND DRAINAGE**

Bid Opening : July 26, 2012  
Prepared By: AF  
Checked By: CT

| Item No.   | Item  | Estimated Quantity | Unit | SEMA Construction, Inc. |                 | Wood Bros, Inc. |                 | Minako America Corporation |                 | Ford Construction Co., Inc. |                 |
|--|---|--------------------|------|-------------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|-----------------------------|-----------------|
|  |   |                    |      | Unit Price              | Extended Amount | Unit Price      | Extended Amount | Unit Price                 | Extended Amount | Unit Price                  | Extended Amount |
| <b>BID SCHEDULE "A" FOR RANCHO RAINBOW ROADWAY</b> |   |                    |      |                         |                 |                 |                 |                            |                 |                             |                 |
| 1  | Mobilization / Demobilization (Max 2% of Bid Schedule "A" General Cont) | 1                  | LS   | \$ 120,000.00           | \$ 120,000.00   | \$ 144,000.00   | \$ 144,000.00   | \$ 150,000.00              | \$ 150,000.00   | \$ 199,400.00               | \$ 199,400.00   |
| 2  | SWPPP Implementation and Monitoring                                     | 1                  | LS   | \$ 100,000.00           | \$ 100,000.00   | \$ 64,200.00    | \$ 64,200.00    | \$ 10,000.00               | \$ 10,000.00    | \$ 43,200.00                | \$ 43,200.00    |
| 3  | Drainage Construction (Labor)   | 1                  | LS   | \$ 200,000.00           | \$ 200,000.00   | \$ 116,410.00   | \$ 116,410.00   | \$ 70,000.00               | \$ 70,000.00    | \$ 200,000.00               | \$ 200,000.00   |
| 4  | Alma Creek Trail Closure  | 1                  | LS   | \$ 15,000.00            | \$ 15,000.00    | \$ 10,000.00    | \$ 10,000.00    | \$ 10,000.00               | \$ 10,000.00    | \$ 4,000.00                 | \$ 4,000.00     |
| 5  | Construction Surveying  | 1                  | LS   | \$ 150,000.00           | \$ 150,000.00   | \$ 70,620.00    | \$ 70,620.00    | \$ 50,000.00               | \$ 50,000.00    | \$ 125,000.00               | \$ 125,000.00   |
| 6  | Utility Control   | 1                  | LS   | \$ 5,000.00             | \$ 5,000.00     | \$ 55,000.00    | \$ 55,000.00    | \$ 10,000.00               | \$ 10,000.00    | \$ 3,000.00                 | \$ 3,000.00     |
| 7  | Unexcused Excavation  | 1                  | LS   | \$ 2,260,000.00         | \$ 2,260,000.00 | \$ 2,026,940.00 | \$ 2,026,940.00 | \$ 2,000,000.00            | \$ 2,000,000.00 | \$ 3,250,000.00             | \$ 3,250,000.00 |
| 8  | Import Contingency  | 50,000             | CY   | \$ 0.01                 | \$ 500.00       | \$ 7.90         | \$ 395,000.00   | \$ 1.00                    | \$ 50,000.00    | \$ 7.90                     | \$ 395,000.00   |
| 8A   | Export Contingency  | 50,000             | CY   | \$ 0.01                 | \$ 500.00       | \$ 5.00         | \$ 250,000.00   | \$ 1.00                    | \$ 50,000.00    | \$ 7.90                     | \$ 395,000.00   |
| 9  | Demolition  | 86,000             | CY   | \$ 1.50                 | \$ 129,000.00   | \$ 2.35         | \$ 202,100.00   | \$ 1.00                    | \$ 86,000.00    | \$ 2.75                     | \$ 236,500.00   |
| 9A   | Unexcused Material Excavation   | 384,000            | CY   | \$ 1.50                 | \$ 576,000.00   | \$ 1.89         | \$ 727,800.00   | \$ 1.00                    | \$ 384,000.00   | \$ 2.00                     | \$ 768,000.00   |
| 10   | Stabilization Fill Subdrainage  | 1                  | LF   | \$ 150,000.00           | \$ 150,000.00   | \$ 450,000.00   | \$ 450,000.00   | \$ 82,000.00               | \$ 82,000.00    | \$ 120,000.00               | \$ 120,000.00   |
| 11   | Canopy Subdrains  | 4,500              | LS   | \$ 23.00                | \$ 103,500.00   | \$ 24.34        | \$ 109,530.00   | \$ 30.00                   | \$ 135,000.00   | \$ 29.00                    | \$ 130,500.00   |
| 12   | Clearing and Grading  | 1                  | LS   | \$ 250,000.00           | \$ 250,000.00   | \$ 109,920.00   | \$ 109,920.00   | \$ 50,000.00               | \$ 50,000.00    | \$ 100,000.00               | \$ 100,000.00   |
| 13   | Asphalt Concrete Pavement   | 76                 | TON  | \$ 200.00               | \$ 15,200.00    | \$ 165.00       | \$ 12,540.00    | \$ 250.00                  | \$ 19,000.00    | \$ 125.00                   | \$ 9,500.00     |
| 14   | Crushed Miscellaneous Stone (C&M)                                       | 40                 | CF   | \$ 130.00               | \$ 5,200.00     | \$ 96.40        | \$ 3,856.00     | \$ 50.00                   | \$ 2,000.00     | \$ 50.00                    | \$ 2,000.00     |
| 15   | Truck Curbs   | 2,540              | BF   | \$ -4.00                | \$ -10,160.00   | \$ 4.10         | \$ 10,414.00    | \$ 12.00                   | \$ 30,480.00    | \$ 3.75                     | \$ 9,525.00     |
| 16   | 1" PVC SDR 35 Storm Drain Pipe  | 185                | LF   | \$ 55.00                | \$ 10,275.00    | \$ 67.00        | \$ 12,485.00    | \$ 52.00                   | \$ 9,720.00     | \$ 19.00                    | \$ 3,515.00     |
| 17   | 1" PVC SDR 35 Storm Drain Pipe  | 710                | LF   | \$ 34.00                | \$ 24,140.00    | \$ 35.10        | \$ 24,921.00    | \$ 100.00                  | \$ 71,000.00    | \$ 20.00                    | \$ 14,200.00    |
| 18   | 1" PVC SDR 35 Storm Drain Pipe  | 1,730              | LF   | \$ 36.00                | \$ 62,040.00    | \$ 33.40        | \$ 57,858.00    | \$ 100.00                  | \$ 173,000.00   | \$ 30.00                    | \$ 52,000.00    |
| 19   | 1" PVC SDR 35 Storm Drain Pipe  | 430                | LF   | \$ 46.00                | \$ 19,880.00    | \$ 42.30        | \$ 18,189.00    | \$ 100.00                  | \$ 43,000.00    | \$ 32.00                    | \$ 13,840.00    |
| 20   | 1" PVC SDR 35 Storm Drain Pipe  | 1,540              | LF   | \$ 50.00                | \$ 77,000.00    | \$ 38.20        | \$ 58,828.00    | \$ 100.00                  | \$ 154,000.00   | \$ 40.00                    | \$ 61,600.00    |
| 21   | 1" PVC SDR 35 Storm Drain Pipe  | 540                | LF   | \$ 37.00                | \$ 20,000.00    | \$ 32.05        | \$ 17,307.00    | \$ 200.00                  | \$ 108,000.00   | \$ 45.00                    | \$ 24,300.00    |
| 22   | 1" Polystyrene PVC Dewatering Basin Subdrain                            | 255                | LF   | \$ 11.00                | \$ 2,805.00     | \$ 25.00        | \$ 6,375.00     | \$ 100.00                  | \$ 25,500.00    | \$ 5.00                     | \$ 1,275.00     |
| 23   | Autoblock PVC Bio-Purification Subdrain                                 | 3,600              | LF   | \$ 11.00                | \$ 39,600.00    | \$ 12.46        | \$ 44,856.00    | \$ 100.00                  | \$ 360,000.00   | \$ 6.00                     | \$ 21,600.00    |
| 24   | 18" HDPE Storm Drain Pipe   | 3,150              | LF   | \$ 42.00                | \$ 132,300.00   | \$ 77.00        | \$ 243,135.00   | \$ 128.00                  | \$ 403,200.00   | \$ 25.50                    | \$ 80,175.00    |
| 25   | 24" HDPE Storm Drain Pipe   | 1,165              | LF   | \$ 54.00                | \$ 62,910.00    | \$ 67.00        | \$ 78,018.00    | \$ 200.00                  | \$ 232,000.00   | \$ 45.00                    | \$ 52,425.00    |
| 26   | 18" HDPE Storm Drain Pipe   | 1,235              | LF   | \$ 57.00                | \$ 70,395.00    | \$ 55.00        | \$ 67,925.00    | \$ 300.00                  | \$ 365,500.00   | \$ 36.00                    | \$ 44,460.00    |
| 27   | 18" HDPE Storm Drain Pipe   | 630                | LF   | \$ 110.00               | \$ 69,300.00    | \$ 101.00       | \$ 63,630.00    | \$ 400.00                  | \$ 252,000.00   | \$ 70.00                    | \$ 44,100.00    |
| 28   | 18" RCP Pipe D-Load Per Plan  | 220                | LF   | \$ 110.00               | \$ 24,200.00    | \$ 98.40        | \$ 21,648.00    | \$ 200.00                  | \$ 44,000.00    | \$ 42.30                    | \$ 9,306.00     |
| 29   | 18" RCP Pipe D-Load Per Plan  | 460                | LF   | \$ 140.00               | \$ 64,400.00    | \$ 108.90       | \$ 50,094.00    | \$ 350.00                  | \$ 160,500.00   | \$ 65.00                    | \$ 29,900.00    |
| 30   | 18" RCP Pipe D-Load Per Plan  | 85                 | LF   | \$ 160.00               | \$ 13,600.00    | \$ 132.00       | \$ 11,220.00    | \$ 400.00                  | \$ 34,000.00    | \$ 75.00                    | \$ 6,375.00     |
| 31   | 18" RCP Pipe D-Load Per Plan  | 280                | LF   | \$ 170.00               | \$ 47,600.00    | \$ 145.00       | \$ 40,600.00    | \$ 400.00                  | \$ 112,000.00   | \$ 95.00                    | \$ 26,600.00    |
| 32   | Precast Concrete Filter End Section                                     | 12                 | EA   | \$ 600.00               | \$ 7,200.00     | \$ 534.00       | \$ 6,408.00     | \$ 2,000.00                | \$ 24,000.00    | \$ 500.00                   | \$ 6,000.00     |
| 33   | Terrace Drain   | 5,740              | LF   | \$ 20.00                | \$ 114,800.00   | \$ 15.20        | \$ 87,152.00    | \$ 20.00                   | \$ 114,800.00   | \$ 21.50                    | \$ 123,410.00   |
| 34   | Down Drain  | 530                | LF   | \$ 29.00                | \$ 15,270.00    | \$ 25.25        | \$ 13,382.50    | \$ 30.00                   | \$ 15,900.00    | \$ 29.00                    | \$ 15,370.00    |
| 35   | Interceptor Drain   | 1,000              | LF   | \$ 17.00                | \$ 17,000.00    | \$ 15.50        | \$ 15,500.00    | \$ 20.00                   | \$ 20,000.00    | \$ 20.25                    | \$ 20,250.00    |
| 36   | Upland Inlet  | 5                  | EA   | \$ 350.00               | \$ 1,750.00     | \$ 315.00       | \$ 1,575.00     | \$ 1,000.00                | \$ 5,000.00     | \$ 1,100.00                 | \$ 5,500.00     |
| 37   | Intercept Marsh (For SWPPP)   | 18                 | AC   | \$ 2,500.00             | \$ 45,000.00    | \$ 3,520.00     | \$ 63,360.00    | \$ 1,000.00                | \$ 18,000.00    | \$ 2,875.00                 | \$ 51,750.00    |
| 38   | Soil Erosion (For SWPPP)  | 56                 | AL   | \$ 1,400.00             | \$ 78,400.00    | \$ 1,498.00     | \$ 83,908.00    | \$ 700.00                  | \$ 39,200.00    | \$ 825.00                   | \$ 46,200.00    |
| 39   | 1" for 18" (For SWPPP)  | 84,000             | EA   | \$ 1.90                 | \$ 159,600.00   | \$ 1.84         | \$ 152,920.00   | \$ 2.00                    | \$ 168,000.00   | \$ 1.80                     | \$ 151,200.00   |
| 40   | Construction Entrance/Exit (For SWPPP)                                  | 1                  | EA   | \$ 3,600.00             | \$ 3,600.00     | \$ 7,810.00     | \$ 7,810.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 25,000.00                | \$ 25,000.00    |
| 41   | Vegetation & Grass Bag Erosion Protection (For SWPPP)                   | 111,000            | SF   | \$ 0.70                 | \$ 77,700.00    | \$ 0.55         | \$ 61,050.00    | \$ 2.00                    | \$ 222,000.00   | \$ 0.90                     | \$ 63,900.00    |
| 42   | Soil Fabric (For SWPPP)   | 5,120              | LF   | \$ 1.80                 | \$ 9,216.00     | \$ 1.20         | \$ 6,144.00     | \$ 10.00                   | \$ 51,200.00    | \$ 1.40                     | \$ 7,168.00     |
| 43   | Storm Drain Inlet Protection  | 75                 | EA   | \$ 320.00               | \$ 24,000.00    | \$ 310.00       | \$ 23,250.00    | \$ 300.00                  | \$ 22,500.00    | \$ 350.00                   | \$ 26,250.00    |
| 44   | Cast Inplace Concrete Curb  | 12                 | EA   | \$ 660.00               | \$ 7,920.00     | \$ 602.50       | \$ 7,230.00     | \$ 1,000.00                | \$ 12,000.00    | \$ 575.00                   | \$ 6,900.00     |
| 44A  | Jointed Section   | 5                  | EA   | \$ 580.00               | \$ 2,900.00     | \$ 1,017.00     | \$ 5,085.00     | \$ 1,000.00                | \$ 5,000.00     | \$ 600.00                   | \$ 3,000.00     |
| 45   | Cast Inplace Pipe Anchor  | 18                 | EA   | \$ 2,000.00             | \$ 36,000.00    | \$ 1,070.00     | \$ 19,260.00    | \$ 1,000.00                | \$ 18,000.00    | \$ 740.00                   | \$ 13,320.00    |
| 46   | Cast Inplace Type II (18" x 18")  | 2                  | EA   | \$ 3,500.00             | \$ 7,000.00     | \$ 4,280.00     | \$ 8,560.00     | \$ 5,000.00                | \$ 10,000.00    | \$ 7,400.00                 | \$ 14,800.00    |
| 47   | Cast Inplace Type II (18" x 18")  | 1                  | EA   | \$ 3,800.00             | \$ 3,800.00     | \$ 4,710.00     | \$ 4,710.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 7,900.00                 | \$ 7,900.00     |
| 48   | Cast Inplace Type II (18" x 18")  | 4                  | EA   | \$ 6,200.00             | \$ 24,800.00    | \$ 6,800.00     | \$ 27,200.00    | \$ 8,000.00                | \$ 32,000.00    | \$ 11,500.00                | \$ 46,000.00    |
| 49   | Cast Inplace Type II (18" x 18")  | 1                  | EA   | \$ 10,900.00            | \$ 10,900.00    | \$ 3,745.00     | \$ 3,745.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 2,450.00                 | \$ 2,450.00     |
| 50   | Opening Cast Inplace (18")  | 13                 | EA   | \$ 3,800.00             | \$ 49,400.00    | \$ 5,345.00     | \$ 69,485.00    | \$ 7,500.00                | \$ 97,500.00    | \$ 5,850.00                 | \$ 76,050.00    |
| 51   | Manhole Duct in trench  | 2                  | EA   | \$ 4,000.00             | \$ 8,000.00     | \$ 5,671.00     | \$ 11,342.00    | \$ 10,000.00               | \$ 20,000.00    | \$ 3,800.00                 | \$ 7,600.00     |
| 52   | Manhole Duct in trench  | 17                 | EA   | \$ 5,600.00             | \$ 95,200.00    | \$ 5,500.00     | \$ 93,500.00    | \$ 6,000.00                | \$ 102,000.00   | \$ 5,000.00                 | \$ 85,000.00    |
| 53   | Concrete CD000000 CV  | 1                  | EA   | \$ 65,300.00            | \$ 65,300.00    | \$ 66,615.00    | \$ 66,615.00    | \$ 70,000.00               | \$ 70,000.00    | \$ 55,000.00                | \$ 55,000.00    |
| 54   | Concrete Precast Channel Wall Box                                       | 1                  | EA   | \$ 17,500.00            | \$ 17,500.00    | \$ 20,245.00    | \$ 20,245.00    | \$ 10,000.00               | \$ 10,000.00    | \$ 25,000.00                | \$ 25,000.00    |
| 55   | 1" Alum. grate  | 4                  | EA   | \$ 550.00               | \$ 2,200.00     | \$ 195.50       | \$ 782.00       | \$ 1,000.00                | \$ 4,000.00     | \$ 1,000.00                 | \$ 4,000.00     |
| 56   | 1/4" x 1/4" Grate Inlet   | 26                 | EA   | \$ 1,300.00             | \$ 33,800.00    | \$ 812.00       | \$ 21,112.00    | \$ 1,000.00                | \$ 26,000.00    | \$ 1,500.00                 | \$ 39,000.00    |
| 57   | 1/4" x 1/4" Grate Inlet   | 25                 | EA   | \$ 1,600.00             | \$ 40,000.00    | \$ 900.00       | \$ 22,500.00    | \$ 1,000.00                | \$ 25,000.00    | \$ 2,200.00                 | \$ 55,000.00    |
| 58   | Concrete Catch #1/1   | 1                  | EA   | \$ 550.00               | \$ 550.00       | \$ 2,675.00     | \$ 2,675.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 975.00                   | \$ 975.00       |
| 59   | Concrete Horizontal Inlet Wingwalls                                     | 50.5               | LF   | \$ 530.00               | \$ 26,765.00    | \$ 2,578.00     | \$ 129,189.00   | \$ 200.00                  | \$ 10,100.00    | \$ 750.00                   | \$ 37,725.00    |

C-4

BID ANALYSIS  
LAKE FOREST SPORTS PARK GRADING AND DRAINAGE

Bid Opening : July 26, 2012  
Prepared By: AF  
Checked By: CT

| Item No.                                   | Item   | Estimated Quantity | Unit | SEMA Construction, Inc. |                 | Wood Bros, Inc. |                 | Mireko America Corporation |                 | Ford Construction Co., Inc. |                 |
|--|--|--------------------|------|-------------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|-----------------------------|-----------------|
|  |  |                    |      | Unit Price              | Extended Amount | Unit Price      | Extended Amount | Unit Price                 | Extended Amount | Unit Price                  | Extended Amount |
| 60   | Concrete Handrail with W/Grassh  | 4                  | EA   | \$ 5,400.00             | \$ 21,600.00    | \$ 7,750.00     | \$ 31,000.00    | \$ 10,000.00               | \$ 40,000.00    | \$ 3,900.00                 | \$ 15,600.00    |
| 61   | Energy Dissipating Structure   | 3                  | EA   | \$ 18,200.00            | \$ 54,600.00    | \$ 43,700.00    | \$ 131,100.00   | \$ 90,000.00               | \$ 90,000.00    | \$ 19,500.00                | \$ 58,500.00    |
| 62   | Panel  | 225                | TGN  | \$ 110.00               | \$ 24,750.00    | \$ 103.00       | \$ 23,175.00    | \$ 100.00                  | \$ 22,500.00    | \$ 50.00                    | \$ 11,250.00    |
| 63   | Impact Protection Barrier  | 3                  | EA   | \$ 3,800.00             | \$ 11,400.00    | \$ 4,730.00     | \$ 14,190.00    | \$ 10,000.00               | \$ 30,000.00    | \$ 2,850.00                 | \$ 8,550.00     |
| 64   | Decor Screen   | 1                  | EA   | \$ 870.00               | \$ 870.00       | \$ 2,375.00     | \$ 2,375.00     | \$ 2,000.00                | \$ 2,000.00     | \$ 3,600.00                 | \$ 3,600.00     |
| 65   | Flag Stone   | 1                  | CA   | \$ 4,900.00             | \$ 4,900.00     | \$ 3,425.00     | \$ 3,425.00     | \$ 1,000.00                | \$ 1,000.00     | \$ 2,500.00                 | \$ 2,500.00     |
| 66   | Impervious Membrane Liner  | 64,800             | SF   | \$ 1.30                 | \$ 84,240.00    | \$ 1.31         | \$ 84,888.00    | \$ 1.00                    | \$ 64,800.00    | \$ 1.20                     | \$ 77,760.00    |
| 67   | Crushed Rock   | 111,000            | CF   | \$ 1.07                 | \$ 118,770.00   | \$ 1.56         | \$ 173,160.00   | \$ 1.00                    | \$ 111,000.00   | \$ 1.70                     | \$ 188,700.00   |
| 68   | Dimensional Soil Preparation   | 12,400             | CY   | \$ 3.00                 | \$ 37,200.00    | \$ 3.36         | \$ 103,664.00   | \$ 10.00                   | \$ 124,000.00   | \$ 10.10                    | \$ 125,240.00   |
| 69   | Water Table  | 291,000            | LF   | \$ 0.55                 | \$ 160,050.00   | \$ 0.25         | \$ 72,750.00    | \$ 0.20                    | \$ 58,200.00    | \$ 0.13                     | \$ 38,030.00    |
| 70   | Gravel Earth Seal  | 3,070              | BF   | \$ 2.20                 | \$ 6,754.00     | \$ 4.20         | \$ 12,894.00    | \$ 10.00                   | \$ 30,700.00    | \$ 3.50                     | \$ 10,745.00    |
| 71   | Installation of 24" to 48" Magnesium Anode   | 1                  | LS   | \$ 25,000.00            | \$ 25,000.00    | \$ 17,500.00    | \$ 17,500.00    | \$ 10,000.00               | \$ 10,000.00    | \$ 12,000.00                | \$ 12,000.00    |
| 72   | Magnesium Anode Installation   | 1                  | LS   | \$ 116,300.00           | \$ 116,300.00   | \$ 68,440.00    | \$ 68,440.00    | \$ 70,000.00               | \$ 70,000.00    | \$ 123,600.00               | \$ 123,600.00   |
| 73   | Overlays   | 1                  | LS   | \$ 15,000.00            | \$ 15,000.00    | \$ 7,200.00     | \$ 7,200.00     | \$ 7,000.00                | \$ 7,000.00     | \$ 5,600.00                 | \$ 5,500.00     |
| 74   | Installation of Concrete Control Joints  | 1                  | LS   | \$ 2,700.00             | \$ 2,700.00     | \$ 4,780.00     | \$ 4,780.00     | \$ 7,000.00                | \$ 7,000.00     | \$ 2,700.00                 | \$ 2,700.00     |
| 75   | Installation of Mulch Regenerant Seed Mix  | 1                  | LS   | \$ 1,800.00             | \$ 1,800.00     | \$ 1,130.00     | \$ 1,130.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 1,800.00                 | \$ 1,800.00     |
| 76   | Installation of Mulch Regenerant Seed Mix  | 1                  | LS   | \$ 2,200.00             | \$ 2,200.00     | \$ 5,080.00     | \$ 5,080.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 2,100.00                 | \$ 2,100.00     |
| 77   | Installation of 1/2" Galvanneal Corrugated Plastic   | 300                | EA   | \$ 3.50                 | \$ 1,050.00     | \$ 20.80        | \$ 6,240.00     | \$ 25.00                   | \$ 7,500.00     | \$ 3.25                     | \$ 975.00       |
| 78   | Installation of 2-4" Corrugated Plastic  | 53                 | EA   | \$ 3.00                 | \$ 159.00       | \$ 6.50         | \$ 344.50       | \$ 20.00                   | \$ 1,060.00     | \$ 5.00                     | \$ 265.00       |
| 79   | Installation of geotextile and installation of locally sourced aggregate   | 414                | EA   | \$ 5.00                 | \$ 2,070.00     | \$ 4.50         | \$ 1,863.00     | \$ 10.00                   | \$ 4,140.00     | \$ 4.50                     | \$ 1,863.00     |
| 80   | Installation of Mycorrhizal Fungus   | 1                  | LS   | \$ 16,200.00            | \$ 16,200.00    | \$ 17,475.00    | \$ 17,475.00    | \$ 20,000.00               | \$ 20,000.00    | \$ 17,500.00                | \$ 17,500.00    |
| 81   | Site Rehabilitation between landscaping and installation of water features and road work   | 1                  | LS   | \$ 2,000.00             | \$ 2,000.00     | \$ 11,436.00    | \$ 11,436.00    | \$ 1,000.00                | \$ 1,000.00     | \$ 22,000.00                | \$ 22,000.00    |
| 82   | Installation of 1/2" Galvanneal Corrugated Plastic   | 1                  | LS   | \$ 9,500.00             | \$ 9,500.00     | \$ 2,850.00     | \$ 2,850.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 9,500.00                 | \$ 9,500.00     |
| 83   | Allowance for Archaeological & Paleontological Discoveries   | 1                  | LS   | \$ 25,000.00            | \$ 25,000.00    | \$ 25,000.00    | \$ 25,000.00    | \$ 25,000.00               | \$ 25,000.00    | \$ 25,000.00                | \$ 25,000.00    |
| 84   | Project Wapacost   | 1                  | LS   | \$ 150,000.00           | \$ 150,000.00   | \$ 15,000.00    | \$ 15,000.00    | \$ 5,000.00                | \$ 5,000.00     | \$ 961,300.00               | \$ 961,300.00   |
| 85   | Shoring, Shoring, and Blowing of Excavated Material for Foundation Area Free to Cooper   | 1                  | LS   | \$ 20,000.00            | \$ 20,000.00    | \$ 5,000.00     | \$ 5,000.00     | \$ 300,000.00              | \$ 300,000.00   | \$ 20,000.00                | \$ 20,000.00    |
| TOTAL SCHEDULE                             |  |                    |      |                         | \$ 6,760,811.00 |                 | \$ 7,565,723.50 |                            | \$ 7,288,396.00 |                             | \$ 9,230,646.50 |
| <b>BID SCHEDULE "B" FOR IRWD UTILITIES</b> |  |                    |      |                         |                 |                 |                 |                            |                 |                             |                 |
| 1 (D)                                      | Material and Demolition  | 1                  | LS   | \$ 10,000.00            | \$ 10,000.00    | \$ 1,805.00     | \$ 1,805.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 5,000.00                 | \$ 5,000.00     |
| 2 (D)                                      | Obtain Required Permits  | 1                  | LS   | \$ 2,500.00             | \$ 2,500.00     | \$ 3,300.00     | \$ 3,300.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 1,250.00                 | \$ 1,250.00     |
| 3 (D)                                      | Furnish Utility Verification Services  | 1                  | LS   | \$ 3,500.00             | \$ 3,500.00     | \$ 7,000.00     | \$ 7,000.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 1,300.00                 | \$ 1,300.00     |
| 4 (D)                                      | Traffic Control  | 1                  | LS   | \$ 1,100.00             | \$ 1,100.00     | \$ 5,000.00     | \$ 5,000.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 5,900.00                 | \$ 5,900.00     |
| 5 (D)                                      | General Safety Plan  | 1                  | LS   | \$ 2,500.00             | \$ 2,500.00     | \$ 5,885.00     | \$ 5,885.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 2,500.00                 | \$ 2,500.00     |
| 6 (D)                                      | Furnish trench safety measures per IRWD specifications   | 1                  | LS   | \$ 5,000.00             | \$ 5,000.00     | \$ 5,885.00     | \$ 5,885.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 8,100.00                 | \$ 8,100.00     |
| 7 (D)                                      | Furnish pipeline pressure testing and abstraction per IRWD specifications  | 1                  | LS   | \$ 5,000.00             | \$ 5,000.00     | \$ 10,540.00    | \$ 10,540.00    | \$ 20,000.00               | \$ 20,000.00    | \$ 8,900.00                 | \$ 8,900.00     |
| 8 (D)                                      | Furnish trench shoring, CAM Monitors and Warm-ups for IRWD facilities per IRWD specifications  | 1                  | LS   | \$ 5,000.00             | \$ 5,000.00     | \$ 5,000.00     | \$ 5,000.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 5,000.00                 | \$ 5,000.00     |
| 9 (D)                                      | Furnish and install 12-inch diameter, 0.150-inch wall aluminum CAMAC steel pipe (per IRWD specifications) and all fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications | 1,085              | LF   | \$ 92.50                | \$ 100,840.00   | \$ 113.00       | \$ 122,940.00   | \$ 100.00                  | \$ 108,500.00   | \$ 155.00                   | \$ 168,940.00   |
| 10 (D)                                     | Furnish and install 8-inch diameter, 0.150-inch wall aluminum CAMAC steel pipe (per IRWD specifications) and all fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications  | 70                 | LF   | \$ 112.00               | \$ 7,840.00     | \$ 113.00       | \$ 7,910.00     | \$ 100.00                  | \$ 7,000.00     | \$ 50.00                    | \$ 3,500.00     |
| 11 (D)                                     | Furnish and install 4-inch PVC C-900 pipe and all fittings, thrust blocks, flange coupling, bedding, backfill and reworking per Detail 4 Sheet 2 per IRWD standards and specifications   | 82                 | LF   | \$ 97.00                | \$ 7,954.00     | \$ 102.00       | \$ 8,364.00     | \$ 100.00                  | \$ 8,200.00     | \$ 48.00                    | \$ 3,936.00     |
| 12 (D)                                     | Furnish and install 4-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications   | 1                  | LS   | \$ 1,020.00             | \$ 1,020.00     | \$ 5,350.00     | \$ 5,350.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 3,000.00                 | \$ 3,000.00     |
| 13 (D)                                     | Furnish and install 12-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications  | 1                  | EA   | \$ 2,530.00             | \$ 2,530.00     | \$ 5,243.00     | \$ 5,243.00     | \$ 1,000.00                | \$ 1,000.00     | \$ 7,000.00                 | \$ 7,000.00     |
| 14 (D)                                     | Furnish and install 8-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications   | 1                  | EA   | \$ 21,000.00            | \$ 21,000.00    | \$ 32,858.00    | \$ 32,858.00    | \$ 15,000.00               | \$ 15,000.00    | \$ 25,000.00                | \$ 25,000.00    |
| 15 (D)                                     | Furnish and install 8-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications   | 1                  | EA   | \$ 4,700.00             | \$ 4,700.00     | \$ 8,346.00     | \$ 8,346.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 5,400.00                 | \$ 5,400.00     |
| 16 (D)                                     | Furnish and install 8-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications   | 1                  | EA   | \$ 9,900.00             | \$ 9,900.00     | \$ 10,123.00    | \$ 10,123.00    | \$ 15,000.00               | \$ 15,000.00    | \$ 7,800.00                 | \$ 7,800.00     |
| 17 (D)                                     | Furnish and install 12-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications  | 1                  | EA   | \$ 4,200.00             | \$ 4,200.00     | \$ 6,153.00     | \$ 6,153.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 3,500.00                 | \$ 3,500.00     |
| 18 (D)                                     | Furnish and install 8-inch nominal pressure polyethylene pipe and fittings, assembly, trenching, dewatering, bedding, backfill and reworking per IRWD standards and specifications   | 1                  | EA   | \$ 8,000.00             | \$ 8,000.00     | \$ 9,416.00     | \$ 9,416.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 4,300.00                 | \$ 4,300.00     |

C-5

**BID ANALYSIS  
LAKE FOREST SPORTS PARK GRADING AND DRAINAGE**

Bid Opening : July 26, 2012  
Prepared By: AF  
Checked By: CT

| Item No.                                     | Item   | Estimated Quantity | Unit | SEMA Construction, Inc. |                 | Wood Bros, Inc. |                 | Minabo America Corporation |                 | Ford Construction Co., Inc. |                 |
|--|--|--------------------|------|-------------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|-----------------------------|-----------------|
|  |  |                    |      | Unit Price              | Extended Amount | Unit Price      | Extended Amount | Unit Price                 | Extended Amount | Unit Price                  | Extended Amount |
| 18 (D)                                       | Install 4" RWWD<br>Furnish and install CP ball valves per #1001  | 1                  | EA   | \$ 2,000.00             | \$ 2,000.00     | \$ 2,400.00     | \$ 2,400.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 3,550.00                 | \$ 3,550.00     |
| 20 (D)                                       | Standard Draining CP-1<br>Culvert pipe/pipe meeting 16-inch PVC as shown on the project plans  | 3                  | EA   | \$ 1,275.00             | \$ 3,825.00     | \$ 910.00       | \$ 2,730.00     | \$ 1,000.00                | \$ 3,000.00     | \$ 1,000.00                 | \$ 3,000.00     |
| 21 (D)                                       | Concrete existing 16-inch pipe to be abandoned and/or removed  | 7                  | EA   | \$ 1,500.00             | \$ 10,500.00    | \$ 2,247.00     | \$ 15,729.00    | \$ 1,000.00                | \$ 7,000.00     | \$ 1,150.00                 | \$ 8,050.00     |
| 22 (D)                                       | Supply 33 existing 16-inch PVC pipe to be abandoned in place as shown on the project plans   | 2,245              | LF   | \$ 1.00                 | \$ 2,245.00     | \$ 93.00        | \$ 208,590.00   | \$ 20.00                   | \$ 44,900.00    | \$ 1.00                     | \$ 2,245.00     |
| 23 (D)                                       | Remove existing 16-inch pipe and change in plans as shown on the project plans   | 1,420              | LF   | \$ 17.50                | \$ 24,850.00    | \$ 14.70        | \$ 20,874.00    | \$ 20.00                   | \$ 28,400.00    | \$ 5.50                     | \$ 7,810.00     |
| 24 (D)                                       | Remove 16-inch large existing culverts<br>Furnish and install blind flange, 16-inch bolts including the welding, bolting, backfill and rebar/acing per RWWD standards and specifications per Detail 2, Sheet 2   | 1                  | LB   | \$ 25,000.00            | \$ 25,000.00    | \$ 6,100.00     | \$ 6,100.00     | \$ 200,000.00              | \$ 200,000.00   | \$ 13,500.00                | \$ 13,500.00    |
| 25 (D)                                       | Furnish and install 16-inch diameter, 0.1345-inch wall thickness, CMLC steel pipe with welded joints, and all fittings, including bolting, bolting, backfill and rebar/acing per RWWD standards and specifications per Detail 2, Sheet 2                 | 1                  | LB   | \$ 5,200.00             | \$ 5,200.00     | \$ 3,530.00     | \$ 3,530.00     | \$ 1,000.00                | \$ 1,000.00     | \$ 17,000.00                | \$ 17,000.00    |
| 26 (D)                                       | Furnish and install 16-inch diameter, 0.1345-inch wall thickness, CMLC steel pipe with welded joints, and all fittings, including bolting, bolting, backfill and rebar/acing per RWWD standards and specifications per RWWD standards and specifications | 1,108              | LF   | \$ 122.00               | \$ 138,836.00   | \$ 131.00       | \$ 148,078.00   | \$ 150.00                  | \$ 170,730.00   | \$ 170.00                   | \$ 193,460.00   |
| 27 (D)                                       | Furnish and install 16-inch diameter, 0.25-inch wall thickness, CMLC steel pipe with welded joints, and all fittings, including bolting, bolting, backfill and rebar/acing per RWWD standards and specifications   | 565                | LF   | \$ 160.00               | \$ 90,400.00    | \$ 144.00       | \$ 81,240.00    | \$ 150.00                  | \$ 87,300.00    | \$ 210.00                   | \$ 122,850.00   |
| 28 (D)                                       | Connect to existing recycled water pipe as shown on the project plans  | 3                  | EA   | \$ 9,600.00             | \$ 28,800.00    | \$ 4,815.00     | \$ 14,445.00    | \$ 5,000.00                | \$ 15,000.00    | \$ 3,150.00                 | \$ 9,450.00     |
| 29 (D)                                       | Install 16" Butterfly Valve  | 2                  | EA   | \$ 8,400.00             | \$ 16,800.00    | \$ 5,243.00     | \$ 10,486.00    | \$ 10,000.00               | \$ 20,000.00    | \$ 8,020.00                 | \$ 16,040.00    |
| 30 (D)                                       | Install 6" RWWD  | 1                  | EA   | \$ 2,900.00             | \$ 2,900.00     | \$ 1,552.00     | \$ 1,552.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 2,075.00                 | \$ 2,075.00     |
| 31 (D)                                       | Connect 2-inch air vacuum release assembly per RWWD standards and specifications   | 1                  | EA   | \$ 6,400.00             | \$ 6,400.00     | \$ 4,321.00     | \$ 4,321.00     | \$ 5,000.00                | \$ 5,000.00     | \$ 4,800.00                 | \$ 4,800.00     |
| 32 (D)                                       | Connect 2-inch blow off assembly per RWWD standards and specifications   | 1                  | EA   | \$ 9,000.00             | \$ 9,000.00     | \$ 2,140.00     | \$ 2,140.00     | \$ 10,000.00               | \$ 10,000.00    | \$ 3,500.00                 | \$ 3,500.00     |
| 33 (D)                                       | Furnish and install CP ball valves per RWWD Standard Drawing CP-1  | 5                  | EA   | \$ 1,300.00             | \$ 6,500.00     | \$ 910.00       | \$ 4,550.00     | \$ 1,000.00                | \$ 5,000.00     | \$ 1,100.00                 | \$ 5,500.00     |
| <b>TOTAL SCHEDULE</b>                        |  |                    |      |                         | \$ 553,846.00   |                 | \$ 685,472.00   |                            | \$ 871,550.00   |                             | \$ 678,466.00   |
| <b>BASE BID (Total Schedule A Plus Sched</b> |  |                    |      |                         | \$ 7,334,857.00 |                 | \$ 6,221,195.50 |                            | \$ 8,740,250.00 |                             | \$ 6,970,112.50 |

C-6

# EXHIBIT "D"

## IRVINE RANCH WATER DIST

### Expenditure Authorization

**Project Name:** LAKE FOREST SPORTS PARK DW FACILITIES  
**EPMS Project No:** 11663 **EA No:** 1  
**Oracle Project No:** 4033  
**Project Manager:** CORTEZ, MALCOLM  
**Project Engineer:** LEW, KELLY  
**Request Date:** September 5, 2012

**ID Split:** Miscellaneous

#### Improvement District (ID) Allocations

| ID No.       | Allocation % | Source of Funds |
|--------------|--------------|-----------------|
| 135          | 100.0        | CAPITAL FUND    |
| <b>Total</b> |              | <b>100.0%</b>   |

#### Summary of Direct Cost Authorizations

|   |           |
|---|-----------|
| <b>Previously Approved EA Requests:</b>     | \$0       |
| <b>This Request:</b>                        | \$354,200 |
| <b>Total EA Requests:</b>                   | \$354,200 |
| <b>Previously Approved Budget:</b>          | \$0       |
| <b>Budget Adjustment Requested this EA:</b> | \$354,200 |
| <b>Updated Budget:</b>                      | \$354,200 |
| <b>Budget Remaining After This EA</b>       | \$0       |

Comments:

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget | Updated Budget   | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|-----------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 1/12  | 8/12   |
| ENGINEERING DESIGN - OUTSIDE             | 30,000           | 0                    | 30,000              | 30,000              | 0               | 30,000           | 1/12  | 8/12   |
| DESIGN STAFF FIELD SUPPORT               | 5,000            | 0                    | 5,000               | 5,000               | 0               | 5,000            | 1/12  | 8/12   |
| ENGINEERING - CA&I IRWD                  | 15,000           | 0                    | 15,000              | 15,000              | 0               | 15,000           | 9/12  | 6/13   |
| ENGINEERING - CA&I OUTSIDE               | 30,000           | 0                    | 30,000              | 30,000              | 0               | 30,000           | 9/12  | 6/13   |
| CONSTRUCTION FIELD SUPPORT               | 5,000            | 0                    | 5,000               | 5,000               | 0               | 5,000            | 9/12  | 6/13   |
| CONSTRUCTION                             | 220,000          | 0                    | 220,000             | 220,000             | 0               | 220,000          | 9/12  | 6/13   |
| LEGAL                                    | 2,000            | 0                    | 2,000               | 2,000               | 0               | 2,000            | 1/12  | 6/13   |
| <b>Contingency - 10.00% Subtotal</b>     | <b>\$32,200</b>  | <b>\$0</b>           | <b>\$32,200</b>     | <b>\$32,200</b>     | <b>\$0</b>      | <b>\$32,200</b>  |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$354,200</b> | <b>\$0</b>           | <b>\$354,200</b>    | <b>\$354,200</b>    | <b>\$0</b>      | <b>\$354,200</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$72,000         | \$0                  | \$72,000            | \$72,000            | \$0             | \$72,000         |       |        |
| <b>Total</b>                             | <b>\$426,200</b> | <b>\$0</b>           | <b>\$426,200</b>    | <b>\$426,200</b>    | <b>\$0</b>      | <b>\$426,200</b> |       |        |
| <b>Direct Labor</b>                      | <b>\$40,000</b>  | <b>\$0</b>           | <b>\$40,000</b>     | <b>\$40,000</b>     | <b>\$0</b>      | <b>\$40,000</b>  |       |        |

\*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: *Kelly Lew* 10/2/12

Department Director: *Tom L. Burton* 10/4/12

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 \$435 additional documents, if any, which are hereby incorporate project is made under Treasury Regulation Section 1.150-2

is further described in the attached staff report and official intent to reimburse costs of the above-captioned

# IRVINE RANCH WATER DISTRICT

## Expenditure Authorization

Project Name: LF ZONE C 16 INCH RW RELOCATION SPORTS PARK'  
 EPMS Project No: 30352 EA No: 2  
 Oracle Project No: 1732  
 Project Manager: CORTEZ, MALCOLM  
 Project Engineer: LEW, KELLY  
 Request Date: October 5, 2012

ID Split: Miscellaneous

### Improvement District (ID) Allocations

| ID No.       | Allocation %  | Source of Funds        |
|--------------|---------------|------------------------|
| 235          | 100.0         | BONDS YET TO BE SOLD** |
| <b>Total</b> | <b>100.0%</b> |                        |

### Summary of Direct Cost Authorizations

|                                       |                  |
|---------------------------------------|------------------|
| Previously Approved EA Requests:      | \$1,186,200      |
| This Request:                         | (\$614,700)      |
| <b>Total EA Requests:</b>             | <b>\$571,500</b> |
| Previously Approved Budget:           | \$1,186,200      |
| Budget Adjustment Requested this EA:  | (\$614,700)      |
| <b>Updated Budget:</b>                | <b>\$571,500</b> |
| <b>Budget Remaining After This EA</b> | <b>\$0</b>       |

Comments:

| Phase                                    | This EA Request    | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget    | Updated Budget   | Start | Finish |
|--|--------------------|----------------------|---------------------|---------------------|--------------------|------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 0                  | 25,000               | 25,000              | 0                   | 25,000             | 25,000           | 7/10  | 8/12   |
| ENGINEERING DESIGN - OUTSIDE             | 0                  | 75,000               | 75,000              | 0                   | 75,000             | 75,000           | 7/10  | 8/12   |
| DESIGN STAFF FIELD SUPPORT               | 0                  | 2,500                | 2,500               | 0                   | 2,500              | 2,500            | 7/12  | 8/12   |
| ENGINEERING - CA&I IRWD                  | (10,000)           | 50,000               | 40,000              | (10,000)            | 50,000             | 40,000           | 9/12  | 12/13  |
| ENGINEERING - CA&I OUTSIDE               | (45,000)           | 95,000               | 50,000              | (45,000)            | 95,000             | 50,000           | 9/12  | 12/13  |
| CONSTRUCTION FIELD SUPPORT               | 0                  | 5,000                | 5,000               | 0                   | 5,000              | 5,000            | 9/12  | 12/13  |
| CONSTRUCTION                             | (555,000)          | 875,000              | 320,000             | (555,000)           | 875,000            | 320,000          | 9/12  | 12/13  |
| LEGAL                                    | 0                  | 2,000                | 2,000               | 0                   | 2,000              | 2,000            | 7/10  | 12/13  |
| Contingency - 10.00% Subtotal            | (\$4,700)          | \$56,700             | \$52,000            | (\$4,700)           | \$56,700           | \$52,000         |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>(\$614,700)</b> | <b>\$1,186,200</b>   | <b>\$571,500</b>    | <b>(\$614,700)</b>  | <b>\$1,186,200</b> | <b>\$571,500</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | (\$30,500)         | \$161,000            | \$130,500           | (\$18,000)          | \$148,500          | \$130,500        |       |        |
| <b>Total</b>                             | <b>(\$645,200)</b> | <b>\$1,347,200</b>   | <b>\$702,000</b>    | <b>(\$632,700)</b>  | <b>\$1,334,700</b> | <b>\$702,000</b> |       |        |
| <b>Direct Labor</b>                      | <b>(\$10,000)</b>  | <b>\$82,500</b>      | <b>\$72,500</b>     | <b>(\$10,000)</b>   | <b>\$82,500</b>    | <b>\$72,500</b>  |       |        |

\*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: Kelly Lew 10/5/12

Department Director: Rain & Burt 10/8/12

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 \$\_\_\_\_\_ not further described in the attached staff report and additional documents, if any, which are hereby incorporated by reference into this authorization. The project is made under Treasury Regulation Section 1.15(c) of official intent to reimburse costs of the above-captioned

08  
October 22, 2012

Prepared by: H. Cho/M. Cortez

Submitted by: K. Burton *K.B.*

Approved by: Paul Cook *Paul Cook*

## ACTION CALENDAR

### SAN JOAQUIN MARSH OUTLET PIPE VALVE REPLACEMENT BUDGET REDUCTION, EXPENDITURE AUTHORIZATION AND CONSTRUCTION AWARD

#### SUMMARY:

The San Joaquin Marsh Outlet Pipe Valve Replacement Project will replace the existing hydraulically-operated control valve on the marsh outlet pipe with a motor-operated control valve. Staff recommends the Board:

- Approve a Budget Reduction in the amount of \$1,067,000 for Project 10835;
- Approve an Expenditure Authorization in the amount of \$374,000 for Project 10835; and
- Authorize the General Manager to execute a construction contract with GCI Construction in the amount of \$134,200.

#### BACKGROUND:

The San Joaquin Marsh Outlet Pipe Valve Replacement Project will replace the existing hydraulically-operated control valve on the marsh outlet pipe with a motor-operated plug valve. The water in the marsh outlet pipe is turbid and contains silt which clogs the pilot tubes of the existing control valve and therefore requires daily maintenance. The motor-operated plug valve is not susceptible to clogging from silt in the water and will similarly control the flow through the pipe without the daily maintenance. Originally, this project was a part of the SAMS1/NTS Site 62 Project, but with the suspension of the SAMS1/NTS Site 62 Project, the valve replacement project was established as a separate project. A site location map is attached as Exhibit "A".

In September 2012, CH2M Hill completed the design, and the project was advertised to a select bidders list of twelve contractors. On October 3, 2012, the bid opening occurred with seven contractors submitting construction bids. The apparent low bidder was GCI Construction, Inc. (GCI) with a low bid of \$134,200. The engineer's estimate was \$129,000. The bid summary is attached as Exhibit "B". GCI was recently awarded several construction projects for IRWD including the Vault Lids Replacement – Phase 1 Project which is nearing completion within the project budget and the Modjeska Canyon Road Domestic Pipeline Relocation Project which recently started construction.

#### FISCAL IMPACTS:

Project 10835 (1853) was included in the FY 2012-13 Capital Budget to fund the SAMS1/NTS Site 62 Project. With the suspension of the SAMS1/NTS Site 62 Project, Project 10835 (1853) will fund only the San Joaquin Marsh Outlet Pipe Valve Replacement. A Budget Reduction and an Expenditure Authorization are requested to fund the construction project as shown in the table below and in Exhibit "C".

| Project No. | Current Budget | Addition <Reduction> | Total Budget | Existing EA | This EA Request | Total EA Request |
|-------------|----------------|----------------------|--------------|-------------|-----------------|------------------|
| 10835(1853) | \$2,249,500    | \$<1,067,000>        | \$1,182,500  | \$ 808,500  | \$ 374,000      | \$1,182,500      |

**ENVIRONMENTAL COMPLIANCE:**

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption was filed with the County of Orange on August 21, 2012.

**COMMITTEE STATUS:**

Construction awards are not routinely taken to Committee prior to submittal for Board approval.

**RECOMMENDATION:**

THAT THE BOARD APPROVE A BUDGET REDUCTION IN THE AMOUNT OF \$1,067,000 FOR PROJECT 10835 (1853); APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$374,000 FOR PROJECT 10835 (1853); AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONTRACT WITH GCI CONSTRUCTION, INC. IN THE AMOUNT OF \$134,200 FOR THE SAN JOAQUIN MARSH OUTLET PIPE VALVE REPLACEMENT PROJECT.

**LIST OF EXHIBITS:**

- Exhibit "A" – Location Map
- Exhibit "B" – Bid Summary
- Exhibit "C" – Expenditure Authorization

# EXHIBIT "A"

## San Joaquin Marsh Outlet Pipe Valve Replacement





| Item No.                              | Description   | Qty | Unit | Engineer's Estimate |              | 1<br>GCI Construction<br>Costa Mesa, CA              |              | 2<br>Paulus Engineering<br>Anaheim, CA           |              | 3<br>J.R. Filanc Construction Co.<br>Escondido, CA |              |
|---------------------------------------|---|-----|------|---------------------|--------------|--|--------------|--|--------------|--|--------------|
|                                       |   |     |      | Unit Price          | Total Amount | Unit Price   | Total Amount | Unit Price                                       | Total Amount | Unit Price   | Total Amount |
|                                       |   |     |      |                     |              |  |              |  |              |  |              |
| 1                                     | Mobilization/Demobilization                                     | 1   | LS   | \$5,000.00          | \$5,000.00   | \$12,500.00  | \$12,500.00  | \$8,000.00                                       | \$8,000.00   | \$9,820.00   | \$9,820.00   |
| 2                                     | Clear and Grub  | 1   | LS   | \$5,000.00          | \$5,000.00   | \$4,500.00   | \$4,500.00   | \$4,000.00                                       | \$4,000.00   | \$4,684.00   | \$4,684.00   |
| 3                                     | 10-inch CLDI Pipe and Valves on 10-inch CLDI Pipe (Above Grade) | 1   | LS   | \$30,000.00         | \$30,000.00  | \$23,400.00  | \$23,400.00  | \$28,900.00                                      | \$28,900.00  | \$24,510.00  | \$24,510.00  |
| 4                                     | Electrical  | 1   | LS   | \$55,000.00         | \$55,000.00  | \$42,800.00  | \$42,800.00  | \$50,000.00                                      | \$50,000.00  | \$56,010.00  | \$56,010.00  |
| 5                                     | Instrumentation and Controls                                    | 1   | LS   | \$20,000.00         | \$20,000.00  | \$41,000.00  | \$41,000.00  | \$44,000.00                                      | \$44,000.00  | \$40,926.00  | \$40,926.00  |
| 6                                     | Trail Restoration   | 1   | LS   | \$10,000.00         | \$10,000.00  | \$9,000.00   | \$9,000.00   | \$4,400.00                                       | \$4,400.00   | \$3,280.00   | \$3,280.00   |
| 7                                     | Record Drawings and O&M Manuals                                 | 1   | LS   | \$4,000.00          | \$4,000.00   | \$1,000.00   | \$1,000.00   | \$285.00   | \$285.00     | \$1,140.00   | \$1,140.00   |
| Subtotal                              |   |     |      |                     |              | \$129,000.00   |              | \$134,200.00                                     |              | \$139,585.00                                       | \$140,370.00 |
| Adjustment (+ or -)                   |   |     |      |                     |              | \$0.00   |              | \$0.00   |              | \$0.00   | \$0.00       |
| TOTAL AMOUNT OF BID                   |   |     |      |                     |              | \$129,000.00   |              | \$134,200.00                                     |              | \$139,585.00                                       | \$140,370.00 |
|                                       |   |     |      |                     |              | <b>Item Delivery Dates:</b>                          |              | <b>Item Delivery Dates:</b>                      |              | <b>Item Delivery Dates:</b>                        |              |
| No Anomalies Found In Any of the Bids |   |     |      |                     |              | Plug Valve for Modulating Service (FCV): 91-105 days |              | Plug Valve for Modulating Service (FCV): 70 days |              | Plug Valve for Modulating Service (FCV): 120 days  |              |
|                                       |   |     |      |                     |              | Electric Actuator for Valve: 91-105 days             |              | Electric Actuator for Valve: 70 days             |              | Electric Actuator for Valve: 120 days              |              |
|                                       |   |     |      |                     |              | Pressure Transmitter: 21-89 days                     |              | Pressure Transmitter: 28 days                    |              | Pressure Transmitter: 70 days                      |              |
|                                       |   |     |      |                     |              | PLC - Modicon M340: 42-56 days                       |              | PLC - Modicon M340: 75 days                      |              | PLC - Modicon M340: 120 days                       |              |
|                                       |   |     |      |                     |              | <b>Manufacturers:</b>                                |              | <b>Manufacturers:</b>                            |              | <b>Manufacturers:</b>                              |              |
|                                       |   |     |      |                     |              | Plug Valve for Modulating Service (FCV): Pratt       |              | Plug Valve for Modulating Service (FCV): Dezrik  |              | Plug Valve for Modulating Service (FCV): Pratt     |              |
|                                       |   |     |      |                     |              | Electric Actuator for Valve: Limitorque              |              | Electric Actuator for Valve: Limitorque          |              | Electric Actuator for Valve: Limitorque            |              |
|                                       |   |     |      |                     |              | Pressure Transmitter: SMAR                           |              | Pressure Transmitter: Smart Transmitters         |              | Pressure Transmitter: SMAR                         |              |
|                                       |   |     |      |                     |              | <b>Subcontractors:</b>                               |              | <b>Subcontractors:</b>                           |              | <b>Subcontractors:</b>                             |              |
|                                       |   |     |      |                     |              | JGM: Electrical                                      |              | JGM: Electrical                                  |              | Southern Contracting: Electrical                   |              |

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EXHIBIT "B"

| Item No.                              | Description   | Qty | Unit | 4  |              | 5   |              | 6   |              | 7   |              |
|---------------------------------------|---|-----|------|--|--------------|---|--------------|---|--------------|---|--------------|
|                                       |   |     |      | Schuler Engineering Corp.                        |              | S.S. Mechanical Corp.                             |              | Caliagua, Inc.                                    |              | Pacific Hydrotech Corp.                           |              |
|                                       |   |     |      | Corona, CA                                       |              | Huntington Beach, CA                              |              | Chino, CA   |              | Perris, CA  |              |
|                                       |   |     |      | Unit Price                                       | Total Amount | Unit Price  | Total Amount | Unit Price  | Total Amount | Unit Price  | Total Amount |
| 1                                     | Mobilization/Demobilization                                     | 1   | LS   | \$5,000.00                                       | \$5,000.00   | \$5,000.00  | \$5,000.00   | \$7,500.00  | \$7,500.00   | \$24,700.00                                       | \$24,700.00  |
| 2                                     | Clear and Grub  | 1   | LS   | \$2,000.00                                       | \$2,000.00   | \$4,500.00  | \$4,500.00   | \$3,000.00  | \$3,000.00   | \$5,300.00  | \$5,300.00   |
| 3                                     | 10-inch CLDI Pipe and Valves on 10-inch CLDI Pipe (Above Grade) | 1   | LS   | \$30,000.00                                      | \$30,000.00  | \$23,000.00                                       | \$23,000.00  | \$35,000.00                                       | \$35,000.00  | \$41,300.00                                       | \$41,300.00  |
| 4                                     | Electrical  | 1   | LS   | \$65,000.00                                      | \$65,000.00  | \$65,000.00                                       | \$65,000.00  | \$57,800.00                                       | \$57,800.00  | \$80,400.00                                       | \$80,400.00  |
| 5                                     | Instrumentation and Controls                                    | 1   | LS   | \$31,350.00                                      | \$31,350.00  | \$40,000.00                                       | \$40,000.00  | \$39,900.00                                       | \$39,900.00  | \$43,500.00                                       | \$43,500.00  |
| 6                                     | Trail Restoration   | 1   | LS   | \$5,000.00                                       | \$5,000.00   | \$7,500.00  | \$7,500.00   | \$4,500.00  | \$4,500.00   | \$8,800.00  | \$8,800.00   |
| 7                                     | Record Drawings and O&M Manuals                                 | 1   | LS   | \$2,500.00                                       | \$2,500.00   | \$1,000.00  | \$1,000.00   | \$1,000.00  | \$1,000.00   | \$100.00  | \$100.00     |
| Subtotal                              |   |     |      |  | \$140,850.00 |   | \$146,000.00 |   | \$148,700.00 |   | \$204,100.00 |
| Adjustment (+ or -)                   |   |     |      |  | \$0.00       |   | \$0.00       |   | \$0.00       |   | \$0.00       |
| TOTAL AMOUNT OF BID                   |   |     |      |  | \$140,850.00 |   | \$146,000.00 |   | \$148,700.00 |   | \$204,100.00 |
|                                       |   |     |      | <b>Item Delivery Dates:</b>                      |              | <b>Item Delivery Dates:</b>                       |              | <b>Item Delivery Dates:</b>                       |              | <b>Item Delivery Dates:</b>                       |              |
| No Anomalies Found In Any of the Bids |   |     |      | Plug Valve for Modulating Service (FCV): 75 days |              | Plug Valve for Modulating Service (FCV): 140 days |              | Plug Valve for Modulating Service (FCV): 15 weeks |              | Plug Valve for Modulating Service (FCV): 140 days |              |
|                                       |   |     |      | Electric Actuator for Valve: 75 days             |              | Electric Actuator for Valve: 140 days             |              | Electric Actuator for Valve: 15 weeks             |              | Electric Actuator for Valve: 140 days             |              |
|                                       |   |     |      | Pressure Transmitter: 40 days                    |              | Pressure Transmitter: 112 days                    |              | Pressure Transmitter: 7 days                      |              | Pressure Transmitter: 56 days                     |              |
|                                       |   |     |      | PLC - Modicon M340: 40 days                      |              | PLC - Modicon M340: 140 days                      |              | PLC - Modicon M340: 8 weeks                       |              | PLC - Modicon M340: 72 days                       |              |
|                                       |   |     |      | <b>Manufacturers:</b>                            |              | <b>Manufacturers:</b>                             |              | <b>Manufacturers:</b>                             |              | <b>Manufacturers:</b>                             |              |
|                                       |   |     |      | Plug Valve for Modulating Service (FCV): Pratt   |              | Plug Valve for Modulating Service (FCV): ValMatic |              | Plug Valve for Modulating Service (FCV): Pratt    |              | Plug Valve for Modulating Service (FCV): Dezurk   |              |
|                                       |   |     |      | Electric Actuator for Valve: Limitorque          |              | Electric Actuator for Valve: Limitorque           |              | Electric Actuator for Valve: Limitorque           |              | Electric Actuator for Valve: Limitorque           |              |
|                                       |   |     |      | Pressure Transmitter: SMAR                       |              | Pressure Transmitter: SMARS                       |              | Pressure Transmitter: Smart Transmitters          |              | Pressure Transmitter: SMAR                        |              |
|                                       |   |     |      | <b>Subcontractors:</b>                           |              | <b>Subcontractors:</b>                            |              | <b>Subcontractors:</b>                            |              | <b>Subcontractors:</b>                            |              |
|                                       |   |     |      | JGM: Electrical 21%                              |              | JGM: Electrical                                   |              | JGM: Electrical                                   |              | Halcyon: Electrical                               |              |

B-2

# IRVINE RANCH WATER DISTR Exhibit "C"

## Expenditure Authorization

**Project Name:** NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)  
**EPMS Project No:** 10835 **EA No:** 4  
**Oracle Project No:** 1853  
**Project Manager:** CORTEZ, MALCOLM  
**Project Engineer:** CHO, HARRY  
**Request Date:** October 3, 2012

**ID Split:** Regional Water Split with LAWD (11/08)

### Improvement District (ID) Allocations

| ID No.       | Allocation %  | Source of Funds        |
|--------------|---------------|------------------------|
| 112          | 3.6           | BONDS YET TO BE SOLD** |
| 113          | 4.4           | BONDS YET TO BE SOLD** |
| 115          | 6.2           | CAPITAL FUND           |
| 121          | 12.8          | BONDS YET TO BE SOLD** |
| 130          | 10.0          | BONDS YET TO BE SOLD** |
| 135          | 16.2          | PREVIOUSLY SOLD BONDS  |
| 140          | 3.5           | BONDS YET TO BE SOLD** |
| 150          | 26.1          | BONDS YET TO BE SOLD** |
| 153          | 2.9           | BONDS YET TO BE SOLD** |
| 154          | 1.2           | BONDS YET TO BE SOLD** |
| 161          | 6.7           | BONDS YET TO BE SOLD** |
| 182          | 2.5           | BONDS YET TO BE SOLD** |
| 184          | 2.3           | BONDS YET TO BE SOLD** |
| 186          | .8            | BONDS YET TO BE SOLD** |
| 188          | .8            | BONDS YET TO BE SOLD** |
| <b>Total</b> | <b>100.0%</b> |                        |

### Summary of Direct Cost Authorizations

|   |               |
|---|---------------|
| <b>Previously Approved EA Requests:</b>     | \$808,500     |
| <b>This Request:</b>                        | \$374,000     |
| <b>Total EA Requests:</b>                   | \$1,182,500   |
| <b>Previously Approved Budget:</b>          | \$2,249,500   |
| <b>Budget Adjustment Requested this EA:</b> | (\$1,067,000) |
| <b>Updated Budget:</b>                      | \$1,182,500   |
| <b>Budget Remaining After This EA</b>       | \$0           |

**Comments:**

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request  | Previous Budget    | Updated Budget     | Start | Finish |
|--|------------------|----------------------|---------------------|----------------------|--------------------|--------------------|-------|--------|
| ENGINEERING DESIGN - IRWD                | 30,000           | 75,000               | 105,000             | 30,000               | 75,000             | 105,000            | 2/10  | 9/12   |
| ENGINEERING DESIGN - OUTSIDE             | 83,000           | 505,000              | 588,000             | 38,000               | 550,000            | 588,000            | 2/10  | 9/12   |
| DESIGN STAFF FIELD SUPPORT               | (4,000)          | 5,000                | 1,000               | (4,000)              | 5,000              | 1,000              | 2/10  | 9/12   |
| ENGINEERING - CA&I IRWD                  | 30,000           | 0                    | 30,000              | (30,000)             | 60,000             | 30,000             | 10/12 | 4/13   |
| ENGINEERING - CA&I OUTSIDE               | 40,000           | 0                    | 40,000              | (20,000)             | 60,000             | 40,000             | 10/12 | 4/13   |
| CONSTRUCTION FIELD SUPPORT               | 10,000           | 0                    | 10,000              | 0                    | 10,000             | 10,000             | 10/12 | 4/13   |
| CONSTRUCTION                             | 140,000          | 0                    | 140,000             | (985,000)            | 1,125,000          | 140,000            | 10/12 | 4/13   |
| LEGAL                                    | 10,000           | 0                    | 10,000              | 0                    | 10,000             | 10,000             | 10/12 | 4/13   |
| ENGINEERING ENVIRONMENTAL-OUTS           | 1,000            | 150,000              | 151,000             | 1,000                | 150,000            | 151,000            | 2/10  | 9/12   |
| Contingency - 10.00% Subtotal            | \$34,000         | \$73,500             | \$107,500           | (\$97,000)           | \$204,500          | \$107,500          |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$374,000</b> | <b>\$808,500</b>     | <b>\$1,182,500</b>  | <b>(\$1,067,000)</b> | <b>\$2,249,500</b> | <b>\$1,182,500</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$106,700        | \$156,100            | \$262,800           | (\$7,200)            | \$270,000          | \$262,800          |       |        |
| <b>Total</b>                             | <b>\$480,700</b> | <b>\$964,600</b>     | <b>\$1,445,300</b>  | <b>(\$1,074,200)</b> | <b>\$2,519,500</b> | <b>\$1,445,300</b> |       |        |
| Direct Labor                             | \$66,000         | \$80,000             | \$146,000           | (\$4,000)            | \$150,000          | \$146,000          |       |        |

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

Department Director: \_\_\_\_\_

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 \$1,475,000. 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.



October 22, 2012<sup>05</sup>  
Prepared by: D. Mazarella/R. Mori  
Submitted by: K. Burton  
Approved by: Paul Cook

## ACTION CALENDAR

### AUTOMATION SUPPORT CONSULTANT SERVICES

#### SUMMARY:

Over the past 18 months, staff has successfully utilized various engineering consultants to provide automation support services on multiple capital projects. Based on recently updated workload projections, continued use of the automation consultants is necessary. Staff recommends the Board:

- Approve Variance No. 1, in the amount of \$132,100, to the Professional Services Agreement with HDR Engineering, Inc.;
- Approve Variance No. 1, in the amount of \$142,300, to the Professional Services Agreement with Malcolm Pirnie/Arcadis;
- Authorize the General Manager to execute a Professional Services Agreement, in the amount of \$90,000, with Westin Engineering; and
- Authorize the General Manager to execute a Professional Services Agreement, in the amount of \$86,360, with Vertech Industrial Systems.

#### BACKGROUND:

The District's automation staff consists of a small group of instrumentation and controls engineers, field technicians, and specialists. This group is responsible for keeping the hardware and software automation systems fully operational on a continuous basis, allowing the District to operate its water and wastewater facilities remotely with minimal after hours support. In addition to the ongoing operation and maintenance of the District's automation systems, this group is also responsible for the design, construction support, and commissioning of the automation systems required for all capital projects. Traditionally, staff in the automation group has been able to support the District's capital projects with in-house personnel and occasional support from consulting firms. Due to the unprecedented number of large and complex capital projects underway for the past several years, staff has increased its use of automation consultants.

In March 2011, the Board approved the execution of Professional Services Agreements with HDR Engineering, EI&C Engineering, and Malcolm Pirnie/Arcadis for automation support consultant services to support multiple capital projects including the Michelson Water Recycling Plant (MWRP) Phase 2 Expansion, the MWRP Biosolids Handling and Energy Recovery Facilities, the Wells 21 and 22 Desalter, the Baker Water Treatment plant, and multiple replacement well projects (Well 21, Well 22, Well 78, Well 107, OPA-1, and Lake Forest Well 2). While the majority of the well projects have either been completed or are in the final stages of completion, support of the four large treatment plant projects continues. Initially, staff estimated that the extensive workload associated with these projects would last for about

18 months, or until September 2012. Due to many different considerations ranging from project scope additions, design and construction issues, extended project schedules, overlapping deadlines, and project complexities, staff projects that continued consultant support for the next six months will be required to complete these projects in accordance with their respective project schedule requirements.

Additional Automation Support Services:

For the past 18 months, staff has been managing and working with the initial group of automation support consultants. During this period, staff has developed good working relationships and an efficient workflow model with key individuals from these firms. These individuals have performed extremely well and have completed their assignments efficiently and in accordance with District automation requirements. Based on the successful integration of these automation support consultants, coupled with the ongoing need for additional project support, staff recommends the continued use of automation support consultants from various consulting firms for another six months.

Staff has reviewed the workload projections and recommends that variances for additional automation services be approved for two of the current automation consulting firms: HDR Engineering and Malcolm Pirnie/Arcadis. Staff also recommends that two additional consulting firms, Westin Engineering and Vertech Industrial Systems, be selected to provide specialized automation support services that are not being provided by any firms currently under contract. Staff identified key individuals at these two consulting firms as being highly qualified. These individuals have successfully worked on previous District projects, and their understanding and knowledge of IRWD's existing automation systems will allow them to be immediately productive. These individuals are skilled and proactive professionals that work well with schedule deadlines and budget constraints. All of these consultants will continue to report results and progress directly to District staff, thereby minimizing overhead within their respective firms.

A summary of proposed hours, by firm, associated with the recommended consultant support services is presented as Exhibit "A". In total, the proposed services will provide more than 3,250 additional hours of support to District's automation staff over the next six months, which equates to about three full time employees. Upon completion of these major capital projects, external automation support services will no longer be required, and staff anticipates that the workload will return to a level that can once again be supported by the District's automation staff.

Staff recommends the Board approve Variance No. 1, in the amount of \$132,100, to the Professional Services Agreement with HDR Engineering, approve Variance No. 1, in the amount of \$142,300, to the Professional Services Agreement with Malcolm Pirnie/Arcadis, authorize the General Manager to execute a Professional Services Agreement, in the amount of \$90,000, with Westin Engineering, and authorize the General Manager to execute a Professional Services Agreement, in the amount of \$86,360, with Vertech Industrial Systems. The variances and proposals from each firm are presented as Exhibits "B", "C", "D", and "E".

FISCAL IMPACTS:

Automation support services will be provided for projects that are included in the FY 2012-13 Capital Budget. The available budgets and existing Expenditure Authorizations for those projects are sufficient to fund these services.

ENVIRONMENTAL COMPLIANCE:

Activities such as executing agreements for consulting services are exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15061 (b) (3). These types of activities are covered by the general rule that CEQA applies only to projects which have the potential for causing a significant direct effect on the environment or reasonably indirect effect on the environment. In addition, the specific projects identified herein, are subject to CEQA and have either already completed, or are currently undergoing, the CEQA review process.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on October 16, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE VARIANCE NO. 1 TO THE PROFESSIONAL SERVICES AGREEMENT WITH HDR ENGINEERING IN THE AMOUNT OF \$132,100; APPROVE VARIANCE NO. 1 TO THE PROFESSIONAL SERVICES AGREEMENT WITH MALCOLM PIRNIE/ARCADIS IN THE AMOUNT OF \$142,300; AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH WESTIN ENGINEERING IN THE AMOUNT OF \$90,000; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH VERTECH INDUSTRIAL SYSTEMS IN THE AMOUNT OF \$86,360.

LIST OF EXHIBITS:

- Exhibit "A" – Automation Consultant Support Services Summary of Labor Hours
- Exhibit "B" – Variance No. 1 to HDR Engineering
- Exhibit "C" – Variance No. 1 to Malcolm Pirnie/Arcadis
- Exhibit "D" – Westin Engineering Proposal
- Exhibit "E" – Vertech Industrial Systems Proposal



**Exhibit A**  
**AUTOMATION CONSULTANT SERVICES**  
**PROPOSED SUPPORT SERVICES CONTRACTS**

| Firm                              | Staff                                     | Hourly Rate | Estimated Manhours | Direct Costs | Budget Estimate for 6 Months | Support Services Total |
|-----------------------------------|---|-------------|--------------------|--------------|------------------------------|------------------------|
| <b>HDR Engineering</b>            | Senior Electrical Engineer                | \$ 188      | 24                 | \$ 100       | \$ 4,612                     |                        |
|                                   | Senior Project Engineer                   | \$ 125      | 840                | \$ 3,108     | \$ 108,108                   |                        |
|                                   | Engineer-Staff                            | \$ 85       | 200                | \$ 740       | \$ 17,740                    |                        |
|                                   | Administration                            | \$ 133      | 12                 | \$ 44        | \$ 1,640                     |                        |
|                                   |   |             |                    |              |                              | \$ 132,100             |
| <b>Malcolm Pirnie\ Arcadis</b>    | Control System Programmer                 | \$ 125      | 680                |              | \$ 85,000                    |                        |
|                                   | Controls Engineer                         | \$ 145      | 280                | \$ 9,100     | \$ 49,700                    |                        |
|                                   | Project Manager                           | \$ 190      | 40                 |              | \$ 7,600                     |                        |
|                                   |   |             |                    |              | \$ 142,300                   | \$ 142,300             |
| <b>Westin Engineering</b>         | Senior Engineer                           | \$ 150      | 600                |              | \$ 90,000                    | \$ 90,000              |
| <b>Vertech Industrial Systems</b> | Touch Panel Programming<br>(See proposal) | \$ varies   | 576                |              | \$ 86,360                    | \$ 86,360              |
|                                   | <b>Total Manhours and Cost</b>            |             | <b>3,252</b>       |              |                              | <b>\$ 450,760</b>      |

**EXHIBIT "A"**





# IRVINE RANCH WATER DISTRICT

## PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: Michelson Water Reclamation Plant  
Phase 2 Expansion Project

IRWD Project No.: 20214/30214  
HDR Project No.: 160747

IRWD Project Manager: Steve Malloy  
HDR Project Director: Raymond Genato

| Variance No. | Description                            | Dates           |          | Variance Amount |
|--------------|--|-----------------|----------|-----------------|
|              |  | Initiated       | Approved |                 |
| 1            | Additional I&C and Electrical services | October 1, 2012 |          | \$132,100       |
|              |  |                 |          |                 |
|              |  |                 |          |                 |
|              |  |                 |          |                 |
|              |  |                 |          |                 |
|              |  |                 |          |                 |

**Exhibit "C"**  
**IRVINE DISTRICT**  
**PROFESSIONAL SERVICES VARIANCE**

Project Title: Engineering Support Services for the IRWD Electrical and Automation Group  
 Project No.: Various Date: 10/9/2012  
 Purchase Order No.: NA Variance No.: 1

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

Description of Variance (attach any back-up material):  
Additional electrical and automation support for various capital projects.

**Engineering & Management Cost Impact:**

| Classification            | Manhours | Billing Rate | Labor \$ | Direct Costs | Subcon. \$ | Total \$         |
|---------------------------|----------|--------------|----------|--------------|------------|------------------|
| Control System Programmer | 680      | \$125        | \$85,000 | \$0          | \$0        | \$85,000         |
| Controls Engineer         | 280      | \$145        | \$40,600 | \$9,100      | \$0        | \$49,700         |
| Project Manager           | 40       | \$190        | \$7,600  | \$0          | \$0        | \$7,600          |
|                           |          |              |          |              |            |                  |
|                           |          |              |          |              |            |                  |
| <b>Total \$ =</b>         |          |              |          |              |            | <b>\$142,300</b> |

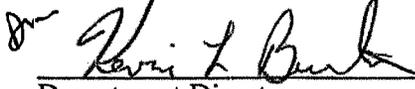
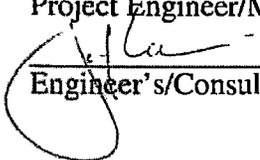
**Schedule Impact:**

| Task No. | Task Description | Original Schedule | Schedule Variance  | New Schedule       |
|----------|------------------|-------------------|--------------------|--------------------|
| 1        | On-Call Services | N/A               | Through April 2013 | Through April 2013 |
|          |                  |                   |                    |                    |
|          |                  |                   |                    |                    |

**Required Approval Determination:**

|  |                   |  |
|--|-------------------|--|
| Total Original Contract                            | \$ <u>154,300</u> | <input checked="" type="checkbox"/> General Manager: Single Variance less than or equal to \$30,000.<br><input type="checkbox"/> Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000.<br><input type="checkbox"/> Board: Single Variance greater than \$60,000.<br><input type="checkbox"/> Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher. |
| Previous Variances \$                              | <u>0</u>          |  |
| This Variance                                      | \$ <u>142,300</u> |  |
| Total Sum of Variances                             | \$ <u>142,300</u> |  |
| New Contract Amount                                | \$ <u>296,600</u> |  |
| Percentage of Total Variances to Original Contract | <u>92</u> %       |  |

ENGINEER/CONSULTANT: Arcadis/Malcolm Pirnie IRVINE RANCH WATER DISTRICT

|  |               |   |               |
|--|---------------|---|---------------|
| _____<br>Project Engineer/Manager  | _____<br>Date | <br>Department Director | _____<br>Date |
| <br>Engineer's/Consultant's Management | _____<br>Date | _____<br>General Manager/Comm./Board  | _____<br>Date |



September 26, 2012

**Cover Letter**

Mr. David Mazzearella, P.E.  
Sr. Electrical and Controls Engineer  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

**Subject: Proposal for the Electrical and I&C Engineering Support Services**

Dear Mr. Mazzearella:

Westin Engineering is pleased to present our proposal for Electrical and I&C Engineering Support Services.

The work is anticipated to be completed within the next 6 months, although if not completed and remaining funds have not been expended, additional services may be provided for up to 12 months. This authorization shall not exceed \$90,000 (ninety thousand dollars); work will be authorized by the District in an individual task order format and we will coordinate with the District on scope and schedule of each task order before we start.

In the following, you will find a resume for our primary team member, Uri Papukchiev, and an hourly rate schedule for the next 6 months. Reimbursable expenses (expected to be minimal) incurred during any assignment will be billed at our cost plus a factor of ten percent to cover administrative costs.

Our team will be led by our project manager, Mr. Papukchiev, at our Santa Ana office. If you have any questions or desire additional information, please feel free to call Mr. Papukchiev via telephone at (760) 672-1746 or via email at [uri.papukchiev@we-inc.com](mailto:uri.papukchiev@we-inc.com).

Thank you and we are looking forward to working with you on coming assignments.

Regards,

A handwritten signature in black ink, appearing to read "Bill Serjeantson", with a long horizontal line extending to the right.

Bill Serjeantson  
Vice President of Engineering Services  
Westin Engineering,

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## Company Background

### Westin Engineering, Inc.

Westin helps utility organizations develop comprehensive solutions to retain knowledge, optimize processes, meet compliance requirements, serve customers and improve efficiency.

As a key part of almost every solution, technology is the catalyst for change and the medium for enterprise-wide improvement. However, successful solutions require more than technology. Real solutions demand balanced changes involving people, process, culture and technology. We understand and apply our unparalleled industry knowledge to guide water, wastewater, and other public agencies to practical, sustainable solutions. Here's why our customers trust Westin:

- **Utilities Experience:** Since 1981, in hundreds of major technology projects, Westin has met the unique needs of large and small utilities. In process control, operations, customer service, maintenance and finance, we know where technology fits and how to help you use it effectively.
- **Proven Approach:** Westin develops a partnership with clients to understand their business issues. This forms the foundation for proven methods for planning, system design, software selection, and full implementation.
- **Skilled Staff:** Westin's staff brings unprecedented depth and breadth in the business processes and technology needed to operate effective, efficient organizations. This enables Westin to apply the right technology solution to meet your organization's specific goals.



### Company Information

Westin is a 28 year old, employee-owned, specialty-consulting firm incorporated in 1981. Our corporate headquarters is located in Rancho Cordova, near Sacramento, in Northern California. We also maintain two Southern California offices in Santa Ana and Glendale, as well as additional offices across the country.

#### Fact Sheet

**Name of Company** Westin Engineering, Inc.  
**Services to Market** Business and technology-related planning; information and control (SCADA) system selection; system design, implementation, configuration, integration, and ongoing maintenance; asset-management related services.



**Type of Entity** Corporation  
**Officers** Chairman of the Board and Treasurer – Jerry W. Garrett  
 Chief Executive Officer, President and Director – Douglas J. Harp  
 CFO/Secretary / Vice President and Officer – Brett K. Matlick  
 Vice President and Officer – Douglas A. Spiers  
 Vice President and Officer – Bill Serjeantson

September 11, 2012



**Office Address** 2000 E. 4<sup>th</sup> St, Ste 300, Santa Ana, CA 92705

**Corporate Address** 3100 Zinfandel Drive, Suite 300, Rancho California, CA 95670

**Website** [www.we-inc.com](http://www.we-inc.com)

**Establishment Date/Location**  
1981. Originally established in San Jose, CA.

**Rates**

**Engineering And Consulting Services  
Rate Sheet  
Valid Thru Westin's December 2012 Accounting Cycle**

| <i>Code</i> | <i>Engineering Category</i> | <i>Hourly Rates (US\$)</i> |
|-------------|-----------------------------|----------------------------|
| 230 •       | Uri Papukchiev, P.E.        | \$150                      |





October 8, 2012

Mr. Dave Mazzarella  
**Irvine Ranch Water District**  
 15600 Sand Canyon Avenue  
 Irvine, CA 92619-7000

Quote #: Q120365

RE: **WOTR Project Indusoft Programming**

### PROJECT

Thank you for the opportunity to provide pricing for Indusoft programming services. Vertech will supply programming services on a time and expenses basis for 26 pump stations, 3 reservoirs and a disinfection facility.

### SCOPE AND PRICING

The following services will be provided. Extended prices are limits at the quoted rates:

| ITEM | QTY | DESCRIPTION  | PRICE EA. | PRICE EXT.   |
|------|-----|--|-----------|--------------|
| 1.0  | 416 | <b>Pump Stations</b>   | \$110.00  | \$ 45,760.00 |
|      |     | <ul style="list-style-type: none"> <li>Develop screens for 26 pump stations. Labor of an average 8 hours per pump station for development and 8 hours per pump station for on-site commissioning.</li> </ul> |           |              |
| 2.0  | 48  | <b>Reservoirs</b>  | \$110.00  | \$5,280.00   |
|      |     | <ul style="list-style-type: none"> <li>Develop screens for 3 pump stations. Labor of an average 8 hours per pump station for development and 8 hours per pump station for on-site commissioning.</li> </ul>  |           |              |
| 3.0  | 32  | <b>Disinfection Facility</b>   | \$110.00  | \$3,520.00   |
|      |     | <ul style="list-style-type: none"> <li>Develop screens for 1 disinfection facility. Labor of 16 hours for screen development and 16 hours for on-site commissioning.</li> </ul>                              |           |              |
| 4.0  | 48  | <b>San Joaquin Flow Control Facility</b>   | \$110.00  | \$5,280.00   |
|      |     | <ul style="list-style-type: none"> <li>Develop screens for the San Joaquin Flow Control Facility. Labor of 32 hours for screen development and 16 hours for on-site commissioning.</li> </ul>                |           |              |

|                    |    |   |             |                     |
|--------------------|----|---|-------------|---------------------|
| 5.0                | 32 | <b>Travel time</b>  | \$110.00    | \$3,520.00          |
|                    |    | <ul style="list-style-type: none"> <li>Travel time is provided for 8 trips to the site. The assumption is that services will be provided for two weeks on site and two weeks off site for three months with two extra trips included as a contingency.</li> </ul>                             |             |                     |
| 6.0                | 1  | <b>Travel expenses</b>  | \$15,000.00 | \$15,000.00         |
|                    |    | <ul style="list-style-type: none"> <li>Travel expenses are provided assuming 6 two week trips to site and two contingency trips. One flight per week, hotel, rental car and meals are included. Expenses will be billed at cost plus 10%.</li> </ul>  |             |                     |
| 7.0                | 1  | <b>Miscellaneous Services</b>   | \$8,000.00  | \$8,000.00          |
|                    |    | <ul style="list-style-type: none"> <li>This task is reserved for miscellaneous services that may be separately authorized as needed for unanticipated activities as directed by the IRWD project manager. Work on this task shall only proceed with prior authorization from IRWD.</li> </ul> |             |                     |
| <b>PRICE TOTAL</b> |    |   |             | <b>\$ 86,360.00</b> |

1. NOTES

1. The following is not provided:
  - Sales, use or TPT tax as may be required by law
  - Any services or hardware not specified by this proposal document

2. PAYMENT AND AVAILABILITY

- Net 30 days. Time and expenses will be billed on a monthly basis.
- Pricing is good for 60 days from date of this proposal.

3. CONTACT INFORMATION

- Contact **Titus Crabb** with any questions regarding this proposal or to place an order:

Titus Crabb  
 480-756-2300 Office  
 602-319-7887 Mobile  
[tcrabb@verttech.com](mailto:tcrabb@verttech.com)

October 22, 2012

Prepared by: J. Moeder/R. Mori

Submitted by: K. Burton

Approved by: Paul Cook

## ACTION CALENDAR

### ORANGE PARK ACRES WELL NO. 1 WELLHEAD DESIGN CONSULTANT SELECTION

#### SUMMARY:

Proposals were solicited from five engineering firms for the design of wellhead and disinfection facilities for Orange Park Acres Well No. 1 (OPA-1). Staff has reviewed the proposals and recommends the Board:

- Approve an Expenditure Authorization for Project 11405 in the amount of \$399,000; and
- Authorize the General Manager to execute a Professional Services Agreement in the amount of \$492,866 with URS Corporation (URS) for engineering services for the OPA-1 wellhead design.

#### BACKGROUND:

A professional services agreement was executed with Kennedy/Jenks (K/J) in April 2011 to prepare a basis of design report and construction documents, and to provide construction phase services for the OPA-1 wellhead and disinfection facilities. K/J has completed the preliminary design of the project and has finalized a Basis of Design (BOD) report for the wellhead and disinfection facilities. As K/J developed the hydraulic calculations, it was determined that the project would need to include provisions to address the high discharge pressure (in excess of 200 psi) that would be encountered at the wellhead. After a review of several alternatives, K/J recommended a dual pumping system that included a wellhead pump that feeds an on-site wet well and a booster pump that feeds the Zone 5 distribution system. As the recommended project substantially differed from the project that was originally scoped, staff decided to solicit proposals for the final design of the recommended facilities.

#### Consultant Selection:

Staff received proposals for the design of the OPA-1 wellhead and disinfection facilities from four firms: K/J, Lee & Ro, Tetra Tech, and URS. Brown & Caldwell declined to submit a proposal due to concerns with meeting the design schedule. Staff recommends that URS be awarded the Professional Services Agreement since their design approach, schedule, and man-hours are consistent with the project goals. URS's proposal presented new ideas for noise control, and for the building design to improve constructability and accessibility. A copy of IRWD's proposal ranking matrix is attached as Exhibit "A". URS's proposed design fee is \$415,896. Their total contract amount, including construction phase services, is \$492,866. URS has successfully completed projects for IRWD in the past, including the design for the Zone 4 Flow Control Facility at OC-72 and the Zone 3 to 4 Booster Pump Station. URS is currently working on the Syphon Reservoir Interim Improvements project and is performing well. Copies of URS's scope of work and fee proposal are attached as Exhibit "B".

OPA-1 Drilling and Wellhead Design Schedule:

At its July 23, 2012 meeting the Board awarded the OPA Well No. 3 destruction and OPA-1 drilling construction contract to Best Drilling and Pump. The well drilling construction project is underway and anticipated to be complete in February 2013.

The wellhead design work will be conducted in accordance with the following schedule:

|   |              |
|---|--------------|
| Final Basis of Design Validation Memorandum and |              |
| 60% Design Submittal                            | January 2013 |
| 90% Design Submittal                            | March 2013   |
| 100% Design Submittal                           | April 2013   |
| Final Plans Approved                            | May 2013     |
| Bid Opening                                     | July 2013    |
| Notice of Award                                 | July 2013    |
| Well Operational                                | June 2014    |

FISCAL IMPACTS:

Project 11405 (1250) is included in the FY 2012-13 Capital Budget. An Expenditure Authorization is requested for design services and staff time as shown in the table below and in Exhibit "C".

| Project No. | Current Budget | Addition <Reduction> | Total Budget | Existing EA | This EA Request | Total EA Request |
|-------------|----------------|----------------------|--------------|-------------|-----------------|------------------|
| 11405(1250) | \$7,355,300    | \$0                  | \$7,355,300  | \$2,715,800 | \$399,000       | \$3,114,800      |

ENVIRONMENTAL COMPLIANCE:

This project is subject to the CEQA and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on April 23, 2012. Pursuant to State Guideline §15073, the IS/MND was made available for public review for a period of 30 days beginning April 23, 2012 and concluded May 24, 2012. The Board adopted the Final IS/MND on June 11, 2012.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on October 16, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION FOR PROJECT 11405 (1250) IN THE AMOUNT OF \$399,000, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT IN THE AMOUNT OF \$492,866 WITH URS CORPORATION FOR ENGINEERING SERVICES FOR THE OPA-1 WELLHEAD DESIGN, PROJECT 11405 (1250).

LIST OF EXHIBITS:

Exhibit "A" – Consultant Ranking Matrix

Exhibit "B" – URS's Proposed Scope of Work and Fee Proposal

Exhibit "C" – Expenditure Authorization



**EXHIBIT "A"**

**CONSULTANT SELECTION MATRIX**

**OPA-1 Wellhead Design**

| Item | Description                                  | Weights    | Kennedy/Jenks          | Lee & Ro                     | Tetra Tech                | URS                      |           |            |           |
|------|--|------------|------------------------|------------------------------|---------------------------|--------------------------|-----------|------------|-----------|
| A    | <b>TECHNICAL APPROACH</b>                    | <b>40%</b> |                        |                              |                           |                          |           |            |           |
| 1    | Overall Project Understanding / Approach     | 40%        | 3                      | 4                            | 2                         | 1                        |           |            |           |
| 2    | Scope of Proposal                            | 60%        | 2                      | 4                            | 3                         | 1                        |           |            |           |
|      | <u>Weighted Score (Technical Approach)</u>   |            | 2.4                    | 4.0                          | 2.6                       | 1.0                      |           |            |           |
| B    | <b>QUALIFICATION AND EXPERIENCE</b>          | <b>60%</b> |                        |                              |                           |                          |           |            |           |
| 1    | Firm/Team                                    | 20%        | 4                      | 3                            | 2                         | 1                        |           |            |           |
| 2    | Project Manager                              | 40%        | 3<br>David Ferguson    | 4<br>Lee Badertscher, 30 yrs | 1<br>Tom Epperson, 32 yrs | 2<br>Joseph Long, 23 yrs |           |            |           |
| 3    | Project Engineer - Mechanical/Pumps          | 20%        | 4<br>Corey Young       | 2<br>Eric Lovering, 15 yrs   | 2<br>Mike Tsoi, PE 19 yrs | 1<br>Bryan Paine, 15 yrs |           |            |           |
| 4    | Project Engineer - Electrical                | 20%        | 4<br>Tony Wakim        | 1<br>James Park, 20 yrs      | 3<br>Mazen Kassar, 22 yrs | 2<br>Joe Moraes          |           |            |           |
|      | <u>Weighted Score (Experience)</u>           |            | 3.6                    | 2.8                          | 1.8                       | 1.6                      |           |            |           |
|      | <u>COMBINED WEIGHTED SCORE</u>               |            | 3.1                    | 3.3                          | 2.1                       | 1.4                      |           |            |           |
|      | <b>Ranking of Consultants</b>                |            | <b>3</b>               | <b>4</b>                     | <b>2</b>                  | <b>1</b>                 |           |            |           |
| C    | <b>SCOPE OF WORK</b>                         |            |                        |                              |                           |                          |           |            |           |
| TASK |  | Task Hours | FEE                    | Task Hours                   | FEE                       | Task Hours               | FEE       | Task Hours | FEE       |
| 1    | Project Management                           | 204        | \$43,230               | 226                          | \$37,591                  | 174                      | \$35,100  | 238        | \$35,055  |
| 2    | BOD Validation Memorandum                    | 66         | \$20,230               | 112                          | \$23,744                  | 230                      | \$36,000  | 133        | \$27,951  |
| 3    | Final Design                                 | 1,790      | \$325,860              | 2,124                        | \$313,938                 | 2,236                    | \$374,500 | 2,466      | \$352,790 |
| 4    | Construction Phase Services                  | 1,024      | \$159,957              | 536                          | \$74,712                  | 524                      | \$87,000  | 560        | \$77,070  |
| 5    | Optional Services (not included in total)    | --         | --                     | --                           | --                        | --                       | --        | 19         | \$3,360   |
|      | <b>TOTAL ENGINEERING SERVICES FEE</b>        | 3,084      | \$549,277              | 2,998                        | \$449,985                 | 3,164                    | \$532,600 | 3,397      | \$492,866 |
| D    | <b>OTHER</b>                                 |            |                        |                              |                           |                          |           |            |           |
|      | Number of Drawings                           |            | 65                     | 69                           | 85                        | 70                       |           |            |           |
|      | Engineering Services Fee per Drawings        |            | \$5,990                | \$5,439                      | \$5,242                   | \$5,940                  |           |            |           |
|      | Joint Venture                                |            | None                   | None                         | None                      | None                     |           |            |           |
|      | Sub Consultants                              | Elec       | In-House               | In-House                     | In-House                  | Moraes & Phem            |           |            |           |
|      |  | Struct     | In-House               | In-House                     | In-House                  | Simon Wong               |           |            |           |
|      |  | Architect  | In-House               | In-House                     | Gillis & Panichapan       | Gillis & Panichapan      |           |            |           |
|      |  | Geotech    | Converse Consultants   | Associated Soils Engineering | not indicated             | Leighton & Associates    |           |            |           |
|      |  | Survey     | not indicated          | Advanced Survey Concepts     | not indicated             | Coast Surveying          |           |            |           |
|      |  | Potholing  | AirX                   | SAF-r-Dig                    | not indicated             | SAF-r-Dig                |           |            |           |
|      |  | Surge      | not indicated          | not indicated                | not indicated             | NHC & Stantec            |           |            |           |
|      |  | Acoustics  | DHK                    | DHK                          | Wieland Acoustics         | In-House                 |           |            |           |
|      |  | Landscape  | Jordan, Gilbert & Bain | NUVIS                        | TCLA                      | In-House                 |           |            |           |
|      | Exceptions taken to IRWD Std. Contract       |            | None                   | None                         | None                      | None                     |           |            |           |
|      | Insurance (Professional & General Liability) |            | Yes                    | Yes                          | Yes                       | Yes                      |           |            |           |



# EXHIBIT "B"



## 1 PROJECT UNDERSTANDING / SCOPE OF SERVICES

### 1.1 PROJECT UNDERSTANDING & APPROACH

#### 1.1.1 Project Overview



The Irvine Ranch Water District has been continuously providing planning and wet infrastructure improvements to the Orange Park Acres portion of its service area since the consolidation of the Orange Park Acres Mutual Water Company in June

2008. The service area consists of approximately 646 acres - generally bounded by Santiago Canyon Road and Villa Park Drive to the north and east, Cannon Street and Rancho Santiago Boulevard to the east and Chapman Avenue to the south. IRWD planning efforts include recommendations and system upgrades to incorporate the Orange Park Acres service area into the IRWD's Zone 5 system.

*To provide high-quality water service in an efficient and cost-effective manner, in an environmentally sensitive way... increased reliability and resource conservation... to provide, conserve, and protect water resources for our customers and to enhance the environment.*

— Excerpt of Mission, Vision, and Values – Irvine Ranch Water District

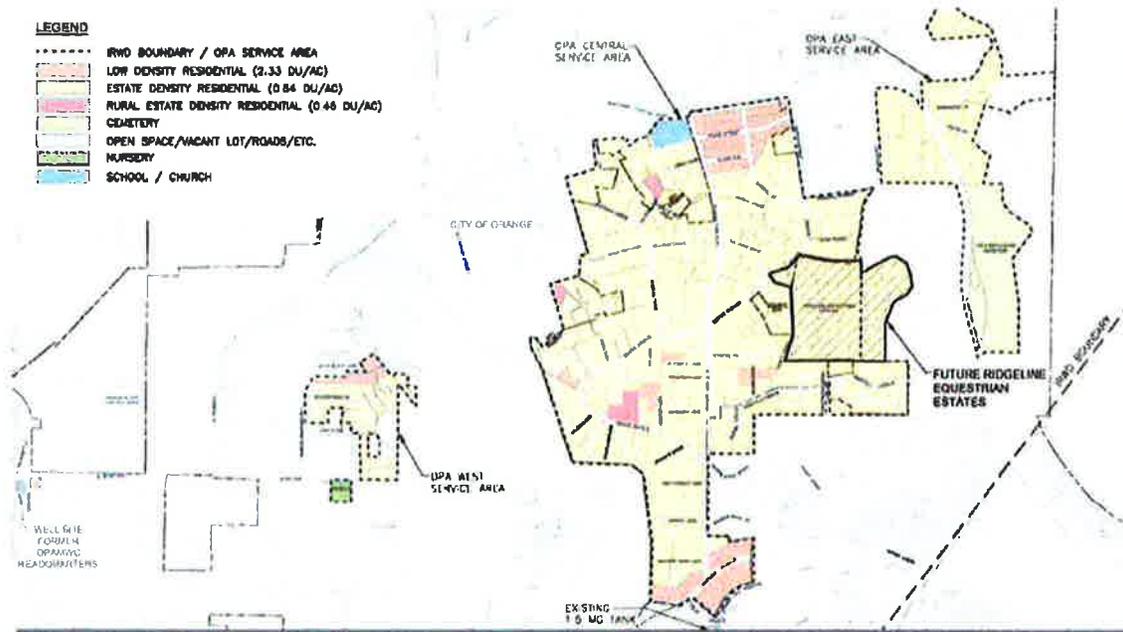


Figure 1 - Orange Park Acres Service Area (ref OPA SAMP - IRWD)

IRWD commissioned a Basis of Design Report and the OPA SAMP, which presents water supply requirements, design concepts, equipment arrangements, building requirements, site development requirements, and operational strategies for the proposed water well and pumping facilities. The



URS design team has thoroughly reviewed the Basis of Design Report, SAMP and other supporting documentation and has a full understanding of the requirements and constraints of the project site and associated improvements.

The OPA Service Area's domestic water supply is provided through both groundwater and imported water supply through the East Orange County Water District. Historically, the groundwater accounts for approximately two-thirds of the annual demands with the remaining portions being addressed through import supplies. The average annual water production is approximately 892 ac-ft. per year (0.80 MGD) and the historical HGL of the system was 623-ft. with the Calle Grande Reservoir full. Subsequent to the completion of the Zone 5 -- Santiago Reservoir transmission main, the OPA domestic water distribution system HGL has been raised to approximately 736-ft with pressure reducing station controlling the west and central 605 Zones. It is the intent of IRWD to directly connect the proposed Orange Park Acres Well No. 1 to the recently completed 20-inch transmission main - thus completing the supply requirements of the area. The OPA Well No. 1 improvements will allow IRWD to take the existing Calle Grande reservoir out of service, and end the use of interim water supply connections with the City of Orange.

The OPA Well No. 1 project directly integrates both the overall distribution network and the only groundwater supply within the area. The proposed new well will have an initial maximum production rate of 2,000 gpm (capped to a maximum of 900 AFY) to meet the current domestic water demands of the Orange Park Acres (OPA) service area. The project also includes planned future expansions of the OPA Well No. 1 site to include an additional well, and booster pumps to increase the total production to 4,000 gpm to meet future demands posed by future developments.

The proposed Orange Park Acres Well No. 1 improvements will be constructed on the same property as the original groundwater well located at the Orange Park Acres Mutual Water Company. Currently, IRWD is demolishing the existing well, existing building and other associated appurtenances within the existing site. The proposed well facility will include a contiguous building, housing the new production well, wet-well/clearwell, booster pumping facilities and electrical control room. A wet well will be incorporated into the overall design to provide the booster pumps with a stable suction water level regardless of varying water well production rates caused by the variable water column within the production well. Since the production water will be directly incorporated into the domestic water distribution system, disinfection will be required to meet CDPH requirements. Disinfection chemical storage will be housed in a separate building onsite.

As mentioned above **the URS design team performed a detailed review of the project supporting documentation provided by IRWD, and conducted a field review of the site to gain a full understanding of the project requirements, identify project constraints, develop proposed project enhancements and establish a level of effort required to complete the project successfully.** As part of our project development efforts, the URS design team has prepared the following discussion of major design elements associated with the project.



### 1.1.2 Site Plan Validation and Development

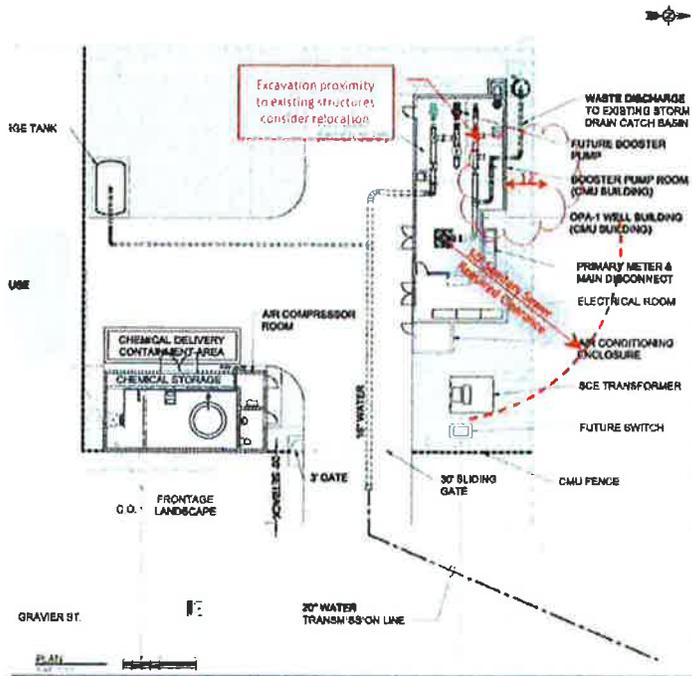


Figure 1 - Proposed Site Plan (ref: Basis of Design Report)

URS performed a constructability review of the proposed site layout. Whereas we generally agree with the site layout, it was noted that the proposed booster pump/wet-well/clearwell configuration is located within 15 feet of the neighboring residence. There are concerns the proposed excavation (approximately 15-foot deep) will be within the influence line of the adjacent building foundation. Although the excavation will be shored and braced there is a high potential for settlement of the surrounding ground potentially exposing the project to risk of damage to surrounding properties. URS proposes to relocate the proposed pump station portion of the facility slightly to the south to

ensure the adjacent buildings are outside the excavation influence line and therefore reducing the potential risk of damages. It is anticipated that during both the BOD validation task and final design, URS will review alternative site and building layouts to identify the most feasible alternative, which addresses existing site constraints and required equipment arrangement.

Based on the requirements of the California Department of Public Health (CDPH) all water wells are required to have a minimum distance of 50 feet to the nearest sanitary sewer service - not excluding sewer laterals. Based on the site development plan presented in the Basis of Design Report, it appears the placement of the new well may violate the minimum distance requirements to the nearest sanitary service. Accordingly, during both the BOD validation task and final design, URS will also closely review CDPH requirements with the District and identify whether there is a need to relocate the proposed water well placement.

Although neither of the above issues is insurmountable, these are examples of issues that will be reviewed during the Basis of Design Report Validation Task. URS will perform a detailed review of all site constraints including, but not limited to, building placement, equipment arrangements, internal site circulation, utility routing, site security systems and minimum setback requirements during the Basis of Design Report validation process.



### 1.1.3 System Hydraulics and Pump Selection

The proposed well and booster pump system for the Orange Park Acres Well No. 1 includes a 2,000 gpm well pump with the capacity to provide an overall lift of 368 feet (reference Preliminary Well Design Memo for IRWD Well OPA 3) into a wet-well located below the proposed booster pump station. Because the groundwater aquifer is significantly influenced by the recharge operations within the Santiago Recharge Basin, and the static water elevation has potential fluctuations of more than 100 feet, the use of the wet-well/clearwell configuration will provide a more stable water surface elevation for the suction side of the booster pumps. The wet-well (clearwell) will also provide for both initial mixing and dispersion of disinfection chemicals and initial disinfectant contact time prior to booster pumping.

As previously noted, the production capacity of the water well is expected to vary significantly due to varying groundwater elevation. As such, the proposed booster pump capacity must be sized slightly greater than the anticipated maximum production of the water well pump. While the booster pump will operate at variable speed, **URS will closely evaluate the maximum turn down ratio of the proposed booster pump with various pump manufacturers and the ability of the booster pumping equipment to meet the anticipated minimum production of the well pump.** If a single booster pump is not able to meet the maximum and minimum water well production rates, then two booster pumps may be required rather than a single pump.

The Zone 5 Transmission Main connects the proposed OPA Well No.1 to the Santiago Hills Zone 5 reservoir and also serves as the backbone facility for the domestic water distribution system. In general, the pump and wellhead facilities will be utilized to fill the Zone 5 Reservoir during the non-peak hours taking advantage of the lower power rates. In addition, the pumping facilities can also be used to maintain system pressure during times of high demand or when the reservoir is offline for maintenance. As such, a full hydraulic analysis of the both the

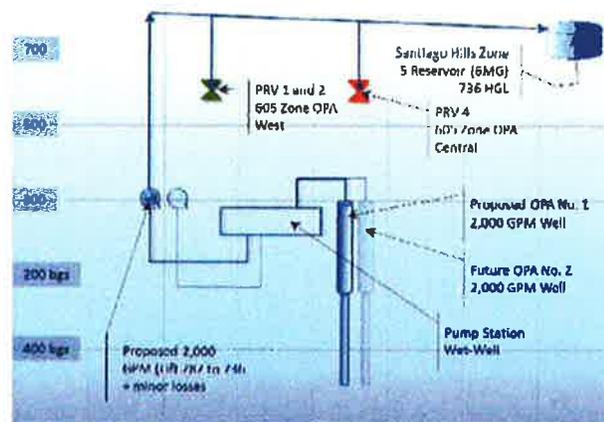


Figure 2 - System Flow Schematic

transmission main and distribution system is warranted. **To facilitate review and validation of the overall hydraulic system, URS has teamed with both Stantec Consulting and Northwest Hydraulic Consultants** for evaluation of the distribution hydraulics and surge analysis. Collectively the URS project team will evaluate the overall hydraulics information for the selection of the booster pumps to ensure the facilities will meet the operational parameters of the project area. As part of the conversion to the 738 pressure zone, it is suggested that a hydrant flow test be performed to better



calibrate the distribution model and therefore provide better input modeling data for pump selection. As part the final design efforts, final selection of both the well pump and booster pump based on actual flow measurements and pressures.

#### 1.1.4 Building and Equipment Layout

**The URS Design team, including subconsultant Gillis and Associates, reviewed the proposed well house and pump station equipment layouts, and identified several areas where refinements would greatly increase the utility of the building.**

During the BOD validation process and final design for the proposed wellhead/pump station facility, the engineering and architectural team will develop concepts that eliminate HVAC ducting conflicts, and will also address equipment layouts to improve access and maintenance operations, specifically in the wet-well and pump floor areas.

As described in the original RFP and the BOD, the project requires full and unobstructed access to the wellhead portions of the building. As described in the BOD, the front portions and building roof are to be fully removable. The URS project team has been researching other viable options such as a retractable roof and wall sections similar to a large warehouse structure.

To facilitate the design and approval, the design team will work directly with IRWD to fully develop alternative concepts and make presentations to the District's Board of Directors, as requested.

#### 1.1.5 Mechanical/HVAC/Noise Attenuation Issues

**With the proposed OPA Well No. 1 being located within a residential area and having sensitive receptors along all property lines, noise suppression will be critical factor to the success of this project.** Beyond being a good neighbor, the City of Orange requires compliance with their noise ordinance, which limits night time noise levels to less than 50dB. Because the proposed facility is to be constructed of concrete block materials, sound transmission through the walls will be fairly easy to achieve. The biggest challenge will be development of sound suppression for the roof, removal of portions of the building, air movement through the HVAC system intake and exhaust ducts piercing through the walls. URS has developed many noise transmission models and designed sound suppression systems to address noise issues, specifically industrial and mechanical room applications.

As discussed above, one of the most difficult areas to deal with sound suppression is air movement for the forced air ventilation system. General mechanical machine noise will be the second order of noise suppression. During final design of the structure, URS will finalize the noise model utilizing the Cadna/A® 3D acoustical noise model. Cadna/A® has the ability to take transmission loss, ground absorption, reflection, diffraction around building edges, topography, and noise attenuation due to spherical wave divergence all into account in order to generate accurate results. The model input will be based upon maps, drawings, and equipment noise data to be provided by the



mechanical/civil design team(site plan and elevation drawings showing identity, location, and dimensions of major noise producing equipment and buildings, and noise emission data for each major item of proposed equipment at the project site). Geo-referenced shape files will be provided by the IRWD based on previous information provided for the project facilities, nearby residences and topography within and surrounding the project site.

Final design of the pumping and chemical building will incorporate appropriate sound suppression material. For the mechanical pump and wellhead rooms, it is anticipated that a combination noise mitigation and absorption system will be utilized to address noises issues associated with this project.

The following scope of services provides a detailed breakdown of the aforementioned project tasks identifying specific activities and design efforts.

## 1.2 SCOPE OF WORK AND METHODOLOGY

The scope of work for the design and implementation of the interim improvements includes Project Management, a Basis of Design Validation Memorandum, Final Design, and Construction Phase Services, with each phase being authorized by a separate Notice-to-Proceed (NTP). The Project Manual will be prepared using the latest IRWD Construction Manual, front-end documents, and appendices from IRWD. Design work will be completed in accordance with requirements identified in IRWD’s Design Process Manual. The design of I&C systems shall conform to the IRWD Electrical and Instrumentation and Control (I&C) Design Standards as described in Exhibit “G” and “H” of the RFP. The Scope of Work and Budget will be stand-alone documents that will become the Agreement Exhibits. Work will consist of, but no be limited to, the following tasks outlined below.

### **Task 1: Project Management**

URS will conduct effective project management that adheres to the scope, schedule, and budget; provide efficient and frequent communication with IRWD and other project stakeholders; and implement the URS Quality Management System in order to provide effective quality assurance/quality control. The scope of services for Project Management includes the following items:

1. Preparation of Project Status Reports – URS will prepare weekly and monthly project status reports for IRWD’s management team. The weekly status reports will consist of a brief (one to two paragraph) email summarizing work activities completed the previous week along with activities planned for the upcoming week. Monthly status reports will provide more detail and will summarize work for the previous and upcoming month. The monthly reports will include an updated project schedule (Microsoft Project Gantt chart) and a summary of budget expenditures to date per task and budget remaining. In addition to the status reports, URS’ management team



will maintain strong lines of communication with IRWD via email and telephone. URS will copy IRWD staff on all emails to and from agencies and other project stakeholders.

- 2. Meetings and Workshops – URS will schedule and lead meeting with IRWD’s team to ensure that all design, operational and maintenance issues are being addressed. URS will provide agendas of upcoming project coordination meetings five working days in advance of the meeting and prepare meeting minutes and action items within five working days subsequent to the meetings. These efforts are intended to ensure that all technical issues are being addressed and that the project remains on schedule. For the purposes of budgeting, the following meetings are anticipated for the project:

| Meeting/Workshop   | Description                   |
|--|-------------------------------|
| General project management and design development meetings   | Twenty (20) two-hour meetings |
| Coordination activities with agencies and project stakeholders (City of Orange, City of Orange Fire Department, Orange County Health Care Agency, CA DPH, SCE, etc.) | Eight (8) two-hour meetings   |
| Discussion of outstanding items in the BOD   | One (1) two-hour workshop     |
| Present the 60% design and discuss IRWD's comments and outstanding item resolution   | One (1) three-hour workshop   |
| Present the 90% design and discuss IRWD's comments   | One (1) two-hour workshop     |

- 3. Quality Assurance/Quality Control – URS will implement our Quality Management System (QMS) throughout the project to ensure consistent quality control for all project phases. The QMS system is based on the ISO 9001 standard and is required on all of our projects. Per this system, each project deliverable will undergo an independent technical review and a detail checking review, and construction documents will undergo a constructability review. The independent technical review will be provided by a technical expert in the related field, who has not been involved in preparation of the deliverable. The detail checking review focuses on a review of grammar, spelling, notes, construction call-outs, construction coordinates, plans and specification coordination, and discipline coordination. URS will provide IRWD with review comment disposition forms, redlines, redline back-checks, and QMS forms upon request.

**Task 2: Basis of Design Validation Memorandum**

URS will review the Basis of Design Report (BOD) and prepare a validation memorandum in accordance with requirements identified in Section 5 (Design Criteria Recycled Water Facilities) of the IRWD Procedural Guidelines and General Design Requirements. In addition to the general guidance provided in the referenced document, URS will specifically address the following items within the validation memorandum:



1. Air Conditioning Equipment – URS' HVAC Design Division will design air conditioning (AC) for the electrical room and ventilation for the well/wet well/booster station building and chemical building. URS will review the findings in the BOD related to the AC system and re-evaluate additional AC systems, locations, and acoustical treatments. We understand that the design of the AC and ventilation system (i.e. fans and louvers) will be governed by the City's noise ordinance at the property line. The results of the draft noise model developed by DHK Engineers and the proposed noise model (Task 3E) will be used for selecting AC and ventilation equipment.
2. Site Security – URS will design site security features for the OPA-1 site. Security features may include, but will not be limited to: surveillance cameras, intrusion alarms (for external doors and hatches), lockable doors, a rolling gate and a pedestrian gate with keypad. URS will also provide a key lock box at the site entrance for the fire department. Based on the proposed site development schematics, URS will provide a line of sight analysis to establish the need and locations of security and surveillance measures for the site.
3. Pump Curve – URS will review the well pump and booster pump curves and pump hydraulic analysis provided in the BOD. We will revisit the hydraulic calculations and pump curve selections as part of the BOD validation process. Our subconsultant, Stantec, will perform a network model analysis of the IRWD Zone 5 system in order to refine the hydraulic analysis and pump selection. We understand the selected well pump will need to account for the 100 feet of static water level fluctuations in the groundwater aquifer. Similarly, the variable speed operation of the booster pump must be able to match the anticipated wide variations in well pump production. URS may recommend two booster pumps in lieu of a single booster pump.

The hydraulic model used for the preparation of the OPA SAMP will be updated and calibrated based on the recently constructed transmission main improvements. The preliminary layout of the onsite piping, wet well, and valving will be included in the model for inclusion of station losses and operation. We will coordinate with IRWD Operations staff to verify current system operation and connections along the new transmission main. Flow tests along the transmission will be requested to calibrate the model, system pressures, and appropriate friction factor to be used for the transmission main. We assume IRWD field crews will be able to conduct the hydrant flow tests. Approximately three (3) test locations are recommended at this time.

The previous studies and relevant data will be reviewed and coordinated with IRWD to be properly be incorporated into the analysis, such as initial and ultimate design flow objectives, estimated well and pump capacities, pump operating constraints, desired pump operation, etc.

A computer model analysis will be performed for various EPS demands conditions to verify proposed pump operating conditions for minimum day, average day, and maximum day demands. Additionally, steady-state run will be performed for maximum day plus fire flow



assuming supply from the well facility only. Each of these demand conditions will be run with the Zone 5 Reservoir at full, at minimum levels, and closed off from the system for both initial and ultimate design objectives. The analysis will also take into consideration the proposed well pump capacity and wet well volume.

The initial results will be provided to the URS design team for the proposed pump size and selection. The results provided will include system head curves, TDH requirements, and discharge pressures anticipated for the various model scenarios. Once a pump is selected, a final analysis will be run adding in the model the pump curve selected by URS to verify and confirm the desired anticipated hydraulic operation.

A technical memorandum will be prepared describing the analysis, assumptions, and conclusions. The technical memorandum will include the hydraulic analysis results and system head curves, along with the model node diagram. It is assumed a draft technical memorandum will be submitted for review, and a final technical memorandum will be provided with review comments addressed. Wet-Well (Clearwell) – We anticipate that there will be constructability concerns with the proposed below grade wet-well (clearwell) adjacent to existing residences. Furthermore, we anticipate concerns with designing an overflow outlet air gap that will be acceptable to the CDPH without designing the wet-well (clearwell) as a concrete pressure vessel as currently shown in the Basis of Design. URS will closely review with the District the concept of designing an above grade clearwell to eliminate the potential constructability and air gap concerns.

4. Geotechnical Investigation – URS will review the existing geotechnical report prepared by Converse Consultants and determine its suitability for final design of the proposed facilities. A supplemental report of findings and recommendations will be developed based on existing data to support this project. Areas of specific interest will be near large excavations, bearing loads for plane structural members associated with the removal and/or retractable portions of the wellhead building.

Deliverables – URS will provide ten (10) copies of Draft and Final BOD validation memorandum to the District for comment, review, and approval. All submittals will include both an MS Word and PDF copy of project documentation ready for reproduction purposes.

### **Task 3: Final Design**

Final design will be completed in accordance with IRWD’s Design Process Manual. URS will address the following items in final design:

1. Project Manual – URS will prepare the Project Manual in standard IRWD format and complete IRWD templates for the bidding and contract requirements section of the manual. We will provide an original set of bidding documents in 8-½ inch x 11-inch format. Computer files of



the Project Manual will be submitted to IRWD in the latest version of Microsoft Word on one CD and as a single PDF file on a second CD. URS has copies of example Project Manuals from IRWD that will be used for reference.

- 2. Construction Plans – URS will prepare detailed construction drawings in the latest version of AutoCAD. Construction plans will be prepared on IRWD standard 24-inch x 36-inch sheet with IRWD title block (provided by IRWD prior to design). The final construction plans will be submitted to IRWD as AutoCAD files on a CD and as a single full-size PDF on a second CD. URS has copies of example final design plans from IRWD that will be used for reference. URS and our subconsultant Moraes, Pham, and Associates (MPA) will prepare all required drawings for the proposed electrical and instrumentation improvements. This will include general plans, civil plans, mechanical plans, structural plans, electrical plans, instrumentation/control plans, and associated details. The following table presents our proposed listing of the potential construction drawings.

**ORANGE PARK ACRES WELL NO. 1 PROJECT  
CONSTRUCTION DRAWING LIST**

| Sheet No. | Drawing No. | Sheet Title   |
|-----------|-------------|---|
| 1         | G-1         | Title Sheet   |
| 2         | G-2         | Location Map, Vicinity Map, and Drawing Index         |
| 3         | G-3         | General Notes, Symbols, Agency Index & Abbreviations  |
| 4         | G-4         | Construction Notes                                    |
| 5         | D-1         | Demolition Plan                                       |
| 4         | C-1         | Overall Site Plan                                     |
| 5         | C-2         | Horizontal Control Plan                               |
| 6         | C-3         | Site Grading and Paving Plan                          |
| 7         | C-4         | Yard Piping Plan                                      |
| 8         | C-5         | Site Details  |
| 9         | C-6         | Civil Details 1                                       |
| 10        | C-7         | Civil Details 2                                       |
| 11        | M-1         | Mechanical Legend, Symbols, and Abbreviations         |
| 12        | M-2         | Well/Wet Well/Booster Pump Station Plan               |
| 13        | M-3         | Well/Wet Well/Booster Pump Station Sections           |
| 14        | M-4         | Well/Wet Well/Booster Pump Station Sections & Details |
| 15        | M-5         | Well/Wet Well/Booster Pump Station Details            |
| 16        | M-6         | Chemical Building Plan                                |
| 17        | M-7         | Chemical Building Sections                            |
| 18        | M-8         | Chemical Building Details                             |
| 19        | M-9         | Surge Tank Plan, Sections, and Details                |



| Sheet No. | Drawing No. | Sheet Title   |
|-----------|-------------|---|
| 20        | M-10        | Surge Tank Air Compressor Plan, Sections, and Details           |
| 21        | M-11        | Mechanical Details 1  |
| 22        | M-12        | Mechanical Details 2  |
| 23        | A-1         | Well/Booster Pump/Electrical Building Plan, Codes, and Notes    |
| 24        | A-2         | Well/Booster Pump/Electrical Building Roof Plan and Details     |
| 25        | A-3         | Well/Booster Pump/Electrical Building Exterior Elevations       |
| 26        | A-4         | Well/Booster Pump/Electrical Building Sections and Wall Details |
| 27        | A-5         | Chemical Building Plan, Codes, and Notes                        |
| 28        | A-6         | Chemical Building Roof Plan and Details                         |
| 29        | A-7         | Chemical Building Exterior/Interior Elevations and Sections     |
| 30        | A-8         | Architectural Details   |
| 31        | S-1         | Structural Notes and Design Criteria                            |
| 32        | S-2         | Structural Foundation/Floor Plan – Well/Pump Station Building   |
| 33        | S-3         | Structural Foundation/Floor Plan – Chemical Storage             |
| 34        | S-4         | Structural Wet-Well Foundation/Sections                         |
| 35        | S-5         | Roof Framing Plans Well/Pump Station Building                   |
| 36        | S-6         | Roof Framing Plans Chemical Building                            |
| 37        | S-7         | Wall Sections and Details                                       |
| 38        | S-8         | Removal/Retractable Roof Details                                |
| 39        | S-9         | Removal/Retractable Wall Details                                |
| 40        | S-10        | Structural Details  |
| 41        | P-1         | Plumbing Legend, Schedule, and Notes                            |
| 42        | P-2         | Well/Wet Well/Booster Pump Station Plumbing Plan                |
| 43        | P-3         | Chemical Building Plumbing Plan                                 |
| 44        | HVAC-1      | HVAC Legend, Schedules, Notes, and Specifications               |
| 45        | HVAC-2      | Well/Pump Station/Electrical Buildings HVAC Plan                |
| 46        | HVAC-3      | Chemical Building HVAC Plan                                     |
| 47        | HVAC-4      | HVAC Details  |
| 48        | E-1         | Electrical Standard Symbols and Abbreviations                   |
| 49        | E-2         | Electrical Site Plan  |
| 50        | E-3         | Single Line Diagrams/Elevations                                 |
| 51        | E-4         | Well Building Power and Signal Plan                             |
| 52        | E-5         | Well Building Lighting Plan                                     |
| 53        | E-6         | Chemical Building Power and Signal Plan                         |
| 54        | E-7         | Chemical Building Lighting Plan                                 |
| 55        | E-8         | Control Diagram 1   |
| 56        | E-9         | Control Diagram 2   |
| 57        | E-10        | Fixture and Panel board Schedules                               |



| Sheet No.  | Drawing No. | Sheet Title                                       |
|--|-------------|---|
| 58   | E-11        | Conduit Schedule                                  |
| 59   | E-12        | Electrical Details                                |
| 60   | I-1         | P&ID Standard Symbols and Abbreviations           |
| 61   | I-2         | P&ID Wellhead Facilities                          |
| 62   | I-3         | P&ID Sodium Hypochlorite Storage and Feed         |
| 63   | I-4         | P&ID Aqueous Ammonia Storage and Feed             |
| 64   | I-5         | RTU Control Diagram 1                             |
| 65   | I-6         | RTU Control Diagram 2                             |
| 66   | I-7         | RTU Control Diagram 3                             |
| 67   | I-8         | RTU Control Diagram 4                             |
| 68   | I-9         | RTU Control Diagram 5                             |
| 69   | I-10        | RTU Layout Diagram                                |
| 70   | I-11        | System Architecture                               |
| <b>Landscaping Plans Provided as Separate Plan Set</b> |             |   |
| LS1  | L-1         | Landscaping and Irrigation Title Sheet            |
| LS2  | L-2         | Landscaping and Irrigation Plan                   |
| LS3  | L-3         | Landscaping and Irrigation Sections and Details 1 |
| LS4  | L-4         | Landscaping and Irrigation Sections and Details 2 |

3. Permits & Coordination – URS will make applications and secure all permits with controlling agencies. URS will prepare and process the permit applications, including exhibits required by the issuing agency, and shall furnish the required number of copies of all plans and exhibits. IRWD staff will sign all applications as required by the owner. We understand that IRWD will reimburse the engineer for actual permit fees without surcharge. We have included a \$5,000 permit allowance within our budget as stipulated in the RFP. Two of the permitting agencies discussed in the RFP include the following:
  - a. City of Orange Fire Department – URS will review the conceptual site layout submitted in the BOD phase. We will refine the layout as needed and summarize the design approach in a memo that will concur with the California Fire Code. URS will submit the memo and a draft Fire Master Plan to IRWD for review and comment prior to finalizing for submission to the City’s Fire Department. We will incorporate comments from the fire department as needed to secure approval of the Fire Master Plan.
  - b. California Department of Public Health – URS understands that the wellhead facilities will include a “pump-to-waste” discharge line that will need to meet the Department of Public Health’s (DPH) cross-connection control requirements. Specifically, the DPH requires that this line have an air-gap separation that “shall be at least double the diameter of the supply pipe, measured vertically from the flood rim of the receiving vessel to the supply pipe”



(CCR, Title 17, Section 7602(a)). A duckbill check valve can be placed on the end of the discharge line to prevent insects, birds, and rodents from entering the potable water well system. URS recommends that a hose bibb connection be provided off of the potable water system for site wash-down. URS has implemented wash-down lines with hose racks on other IRWD sites. The wash-down line will have an RP device and vacuum breaker to prevent cross-connection. URS will also assist with preparation of all necessary attachments for the Domestic Water Supply Permit, which IRWD will apply for prior to operating the new well.

4. Utility Research – URS will review the topographic survey prepared by Cal Vada Surveying to locate above-ground utility features (i.e. manholes, valve cans, CP test stations). On a recent site visit we made note of USA paint markings on the ground for buried utilities and will make use of this information for creation of a utility base map. During the BOD validation phase we will collect utility as-built drawings from IRWD, the City of Orange, and other agencies and private parties in order to create a utility base map for final design. We will also perform a web search of USA Digalet's online database to locate all of the utilities in the project vicinity and then contact each utility owner to request a copy of their available as-built drawings.

For budgeting purposes, URS has budgeted for four (4) utility potholes. Our subconsultant SAF-r-DIG will perform utility potholing. SAF-r-DIG specializes in obtaining accurate subsurface utility information using a non-destructive, minimally invasive, vacuum process, which exposes the utility for visual verification, identification, inspection, measurements and vertical and horizontal location of the utility. URS will obtain encroachment permits from the City for the potholing fieldwork.

5. Noise Model/Sound Suppression Measures – URS understands that the noise levels of the proposed facilities will need to comply with the IS/MND and City of Orange's Noise Ordinance. Irvine Ranch Water District (IRWD) Orange Park Acres Well No. 1 Wellhead Facility is located at 678 Gravier Street in the City of Orange, within a lot surrounded by single family residences. The project consists of establishing a well pump on-site which will be powered by an electric motor ranging in power from 250 to 600 hp. In the future, there is the potential for two additional booster pumps to be installed on-site, each with an anticipated capacity of 400 hp. All of these pumps will be enclosed within a building to provide noise mitigation to the noise sensitive residential land uses located directly adjacent to the project site. The following specific tasks will be accomplished to fully develop the noise attenuation measures:

Ambient Noise Measurement Survey

In preparing the project noise analysis, URS Acoustics and Noise Control Group will conduct a series of long-term (24-hour) and short-term (15-60 minutes) ambient noise measurements adjacent to the project site in order to quantitatively assess the existing noise environment. The purpose of these measurements is to determine existing noise sources and environmental noise



levels and provide a baseline for assessing changes in noise levels attributable to the proposed project. The noise ordinance for the City of Orange is based upon a series of fixed thresholds and time durations for both the daytime and nighttime periods. Should the existing ambient environment exceed the stated threshold levels or durations, the criteria can be adjusted accordingly to account for the existing noise conditions.

#### Source Noise Measurement Survey

In order to accurately model the impacts of the proposed pump equipment to be used on-site, one-third octave spectral source noise levels of the equipment will need to be obtained. To obtain these source noise levels, a series of noise measurements will be conducted of similar equipment which is currently in use by IRWD at another facility. We will work with the client to determine the location of similar equipment and to coordinate access for Acoustics and Noise Control staff to conduct the source noise measurements. This spectral data will be used as the basis of proposed source noise modeling of the project site.

#### Pump Noise Isolation Analysis

The source noise levels for each of the pumps to be installed on-site will be obtained either through direct measurement or by obtaining the source sound power levels from the manufacturer. Project-related noise levels generated at the facility will be modeled through the utilization of three-dimensional acoustical modeling software known as Cadna/A®. Cadna/A® is a Windows-based computer software modeling program that allows for the input of octave band sound sources and their corresponding noise source output levels. During calculation, Cadna/A® has the ability to take transmission loss, ground absorption, reflection, diffraction around building edges, topography, and noise attenuation due to spherical wave divergence all into account in order to generate accurate results. The model input will be based upon maps, drawings, and equipment noise data. This data includes the site plan and elevation drawings showing the type, location, and dimensions of major noise producing equipment, along with the footprints of the proposed buildings. Geo-referenced shape files will be provided by the applicant for the project facilities, nearby residences and topography within and surrounding the project site. We will then work with the design team to design the acoustical characteristics of the structure, which will house the pump equipment. Noise mitigation measures will be developed and incorporated into the building design so that the operational noise levels associated with the project comply with the City of Orange Noise Ordinance standards. The proposed noise mitigation measures will be incorporated into the model to demonstrate compliance with the noise ordinance.

#### Ventilation Noise Analysis

The room in which the pump equipment will be located will be ventilated by a Forced Air Ventilation system to control the room temperature. This system will be expected to move a



significant amount of air, and as a result, generate a substantial level of noise. The source noise and air moving capacity specifications for this ventilation system will be provided to the noise group in order to conduct the acoustic analysis on this component of the project. Mitigation measures to reduce noise from the fan motor and from the movement of air through both the intake and exhaust ducting will be developed to ensure noise from this unit complies with the City of Orange Noise Ordinance levels.

#### Air Conditioning Noise Isolation

Air conditioning equipment will be provided for the electrical room. The source noise sound power levels for the condenser unit will be provided to the noise group in order to conduct the acoustic analysis on this component of the project. Specific noise mitigation measures to reduce noise from the condenser, such as location, noise barriers, noise absorption, will be developed for the condenser to ensure noise from this unit complies with the City of Orange Noise Ordinance levels.

#### Noise Design Report.

A draft noise report will be prepared and submitted along with the 60% design submittal. A final noise analysis will be prepared and submitted along with the 90% design submittal. These reports will document results of the noise measurement surveys, the source noise levels associated with each piece of relevant mechanical equipment, the details of the noise mitigation measures developed for building enclosure and the HVAC system, and the results of the indoor-to-outdoor noise reduction modeling for the structure. URS will provide noise contours produced by Cadna/A® that illustrate continuous noise equivalent levels (Leq) generated by project operations. These noise contours will be presented in figures included in the Noise Technical Report.

6. Electrical/Instrumentation – URS and our subconsultant Moraes, Pham & Associates (MPA) will collaborate with IRWD electrical staff to develop the instrumentation and controls requirements along with the electrical power requirements for the proposed facility. Based on information provided by IRWD staff, the proposed electrical power supply will require the installation of a new electrical service and transformer. The URS/MPA team will coordinate with Southern California Edison and IRWD to locate and install the new electrical service and transformer. URS/MPA will prepare a preliminary operational scheme including Process and Instrumentation Diagram (P&ID), single line diagram, control equipment list, and method of integration into the IRWD SCADA system for the pumping facilities, flow meters, valves, pressure transmitters, and chloramine injection system. URS/MPA will conduct a field review to investigate a suitable location for establishing radio and/or fiber optic telemetry. We assume that a radio path study is not required. As part of the control designs, MPA will incorporate a Quantum PLC based RTU, meeting the latest IRWD standards. RTU drawings and Bill of



Materials will be prepared for IRWD staff review and acceptance. URS/MPA will prepare a PLC I/O and control alarm functions and trigger points schedule. System operations and descriptions will be prepared for PLC programming by IRWD staff members.

7. Architectural Design and Structural Engineering – URS and our subconsultants, Gillis and Associates and Simon Wong Engineering will work collaboratively with IRWD to fully develop the proposed buildings and overall site plan. The civil analysis will review building and equipment arrangement, site access, vehicle movements, and general surface improvements. The project team will develop building concepts incorporating the removable/retractable elements of the building and associated structural requirements. Architectural Development Drawings will be prepared for both public and IRWD Board Meetings.
8. Landscaping and Irrigation Design (separate construction contract) – URS will provide landscaping and irrigation plans and technical specifications for the front area of the proposed site. The construction documents will be a separate stand-alone set that can be used by IRWD to bid a separate construction contract. URS will perform a site reconnaissance visit to survey the landscaping features of the surrounding neighborhood and develop a planting pallet that matches the neighborhood. We will attend one (1) meeting with the City of Orange to present the landscaping and irrigation concept on full-size color poster boards.
9. Project Schedule – URS will submit monthly project schedule updates and with each final design submittal, including a detailed construction schedule. The project schedule will reflect coordination items, submittal milestones, critical path items, IRWD review times, shop drawing approvals, manufacturing, delivery, seasonal weather impacts, and affected construction projects.
10. Liquidated Damages Spreadsheet – URS will assist in calculating liquidated damages for the project, which would take effect if the Contractor exceeds the contract time. URS will fill out IRWD's standard liquidated damage calculation form.
11. Opinion of Probable Construction Cost – URS will provide IRWD with an engineer's estimate of probable construction costs for the 60%, 90% 100% and final submittals. URS will incorporate and address comments from IRWD related to the cost estimate.
12. Miscellaneous – In accordance with the RFP, we have included a budget of \$15,000 for miscellaneous services for unanticipated services. We understand work on these services will only proceed if authorized by IRWD and may be separately authorized, as required. These services may include, but will not be limited to: additional potholing, field surveying, mapping services, geotechnical work, and other tasks directed by the IRWD PM.
13. Final Design Deliverables – URS will provide final design deliverables pursuant to IRWD's Design Process Manual. The submittals will be provided as described below.



- a. URS will submit ten (10) copies of the first (60%) submittal. Plans for the first submittal will include a draft set of drawings for the entire project. Layouts, sections, and details will be provided in detail for of each component of the design such as civil, mechanical, structural, electrical, and instrumentation improvements. The first submittal will include all sections of the Project Manual with technical specifications and an engineer's estimate of probable construction cost. The General Provisions will not be included in the Project Manual for this submittal.
  - b. URS will submit ten (10) copies of the second (90%) submittal. Plans for the second submittal will clearly show layouts of design components such as civil, mechanical, structural, electrical, instrumentation, and detail sheets. URS will incorporate IRWD staff comments on the 60% submittal. URS will update the Project Manual and engineer's estimate of probable construction cost for this submittal. The General Provisions will not be included in the Project Manual for this submittal.
  - c. URS will submit ten (10) copies of the third (100%) submittal. This submittal will include a final set of plans for the entire project. Plans for the second submittal will clearly show layouts of design components such as civil, mechanical, structural, electrical, instrumentation, and detail sheets. URS will incorporate IRWD staff comments on the 90% submittal, as well as comments received at the 90% plan review meeting. URS will update the Project Manual and engineer's estimate of probable construction cost for this submittal. The General Provisions will not be included in the Project Manual for this submittal.
  - d. URS will submit stamped and signed reproducible plans (mylars), bond paper set of the final construction plans and original signed Project Manual for IRWD signatures. URS will attend IRWD's meeting for signatures to explain the project and answer questions. A final engineer's estimate of probable construction cost will be submitted with the final plans and Project Manual.
14. Addenda Preparation and Pre-Bid Meeting - During the bidding period, URS will provide bidding support and assistance as it pertains to the contract documents and construction drawings of the interim improvements. For budgetary purposes, we have assumed a number of hours in our fee estimate to answer questions from prospective bidding contractors, and assist IRWD in providing information and clarification of the bid documents. URS will consult with IRWD to address concerns or answer their questions in support of administering the bid process. URS will prepare four (4) addenda for all prospective bidders, if requested by IRWD.

#### **Task 4: Construction Phase Services**

URS will provide construction phase services including Project Management, submittal/shop drawing review, response to requests for information, and record drawings preparation. These services are detailed below:



1. Project Meetings – URS will attend/conduct twenty (20) progress meetings of two hours each during the course of the project construction and provide agendas and meeting minutes.
2. Contractor's Request for Information (RFI) – URS will respond to approximately forty (40) Requests for Information.
3. Minor Plan Revisions – URS has budgeted sixty (60) hours of staff time for minor plan revisions to the construction drawings.
4. Site Visits – URS has budgeted six (6) site visits of two hours each during construction.
5. Shop Drawing Reviews – URS has budgeted for the review of one hundred (100) shop drawing submittals fifty (50) additional resubmittals. Submittals will be reviewed for completeness and conformity with the contract documents. URS will deliver copies of the reviewed submittals to the IRWD Inspector, IRWD Project Manager, IRWD File and Contractor as required.
6. Record Drawings – URS will prepare record drawings on 24-inch by 36-inch mylars at construction completion, using the Contractor's and IRWD Inspector's red lines. URS will prepare final record drawings mylars, reissued signed mylars (as needed), AutoCAD electronic files on CD, and one color PDF file of the entire construction plan set on CD and deliver the record drawing package to IRWD.



## 2 PROJECT TEAM / ORGANIZATION CHART

The URS team members and our subconsultants have been specifically chosen for this project based on their individual expertise as it relates to their tasks and responsibilities. The project will be managed by Joseph Long, PE who has more than 23 years of direct experience in the development and implementation of water conveyance projects. Our design team will be led by Bryan Paine, PE and Bernard Pyska, PE, both of whom have successfully completed similar pump station projects directly for IRWD. The following matrix provides a brief description of our key staff assigned to this project. Detailed resumes are provided at the end of this proposal.

### 2.1 KEY TEAM MEMBERS AND QUALIFICATIONS

**Key Staff Experience Matrix and Availability**

| Key Personnel/<br>Project Role/<br>Project Availability   | Education/<br>Registration  | Specialty and Capabilities   | Project Experience   |
|---|---|--|--|
| <b>Joseph Long, PE</b><br>Project Manager<br><i>Project Availability:</i><br>50%                          | BS, Civil Engineering<br>Civil Engineer, CA,<br>#54329                                  | <ul style="list-style-type: none"> <li>▪ Water/Reclaimed Water Facilities</li> <li>▪ Chlorination Facility Design</li> <li>▪ Potable/Reclaimed Water Reservoirs</li> <li>▪ Pump Station Facilities</li> <li>▪ Transportation Infrastructure</li> <li>▪ Construction Support Services</li> <li>▪ QA/QC</li> </ul>                   | <ul style="list-style-type: none"> <li>▪ Syphon Reservoir Interim Facilities (IRWD)</li> <li>▪ Various TIC Capital Improvement Projects, Irvine</li> <li>▪ New Model Colony Backbone Water and Sewer Facilities, Ontario, CA</li> <li>▪ Winchester Hills Infrastructure Master Plan, Hemet</li> </ul>  |
| <b>Bryan Paine, PE</b><br>Civil/Mechanical Design Project Engineer<br><i>Project Availability:</i><br>50% | BS, Civil Engineering<br>BS, Environmental Engineering<br>Civil Engineer, CA,<br>#64334 | <ul style="list-style-type: none"> <li>▪ Pipeline, Pump Station, Drainage, and Reservoir Design</li> <li>▪ Chlorination Facility Design</li> <li>▪ Water and Wastewater Treatment</li> <li>▪ Hydrology and Hydraulic Analysis</li> <li>▪ Stormwater Treatment</li> <li>▪ Construction Support Services</li> <li>▪ QA/QC</li> </ul> | <ul style="list-style-type: none"> <li>▪ Syphon Reservoir Interim Facilities (IRWD)</li> <li>▪ Zone 4 FCF and Zone 3-4 BPS, Irvine (IRWD)</li> <li>▪ Bayview Lift Station Improvements, Irvine (IRWD)</li> <li>▪ MWRP Primary Sludge, WAS and Skimming Pumps Replacement, Irvine (IRWD)</li> <li>▪ Treatment Optimization of the Horace P. Hinckley Water Treatment Plant, Redlands</li> </ul> |



| Key Personnel/<br>Project Role/<br>Project Availability   | Education/<br>Registration  | Specialty and Capabilities  | Project Experience   |
|---|---|---|--|
| <b>Bernard Pyska, PE</b><br>Civil/Mechanical<br>Design Lead<br><i>Project Availability:</i><br>30%  | MS, Environmental<br>Engineering<br>BS, Civil Engineering<br>Civil Engineer, CA,<br>#38656  | <ul style="list-style-type: none"> <li>▪ Water/Wastewater Engineering</li> <li>▪ Water Reclamation</li> <li>▪ Chlorination Facility Design</li> <li>▪ Construction Management</li> <li>▪ QA/QC</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Syphon Reservoir Interim Facilities (IRWD)</li> <li>▪ Zone 4 FCF and Zone 3-4 BPS, Irvine (IRWD)</li> <li>▪ Bayview Lift Station Improvements, Irvine (IRWD)</li> <li>▪ MWRP Primary Sludge, WAS and Skimming Pumps Replacement, Irvine (IRWD)</li> <li>▪ Coyote Spring Valley to Moapa Transmission System 340-A Pump Station and Pipeline, Las Vegas</li> <li>▪ Grand Reservoir and Pump Station, South Pasadena</li> </ul> |
| <b>Ted Lindberg, INCE</b><br>Noise<br>Modeling/Sound<br>Suppression<br><i>Project Availability:</i><br>25%                                    | BA/Mathematics/199<br>4/California State<br>University, Long<br>Beach<br>Board Certified –<br>Institute of Noise<br>Control Engineering   | <ul style="list-style-type: none"> <li>▪ Transportation (Road, Rail, Air) Noise Studies</li> <li>▪ Commercial-Industrial Noise Assessments</li> <li>▪ FAR Part 150 Noise &amp; Land Use Compatibility Studies</li> <li>▪ Residential Environmental Studies</li> </ul> | <ul style="list-style-type: none"> <li>▪ Noise and Vibration Analysis – High Speed Train (Los Angeles County)</li> <li>▪ Noise and Vibration Analysis – First Industrial Distribution Center, Perris California</li> <li>▪ Noise Exposure and Land Use Compatibility Studies</li> </ul>  |
| <b>Joe Moraes, PE</b><br>(Moraes & Pham<br>Associates)<br>Electrical/Instrumentation<br><i>Project Availability:</i><br>30%                   | BS, Electrical<br>Engineering<br>Electrical Engineer,<br>CA #11023  | <ul style="list-style-type: none"> <li>▪ Design of electrical and controls systems for water and wastewater facilities</li> <li>▪ 200 reservoirs, pumping stations, sanitary lift stations, PRV stations, wells, and treatment plants</li> </ul>                      | <ul style="list-style-type: none"> <li>▪ Syphon Reservoir Interim Facilities, IRWD</li> <li>▪ Santiago Permanent Generator Additions (IRWD)</li> <li>▪ Reservoir De-chlorination Project (IRWD)</li> <li>▪ Upgrade Various PRV's (IRWD)</li> </ul>   |
| <b>Jack Panichapan, AIA, NCARB, LEED® AP</b><br>(Gillis Panichapan Architects)<br>Architectural Design<br><i>Project Availability:</i><br>25% | M. Arch, Architecture,<br>Iowa State University<br>B. Arch, Architecture,<br>Iowa State University<br>Professional<br>Architect, CA 29344 | <ul style="list-style-type: none"> <li>▪ Architectural Design Pump Stations</li> <li>▪ Architectural Design Municipal Buildings</li> </ul>  | <ul style="list-style-type: none"> <li>▪ Continental Lift Station Replacement, Lake Elsinore, CA</li> <li>▪ Irvine Ranch Water District – Desalination Building</li> <li>▪ Calleguas Municipal Water District – City of Carlsbad – Moorpark Pump Station</li> <li>▪ Temecula Valley Regional Water Reclamation Facility – Palomar Recycled Water Booster Station</li> </ul>  |



| Key Personnel/<br>Project Role/<br>Project Availability   | Education/<br>Registration  | Specialty and Capabilities  | Project Experience  |
|---|---|---|---|
| <b>Simon Wong, PE, SE</b><br><b>(Simon Wong Engineering)</b><br>Structural Engineering<br>Project Availability: 25% | M.S. Structural Engineering, 1984<br>Civil Engineer, CA 37416<br>Structural Engineer, CA 2906 | <ul style="list-style-type: none"> <li>Structural Engineering Water Facilities</li> </ul> | <ul style="list-style-type: none"> <li>Catalina Pump Station</li> <li>Rancho Penasquitos Pump Station</li> <li>Otay River Pump Station</li> </ul> |

## 2.2 SUBCONSULTANTS

URS has carefully selected teaming partners for the specialty services they provide, the quality of their work, their longstanding working relationships with URS (and other team members), and both their familiarity and prior experience in and around the project site. A brief overview of each firm below illustrates their role and qualifications applicable to this contract.

**Moraes, Pham & Associates** (Electrical, Instrumentation, and Controls)



Moraes, Pham & Associates (MPA) is an award-winning engineering firm founded in 1989 to provide integrated mechanical, electrical, and plumbing designs, for advanced technology, institutional, industrial, and municipal facilities. MPA has a twenty-year record of timely delivery within contracted scope and budget.

**SAF-R-Dig Utility Surveys, Inc.** (Potholing)



SAF-r-DIG is a sophisticated, state-licensed, federally-certified, minority-owned, certified small business (OSMB #0011159) with a WBE (100% woman owned business) status. SAF-r-DIG holds a State of California General Engineering (Class A) Contractor's License (#712492) with Hazardous Substances Removal and Remedial Actions Certification and a Arizona State License #108545 (L-05). SAF-r DIG's Utility Locating Services are performed by certified professional employees. SAF-r DIG is a utility-based subsurface information-service provider for public, private and industrial utility-related projects.

**Gillis + Panichapan Architects Inc.** (Architecture)

Since its inception, Gillis + Panichapan Architects Inc. has distinguished itself by providing excellence in architecture, space programming, master planning, and interior design services. With extensive experience in public architecture, their work includes designing more than 100 public



works facilities ranging from district offices, community centers, schools, maintenance facilities, fire and police facilities, city yards, and more.

The firm received the “Project Achievement Award” from the American Society of Civil Engineers Orange County Branch for its design of the Irvine Desalination Project, Irvine Ranch Water District.

They also completed the preconstruction for Hidden Canyon Pump Station and are currently providing services to the City of Anaheim – similar to those required under for the IRWD’s Orange Park Acres Well No. 1 Wellhead Facilities.

**Simon Wong Engineer**

**(Structural Engineering)**

Since 1986, SWE has grown not only in staff, but also in the breadth of work we have had the opportunity to provide. We have built a reputation that invokes images of excellence, creativity, reliability, and prestige. Our firm, headquartered in San Diego, is comprised of a staff of 120 with branch offices located in El Centro, Riverside, Los Angeles, Irvine, and San Francisco. SWE is comprised of four major divisions: structural design, bridge design, construction management and inspection, and public relations.

SWE’s Structural Division is committed to a highly automated and creative environment, which allows us to continually improve our structural design process. Our success in providing superior client service and high quality design for all types of structures has earned us a reputation of excellence in our industry. Specializing in full-service structural engineering for a variety of public and private, new and renovation projects, we believe that the successful solution to each project evolves from a thoughtful and creative analysis of the architectural concept, user needs, and budget.

### 2.3 ORGANIZATION CHART

As required by the RFP, below we have provided our organization chart showing the reporting relationships and home office of our team members.



Estimated Cost Breakdown of Base Fees (Including Subconsultants)  
 Irvine Ranch Water District  
 Orange Park Acres Well No. 1 Wellhead Facilities Project  
 September 18, 2012

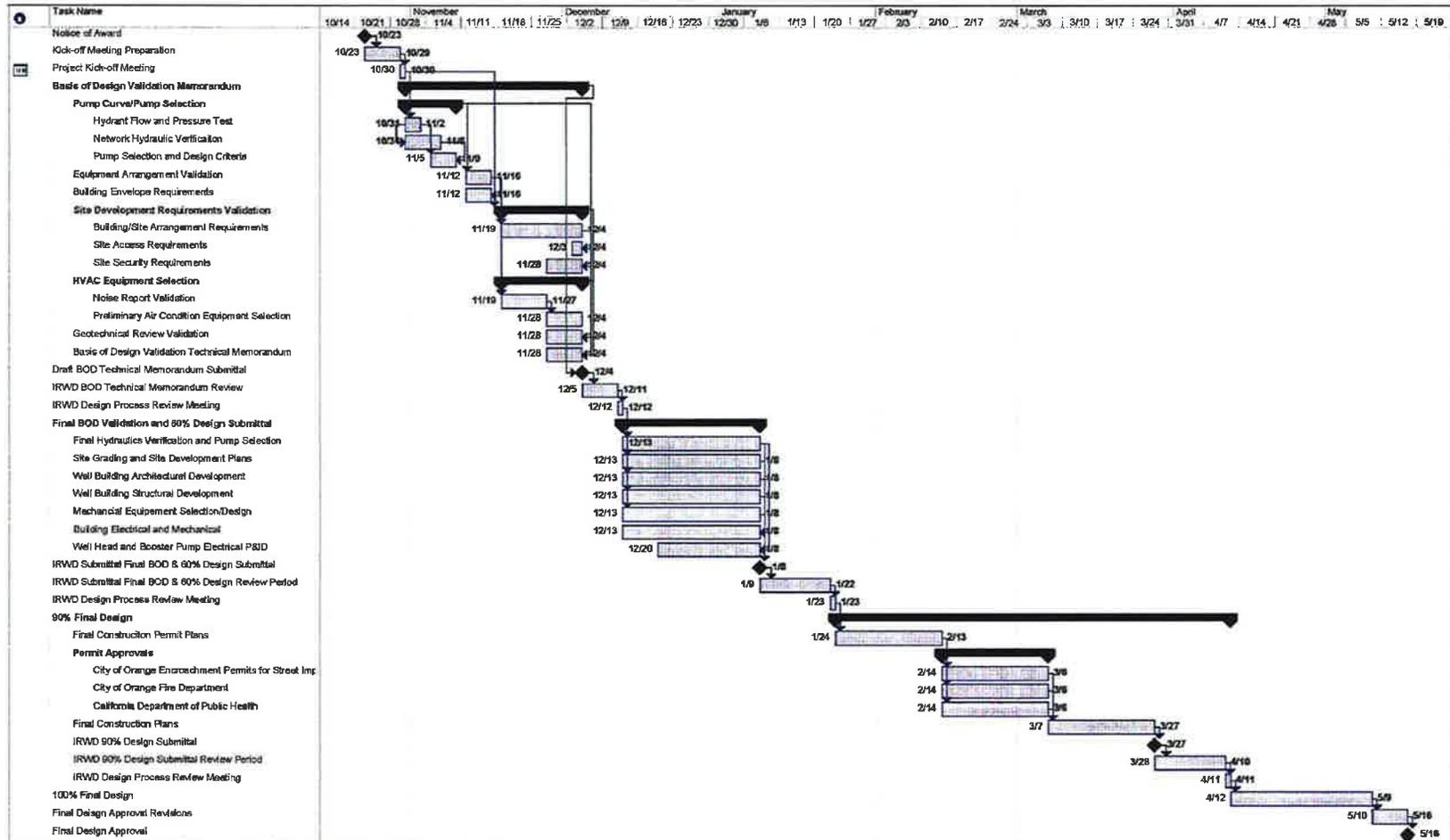
| Task No.                                   | Task Description  | Project Manager | Principal Engineer - QA/QC | Mechanical Engineer | Landscape Architect | Project Engineer | Staff Engineer | Senior CAD Technician | Admin / Permit Coord. / Project | TOTAL HOURS  | TOTAL LABOR      | Electrical Subconsultant Murren/Pham | Architectural Subconsultant GBS+Partchapan | Structural Subconsultant Srinan Wang | Hydraulic Analysis Subconsultant Conestoga | Politec Subconsultant SAF-R-DIG <sup>1</sup> | Direct Costs / Materials <sup>2</sup> | TOTAL            |
|--|---|-----------------|----------------------------|---------------------|---------------------|------------------|----------------|-----------------------|---------------------------------|--------------|------------------|--------------------------------------|--|--------------------------------------|--|--|---------------------------------------|------------------|
|  |   | \$165           | \$170                      | \$120               | \$150               | \$130            | \$50           | \$75                  | \$30                            |              |                  |                                      |  |                                      |  |  |                                       |                  |
| <b>TASK 1: Project Management</b>          |   |                 |                            |                     |                     |                  |                |                       |                                 |              |                  |                                      |  |                                      |  |  |                                       |                  |
| 1.   | Preparation of Project Status Reports                                       | 16              |                            |                     |                     |                  |                |                       |                                 | 16           | \$2,980          | \$1,050                              |  |                                      |  |  |                                       | \$4,040          |
| 2.   | Meetings and Workshops  | 50              |                            |                     |                     | 125              |                |                       |                                 | 175          | \$25,500         | \$1,050                              | \$4,235                                    |                                      |  |  | \$200                                 | \$31,515         |
| 3.   | Quality Assurance/Quality Control (Labor Assigned Per Task)                 |                 |                            |                     |                     |                  |                |                       |                                 |              |                  |                                      |  |                                      |  |  |                                       |                  |
| 4.   | Miscellaneous Task Assignments (Prior Authorization Required)               | 10              | 4                          |                     |                     | 32               | 40             | 60                    | 10                              | 156          | \$14,900         |                                      |  |                                      |  |  | \$10                                  | \$15,000         |
| <b>SUBTOTAL TASK 1</b>                     |   | <b>76</b>       | <b>4</b>                   |                     |                     | <b>157</b>       | <b>40</b>      | <b>60</b>             | <b>10</b>                       | <b>247</b>   | <b>\$43,480</b>  | <b>\$2,100</b>                       | <b>\$4,235</b>                             |                                      |  |  | <b>\$210</b>                          | <b>\$49,865</b>  |
| <b>TASK 2: Basis of Design Report</b>      |   |                 |                            |                     |                     |                  |                |                       |                                 |              |                  |                                      |  |                                      |  |  |                                       |                  |
| 1.   | Air Conditioning Equipment  | 4               |                            | 28                  |                     |                  |                |                       |                                 | 32           | \$4,100          | \$1,000                              |  |                                      |  |  |                                       | \$5,100          |
| 2.   | Site Security   | 4               |                            |                     |                     |                  |                |                       |                                 | 4            | \$740            | \$1,000                              |  |                                      |  |  |                                       | \$1,820          |
| 3.   | Pump Curve  | 1               |                            |                     |                     | 16               |                |                       |                                 | 17           | \$2,295          |                                      |  |                                      | \$10,678                                   |  |                                       | \$12,941         |
| 4.   | Geotechnical Engineering  | 2               | 1                          |                     |                     | 16               | 20             | 40                    | 10                              | 90           | \$5,005          |                                      |  |                                      |  |  | \$5                                   | \$8,010          |
| <b>SUBTOTAL TASK 2</b>                     |   | <b>12</b>       | <b>1</b>                   | <b>28</b>           |                     | <b>32</b>        | <b>20</b>      | <b>40</b>             | <b>10</b>                       | <b>142</b>   | <b>\$16,118</b>  | <b>\$2,100</b>                       |  |                                      | <b>\$10,678</b>                            |  | <b>\$5</b>                            | <b>\$27,861</b>  |
| <b>TASK 3: Final Design</b>                |   |                 |                            |                     |                     |                  |                |                       |                                 |              |                  |                                      |  |                                      |  |  |                                       |                  |
| 1.   | Project Manual  | 4               | 2                          | 20                  | 28                  | 16               | 20             |                       | 8                               | 98           | \$11,840         | \$1,720                              | \$7,045                                    | \$8,400                              |  |  | \$250                                 | \$29,255         |
| 2.   | Construction Plans (70 Sheets)  | 40              | 40                         | 75                  |                     | 200              | 260            | 380                   | 8                               | 1023         | \$100,950        |                                      | \$46,965                                   | \$38,850                             |  |  | \$600                                 | \$206,895        |
| 3.   | Permits & Coordination  | 2               | 2                          | 8                   |                     | 4                |                | 8                     | 6                               | 30           | \$3,150          |                                      |  |                                      |  |  | \$2,000                               | \$5,150          |
| 4.   | Utility Research (Assume 4 potholes)  |                 |                            |                     |                     | 2                | 8              |                       |                                 | 10           | \$600            |                                      |  |                                      |  | \$4,000                                      |                                       | \$7,000          |
| 5.   | Noise Model   | 4               |                            | 4                   |                     | 80               | 100            | 10                    |                                 | 198          | \$20,370         |                                      |  |                                      |  |  |                                       | \$20,370         |
| 6.   | Electrical Instrumentation  |                 |                            |                     |                     |                  |                |                       |                                 |              |                  | \$45,250                             |  |                                      |  |  |                                       | \$45,250         |
| 7.   | Landscape and Irrigation Design (Separate Construction Contract) (4 Sheets) |                 |                            |                     | 50                  |                  |                |                       |                                 | 50           | \$8,400          |                                      |  |                                      |  |  |                                       | \$8,400          |
| 10.  | Opinion of Probable Construction Cost                                       | 1               | 1                          | 12                  |                     | 8                | 8              |                       |                                 | 30           | \$3,475          | \$1,000                              |  |                                      |  |  |                                       | \$4,475          |
| 11.  | Final Design Deliverables   | 8               | 8                          |                     |                     | 8                |                | 16                    |                                 | 40           | \$5,060          |                                      |  |                                      |  |  | \$2,000                               | \$7,060          |
| 12.  | Address Preparation and Print/Bind Meeting (4 Addresses, 1 Meeting)         | 6               |                            |                     |                     | 6                | 8              |                       |                                 | 20           | \$2,520          |                                      | \$1,245                                    |                                      |  |  |                                       | \$3,775          |
| <b>SUBTOTAL TASK 3</b>                     |   | <b>69</b>       | <b>23</b>                  | <b>110</b>          | <b>84</b>           | <b>324</b>       | <b>424</b>     | <b>414</b>            | <b>22</b>                       | <b>1,898</b> | <b>\$188,238</b> | <b>\$58,210</b>                      | <b>\$54,158</b>                            | <b>\$47,250</b>                      |  | <b>\$4,000</b>                               | <b>\$4,850</b>                        | <b>\$347,700</b> |
| <b>TASK 4: Construction Phase Services</b> |   |                 |                            |                     |                     |                  |                |                       |                                 |              |                  |                                      |  |                                      |  |  |                                       |                  |
| 1.   | Project Meetings (20)   | 20              |                            |                     |                     | 40               |                |                       |                                 | 60           | \$5,900          | \$1,000                              |  |                                      |  |  |                                       | \$9,900          |
| 2.   | Contractor's RFI (40)   | 12              |                            |                     |                     | 20               |                |                       |                                 | 32           | \$4,620          | \$3,560                              | \$4,240                                    | \$4,400                              |  |  |                                       | \$17,080         |
| 3.   | Misc Plan Revisions (60 Hours)  | 6               | 6                          |                     |                     | 16               |                | 40                    |                                 | 68           | \$7,210          | \$2,800                              |  | \$4,400                              |  |  |                                       | \$14,470         |
| 4.   | Site Visits (8)   | 12              |                            |                     |                     | 12               |                |                       |                                 | 24           | \$3,760          | \$1,080                              | \$1,740                                    |                                      |  |  |                                       | \$6,600          |
| 5.   | Shop Drawing Reviews (100)  | 12              |                            |                     |                     | 80               |                |                       |                                 | 92           | \$12,520         | \$3,400                              | \$1,210                                    |                                      |  |  | \$550                                 | \$17,780         |
| 6.   | Prepare Record Drawings   | 2               | 8                          |                     |                     | 16               |                | 40                    |                                 | 66           | \$7,970          | \$2,000                              | \$680                                      |                                      |  |  | \$300                                 | \$11,150         |
| <b>SUBTOTAL TASK 4</b>                     |   | <b>64</b>       | <b>14</b>                  |                     |                     | <b>164</b>       |                | <b>100</b>            |                                 | <b>288</b>   | <b>\$46,300</b>  | <b>\$13,880</b>                      | <b>\$7,680</b>                             | <b>\$4,820</b>                       |  |  | <b>\$1,080</b>                        | <b>\$77,670</b>  |
| <b>TOTAL (TASKS 1 THRU 4)</b>              |   | <b>217</b>      | <b>19</b>                  | <b>147</b>          | <b>84</b>           | <b>521</b>       | <b>424</b>     | <b>514</b>            | <b>42</b>                       | <b>2,365</b> | <b>\$382,038</b> | <b>\$68,490</b>                      | <b>\$67,379</b>                            | <b>\$76,176</b>                      | <b>\$10,678</b>                            | <b>\$4,000</b>                               | <b>\$6,110</b>                        | <b>\$483,894</b> |

Notes & Assumptions:

- 1) We assume that four (4) potholes by SAF-R-DIG will be required.
- 2) Direct Costs / Materials include costs such as mileage to meetings/sites, courier fees, and document reproduction costs.



B-25





# Exhibit "C"

## IRVINE RANCH WATER DISTRICT

### Expenditure Authorization

**Project Name:** OPA / REGIONAL GROUNDWATER PROJECT  
**EPMS Project No:** 11405    **EA No:** 4  
**Oracle Project No:** 1250  
**Project Manager:** MORI, RICHARD  
**Project Engineer:** MOEDER, JACOB  
**Request Date:** October 3, 2012

**ID Split:** Regional Potable Water Splits (11/08)

**Improvement District (ID) Allocations**

| 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**

|                                       |                    |
|---------------------------------------|--------------------|
| Previously Approved EA Requests:      | \$2,715,800        |
| This Request:                         | \$399,000          |
| <b>Total EA Requests:</b>             | <b>\$3,114,800</b> |
| Previously Approved Budget:           | \$7,355,300        |
| Budget Adjustment Requested this EA:  | \$0                |
| <b>Updated Budget:</b>                | <b>\$7,355,300</b> |
| <b>Budget Remaining After This EA</b> | <b>\$4,240,500</b> |

Comments:

| Phase                                    | This EA Request  | Previous EA Requests | EA Requests to Date | This Budget Request | Previous Budget    | Updated Budget     | Start | Finish |
|--|------------------|----------------------|---------------------|---------------------|--------------------|--------------------|-------|--------|
| ENGINEERING - PLANNING IRWD              | 0                | 0                    | 0                   | (99,100)            | 100,000            | 900                | 12/11 | 12/12  |
| ENGINEERING - PLANNING OUTSIDE           | 0                | 0                    | 0                   | (17,900)            | 20,000             | 2,100              | 12/11 | 12/12  |
| ENGINEERING DESIGN - IRWD                | 60,000           | 60,000               | 120,000             | 60,000              | 60,000             | 120,000            | 1/09  | 12/12  |
| ENGINEERING DESIGN - OUTSIDE             | 240,000          | 435,000              | 675,000             | 200,000             | 475,000            | 675,000            | 1/09  | 12/12  |
| ENGINEERING - CA&I IRWD                  | 0                | 60,000               | 60,000              | 0                   | 180,000            | 180,000            | 3/13  | 4/14   |
| ENGINEERING - CA&I OUTSIDE               | 80,000           | 178,000              | 258,000             | 0                   | 300,000            | 300,000            | 3/13  | 4/14   |
| CONSTRUCTION                             | 0                | 1,818,400            | 1,818,400           | (143,000)           | 5,800,000          | 5,657,000          | 3/13  | 4/14   |
| LEGAL                                    | 0                | 5,000                | 5,000               | 0                   | 10,000             | 10,000             | 1/09  | 4/14   |
| WATER QUALITY                            | 0                | 20,000               | 20,000              | 0                   | 20,000             | 20,000             | 12/11 | 4/14   |
| ENGINEERING ENVIRONMENTAL-OUTS           | 0                | 10,000               | 10,000              | 0                   | 40,000             | 40,000             | 3/11  | 7/12   |
| Contingency - 5.00% Subtotal             | <b>\$19,000</b>  | \$129,400            | \$148,400           | \$0                 | \$350,300          | \$350,300          |       |        |
| <b>Subtotal (Direct Costs)</b>           | <b>\$399,000</b> | <b>\$2,715,800</b>   | <b>\$3,114,800</b>  | <b>\$0</b>          | <b>\$7,355,300</b> | <b>\$7,355,300</b> |       |        |
| Estimated G/A - 180.00% of direct labor* | \$108,000        | \$252,000            | \$360,000           | (\$70,400)          | \$648,000          | \$577,600          |       |        |
| <b>Total</b>                             | <b>\$507,000</b> | <b>\$2,967,800</b>   | <b>\$3,474,800</b>  | <b>(\$70,400)</b>   | <b>\$8,003,300</b> | <b>\$7,932,900</b> |       |        |
| Direct Labor                             | \$60,000         | \$140,000            | \$200,000           | (\$39,100)          | \$360,000          | \$320,900          |       |        |

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

Department Director: \_\_\_\_\_

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 \$8,092,000. 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.



October 22, 2012

Prepared By: P. Weghorst

Submitted By: G. Heiertz

Approved By: Paul Cook



## ACTION CALENDAR

### APPROVAL OF SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE MWRP PHASE 2 AND 3 CAPACITY EXPANSION PROJECT BIOSOLIDS HANDLING COMPONENT

#### SUMMARY:

The Irvine Ranch Water District (IRWD), as Lead Agency, has prepared a Final Supplemental Environmental Impact Report (Final SEIR) for the Michelson Water Recycling Plant Phase 2 and 3 Capacity Expansion Project, Biosolids Handling Component. These actions are necessary for IRWD to complete the steps required under the California Environmental Quality Act (CEQA). Staff requests that the Board adopt a resolution relative to certifying the Final SEIR, adopting written findings, approving the Mitigation Monitoring and Reporting Program, approving the project and authorizing staff to file a Notice of Determination.

#### BACKGROUND:

IRWD is proposing to construct the Biosolids Component of the existing Michelson Water Recycling Plant (MWRP) to provide a residuals management system with capacity to handle all solids produced based on projected future demand in the IRWD service area, up to 33 million gallons per day (MGD) at the MWRP and up to 5.5 MGD at the Los Alisos Water Recycling Plant (LAWRP). New biosolids processing, biogas management, and energy recovery systems would be constructed. The proposed project includes solids-handling facilities that would thicken, stabilize, dewater, and dry sludge to produce biosolids. Stabilization of sludge would be achieved using anaerobic digestion generating biogas as a byproduct. This biogas would be put to beneficial reuse, including but not limited to providing an energy source for other processes at the MWRP. In addition to sludge, fats, oil and greases (FOG) associated with restaurant waste could be added to the digesters to increase biogas production. Digested sludge would be dewatered to produce Class B biosolids or would be dried in a rotary drum dryer to produce pelletized Class A biosolids. All biosolids would be trucked offsite for beneficial reuse or disposal.

#### Public Scoping:

Pursuant to the requirements of the CEQA Guidelines, a Notice of Preparation was publicly circulated for a 30-day period beginning March 28, 2011. At the close of the comment period, it was determined that a supplemental EIR would be prepared as the environmental documentation for the project. In addition, IRWD held a public scoping meeting on April 12, 2011 which provided the public and governmental agencies with information on the CEQA process and an opportunity to identify environmental issues and alternatives for consideration in the SEIR. Comments received during the scoping process were considered in the preparation of the Draft SEIR.

Public Review:

The Notice of Availability (NOA) of the Draft SEIR was posted on July 5, 2012 with the Orange County Clerk. The Draft SEIR was circulated to federal, state, and local agencies with interested parties requesting a copy of this report. Copies of the Draft SEIR were made available to the public at three libraries and on IRWD's website. The Draft SEIR was circulated for a 45-day public review period from July 3, 2012 through August 16, 2012. In response to requests by interested parties, a Notice of Extension of Review Period was circulated that extended the review period by an additional 15 days, bringing the total review period to 60 days. The extended comment period for the Draft SEIR concluded on August 31, 2012. A public informational meeting on the Draft SEIR was held on July 24, 2012 to provide the public and governmental agencies an opportunity to express comments or concerns regarding the contents of the Draft SEIR. No official comments on the Draft SEIR were recorded at this meeting.

IRWD received 16 comment letters during the public review period, plus the letters of confirmation from the Office of Planning and Research regarding receipt of the Notice of Completion and the time extension for the public comment period. Comments were received from the following organizations:

- Native American Heritage Commission
- Department of Toxic Substances Control
- Airport Land Use Commission
- University Synagogue (two letters)
- Department of Transportation
- Orange County Public Works
- LBA Realty
- County of Orange Health Care Agency, Public Health Services
- Orange County Sanitation District
- Department of Resources Recycling and Recovery
- University of California, Irvine
- South Coast Air Quality Management District
- City of Irvine – Community Development
- Sea and Sage Audubon
- US Fish and Wildlife Service

IRWD reviewed all comments received from interested persons, organizations and agencies and prepared detailed responses directed to environmental issues related to the project. An overview of significant comments and responses will be summarized by staff at the Board meeting.

The comments, responses and revisions to the Draft SEIR text are included in additional chapters 9, 10, 11 and 12, which together with the Draft SEIR that is included by reference, comprise the Final SEIR (attached as Exhibit "A" and on IRWD's website). The Findings and Facts in Support of Findings for the project are attached as Exhibit "B". The Mitigation Monitoring and Reporting Program is attached as Exhibit "C".

Findings:

As lead agency, IRWD must comply with CEQA by considering and adopting the Final SEIR. IRWD's consideration must be given to the environmental effects of the proposed project prior to reaching a decision on the project. In addition, IRWD must make findings related to the project and file a Notice of Determination. A resolution for certifying the Final SEIR, adopting findings and approving the project is attached as Exhibit "D". IRWD is responsible for mitigating or avoiding only the direct or indirect environmental effects of those portions of the proposed project it decides to approve and/or carry out.

Staff requests that the Board consider the environmental effects of the proposed project, the proposed mitigation measures, and all findings and facts in support of findings for the project through this review.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

This Final SEIR has been prepared 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 not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD DIRECT STAFF TO INCORPORATE INTO THE DRAFT FINDINGS AS PRESENTED SUCH REVISIONS AS MAY BE NECESSARY TO CONFORM THE FINDINGS TO ANY INFORMATION THAT MAY BE RECEIVED AFTER PREPARATION OF SAID DRAFT AND PRIOR TO THIS ACTION, INCLUDING ANY CHANGES MADE IN THE FINDINGS BY IRWD IN CERTIFYING THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT AND ANY COMMENTS FROM THE BOARD; DIRECT THAT THE FINDINGS, AS SO REVISED, AND THE MITIGATION, MONITORING AND REPORTING PROGRAM BE INCORPORATED INTO THE RESOLUTION AND ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2012 -

RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT CERTIFYING THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE MICHELSON WATER RECYCLING PLANT (MWRP) PHASE 2 AND 3 CAPACITY EXPANSION PROJECT, (ADDING BIOSOLIDS HANDLING COMPONENT); ADOPTING WRITTEN FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; ADOPTING A MITIGATION, MONITORING AND REPORTING PROGRAM; APPROVING THE PROJECT; AND AUTHORIZING THE FILING OF A NOTICE OF DETERMINATION TO PROCEED WITH THE PROJECT

LIST OF EXHIBITS:

- Exhibit "A" – MWRP Phase 2 and 3 Capacity Expansion Project Final Supplemental Environmental Impact Report No. 1
- Exhibit "B" – Findings and Facts in Support of Findings
- Exhibit "C" – Mitigation Monitoring and Reporting Program
- Exhibit "D" – Resolution

# EXHIBIT "A"

## MICHELSON WATER RECYCLING PLANT PHASE 2 & 3 CAPACITY EXPANSION PROJECT

Final Supplemental Environmental Impact Report No. 1  
SCH# 2011031091

Prepared for  
Irvine Ranch Water District

October 2012



# MICHELSON WATER RECYCLING PLANT PHASE 2 & 3 CAPACITY EXPANSION PROJECT

Final Supplemental Environmental Impact Report No. 1  
SCH# 2011031091

Prepared for  
Irvine Ranch Water District

October 2012



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210480

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## CHAPTER 9

# Final SEIR Introduction and Requirements

---

## 9.0 Introduction

This Final Supplemental Environmental Impact Report (Final SEIR) No. 1 has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended (Public Resources Code Section 21000 et seq.) and *CEQA Guidelines* (California Administrative Code Section 15000 et seq.). The Final SEIR incorporates, by reference, the Draft SEIR prepared by Irvine Ranch Water District (IRWD or District) for the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project to include a Biosolids Handling Component (proposed project) (State Clearinghouse No. 2011031091) as it was originally published and the following chapters, which include revisions made to the Draft SEIR.

## 9.1 CEQA Requirements

*CEQA Guidelines* (Section 15132) specify that the Final SEIR shall consist of the following:

- The Draft SEIR or a revision of that draft;
- Comments and recommendations received on the Draft SEIR;
- A list of persons, organizations, and public agencies commenting on the Draft SEIR;
- The response of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

This Final SEIR No. 1 for the MWRP Phase 2 and 3 Capacity Expansion Project includes the following chapters as a continuation of those included in the Draft SEIR:

- Chapter 10: The list of persons, organizations, and public agencies commenting on the Draft SEIR along with copies of the written and oral comments
- Chapter 11: Written responses to each comment identified in Chapter 10
- Chapter 12: Revisions made to the Draft SEIR in response to comments received or initiated by the Lead Agency

## 9.2 CEQA Process

### 9.2.1 Public Participation Process

#### Notice of Preparation

In accordance with Sections 15063 and 15082 of *CEQA Guidelines*, IRWD, as Lead Agency, prepared and circulated a Notice of Preparation (NOP) (see Draft SEIR **Appendix A**) on March 28, 2011. The NOP was mailed to approximately 53 interested parties, including local, state, and federal agencies. A Notice of Completion (NOC) was also prepared by IRWD and sent to the State Clearinghouse. Copies of the NOP were made available for public review at the Heritage Park Library, Katie Wheeler Library, University Park Library, and IRWD's internet site.

The NOP provided a general description of the facilities associated with the proposed project, a summary of the probable environmental effects of the project to be addressed in the EIR, and a figure showing the project location. The NOP provided the public and interested public agencies with the opportunity to review the proposed project and to provide comments or concerns on the scope and content of the environmental review document including: the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the EIR.

The 30-day scoping period, which began with the distribution of the NOP, remained open through April 26, 2011. At the close of the 30-day comment period, it was determined that a supplemental EIR (SEIR) would be prepared as the environmental documentation for the proposed project.

#### Public Scoping Meeting

CEQA recommends conducting early coordination with the general public, appropriate public agencies, and local jurisdictions to assist in developing the scope of the environmental document. Pursuant to *CEQA Guidelines* Section 15083, a public scoping meeting was held on April 12, 2011 to allow agency consultation and public involvement for the Draft SEIR. Public notices were placed in local newspapers informing the general public of the scoping meeting and the availability of the NOP. The purpose of the meeting was to present to the public the proposed project and its potential environmental impacts. Attendees were provided an opportunity to voice comments or concerns regarding potential effects of the proposed project and the issues to be included in the Draft SEIR.

#### Notice of Availability of the Draft SEIR

The Notice of Availability (NOA) of the Draft SEIR was posted on July 5, 2012 with the County Clerk in Orange County. The Draft SEIR was circulated to federal, state, and local agencies and interested parties requesting a copy of the Draft SEIR. Copies of the Draft SEIR were made available to the public at the following locations:

- Heritage Park Library – 14361 Yale Avenue, Irvine, CA 92604
- Katie Wheeler Library – 13109 Old Myford Road, Irvine, CA 92602
- University Park Library – 4512 Sandburg Way, Irvine, CA 92612
- IRWD's internet site ([www.irwd.com](http://www.irwd.com))

The Draft SEIR was circulated for a 45-day public review period from July 3, 2012 through August 16, 2012. In response to requests by interested parties, a Notice of Extension of Review Period was circulated that extended the review period by an additional 15 days, bringing the total review period to 60 days. The extended comment period for the Draft SEIR ended on August 31, 2012. All comments received on the Draft SEIR are addressed in this Response to Comments document (Chapters 10, 11 and 12) which, together with the Draft SEIR and changes and corrections to the Draft SEIR, constitute the Final SEIR.

## Public Meeting

During the 60-day review period, IRWD held a public informational meeting on July 24, 2012 at the IRWD Headquarters Boardroom. Attendees were provided an opportunity to express their comments or concerns regarding the contents of the Draft SEIR. No official comments on the Draft SEIR were recorded at the public meeting.

## 9.2.2 Evaluation and Response to Comments

*CEQA Guidelines* Section 15088 requires IRWD, as the Lead Agency, to evaluate comments on environmental issues received from parties that have reviewed the Draft SEIR and to prepare a written response. The written responses to commenting public agencies shall be provided at least ten (10) days prior to the certification of the Draft SEIR (*CEQA Guidelines* §15088(b)).

## 9.2.3 Final EIR Certification and Approval

As the Lead Agency, IRWD has the option to make the Final SEIR available for public review prior to considering the project for approval (*CEQA Guidelines* §15089(b)). Prior to considering the project for approval, IRWD, as the Lead Agency, will review and consider the information presented in the Final SEIR and will certify that the Final SEIR:

- (a) has been completed in compliance with CEQA;
- (b) has been presented to the Board of Directors as the decision-making body for the Lead Agency, which reviewed and considered it prior to approving the project; and
- (c) reflects IRWD's independent judgment and analysis.

Once the Final SEIR is certified, IRWD's Board of Directors may proceed to consider project approval (*CEQA Guidelines* §15090). Prior to approving the proposed project, IRWD must make written findings and adopt statements of overriding considerations for each unmitigated significant environmental effect identified in the Final SEIR in accordance with Sections 15091 and 15093 of the *CEQA Guidelines*.

## 9.2.4 Notice of Determination

Pursuant to Section 15094 of the *CEQA Guidelines*, IRWD will file a Notice of Determination (NOD) with the Office of Planning and Research and Orange County Clerk-Recorder within five working days of project approval.

# CHAPTER 10

## Comment Letters

The Draft SEIR for the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project (proposed project) was circulated for public review for 60 days (July 3, 2012 through August 31, 2012). IRWD received 16 comment letters during the public review period, plus the letters of confirmation from the Office of Planning and Research regarding receipt of the Notice of Completion and the time extension for the public comment period. This chapter presents the comment letters, in the order listed in the table below. The letters have been bracketed and numbered; corresponding responses are provided in Chapter 11, Responses to Comments.

**TABLE 10-1  
COMMENT LETTERS RECEIVED**

| <b>Comment No.</b> | <b>Commenting Agency / Interested Party</b>                 | <b>Date of Comment</b> |
|--------------------|---|------------------------|
| 1                  | Native American Heritage Commission                         | July 11, 2012          |
| 2                  | Department of Toxic Substances Control                      | August 3, 2012         |
| 3                  | Airport Land Use Commission                                 | August 6, 2012         |
| 4                  | University Synagogue (1)                                    | August 7, 2012         |
| 5                  | Department of Transportation                                | August 13, 2012        |
| 6                  | Orange County Public Works                                  | August 14, 2012        |
| 7                  | LBA Realty  | August 14, 2012        |
| 8                  | County of Orange Health Care Agency, Public Health Services | August 15, 2012        |
| 9                  | Orange County Sanitation District                           | August 15, 2012        |
| 10                 | Department of Resources Recycling and Recovery              | August 16, 2012        |
| 11                 | University of California, Irvine                            | August 16, 2012        |
| 12                 | University Synagogue (2)                                    | August 28, 2012        |
| 13                 | South Coast Air Quality Management District                 | August 30, 2012        |
| 14                 | City of Irvine – Community Development                      | August 30, 2012        |
| 15                 | Sea and Sage Audubon  | August 30, 2012        |
| 16                 | US Fish and Wildlife Service                                | September 6, 2012      |

**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)  
ds\_nahc@pacbell.net



July 11, 2012

Mr. Paul Weghorst, Director of Water Resources

**Irvine Ranch Water District**

15600 Sand Canyon Avenue  
Irvine, CA 92618

Re: SCH#2011031011; CEQA Notice of Completion; proposed Mitigated Negative Declaration for the "Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project: Biosolids Handling Component;" located Irvine; Orange County, California.

Dear Mr. Weghorst:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3<sup>rd</sup> 604).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC did conduct a Sacred Lands File (SLF) search within the 'area of potential effect (APE)' and Native American cultural resources were not identified in the project area specified.

The NAHC "Sacred Sites," as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you

NAHC-1

## Comment Letter NAHC

make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

NAHC-1

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

NAHC-2

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254( r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

NAHC-3

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

NAHC-4

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

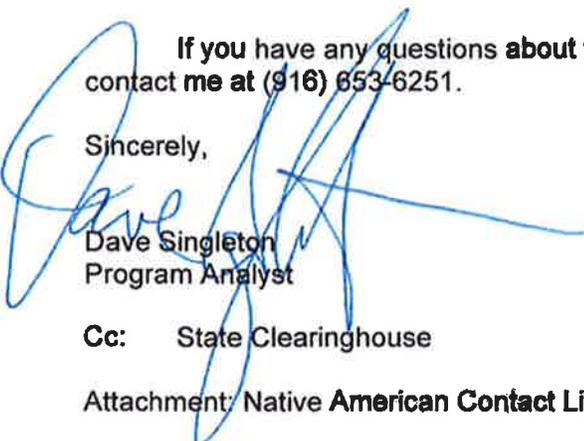
NAHC-5

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

NAHC-6

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton  
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

**Comment Letter NAHC**

**Native American Contacts**  
Orange County  
July 11, 2012

Ti'At Society/Inter-Tribal Council of Pimu  
Cindi M. Alvitre, Chairwoman-Manisar  
3094 Mace Avenue, Apt. B Gabrielino  
Costa Mesa, , CA 92626  
calvitre@yahoo.com  
(714) 504-2468 Cell

Gabrielino Tongva Nation  
Sam Dunlap, Chairperson  
P.O. Box 86908 Gabrielino Tongva  
Los Angeles , CA 90086  
samdunlap@earthlink.net  
  
(909) 262-9351 - cell

Juaneno Band of Mission Indians Acjachemen Nation  
David Belardes, Chairperson  
32161 Avenida Los Amigos Juaneno  
San Juan Capistrano CA 92675 m  
chiefdavidbelardes@yahoo.  
(949) 493-4933 - home  
(949) 293-8522

Juaneno Band of Mission Indians Acjachemen Nation  
Anthony Rivera, Chairman  
31411-A La Matanza Street Juaneno  
San Juan Capistrano CA 92675-2674  
arivera@juaneno.com  
(949) 488-3484  
(949) 488-3294 - FAX  
(530) 354-5876 - cell

Tongva Ancestral Territorial Tribal Nation  
John Tommy Rosas, Tribal Admin.  
Private Address Gabrielino Tongva  
  
tattnlaw@gmail.com  
310-570-6567

Gabrielino Tongva Indians of California Tribal Council  
Robert F. Dorame, Tribal Chair/Cultural Resources  
P.O. Box 490 Gabrielino Tongva  
Bellflower , CA 90707  
gtongva@verizon.net  
562-761-6417 - voice  
562-761-6417- fax

Gabrieleno/Tongva San Gabriel Band of Mission  
Anthony Morales, Chairperson  
PO Box 693 Gabrielino Tongva  
San Gabriel , CA 91778  
GTtribalcouncil@aol.com  
(626) 286-1632  
(626) 286-1758 - Home  
(626) 286-1262 -FAX

Juaneno Band of Mission Indians  
Alfred Cruz, Cultural Resources Coordinator  
P.O. Box 25628 Juaneno  
Santa Ana , CA 92799  
alfredgcruz@sbcglobal.net  
714-998-0721  
714-998-0721 - FAX  
714-321-1944 - cell

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed sCH#2011031091; CEQA Notice of Completion; Supplemental Environmental Impact Report (SEIR) for the Biosolids Handling and Energy REcovery Facilities Project; located in Irvine; Orange County, California.

## Comment Letter NAHC

### Native American Contacts

Orange County

July 11, 2012

Juaneno Band of Mission Indians  
Anita Espinoza  
1740 Concerto Drive Juaneno  
Anaheim , CA 92807  
neta777@sbcglobal.net  
(714) 779-8832

Gabrielino-Tongva Tribe  
Linda Candelaria, Chairwoman  
1875 Century Pk East #1500 Gabrielino  
Los Angeles , CA 90067  
lcandelaria1@gabrielinoTribe.org  
626-676-1184- cell  
(310) 587-0170 - FAX

United Coalition to Protect Panhe (UCPP)  
Rebecca Robles  
119 Avenida San Fernando Juaneno  
San Clemente CA 92672  
rebrobles1@gmail.com  
(949) 573-3138

Gabrieleno Band of Mission Indians  
Andrew Salas, Chairperson  
P.O. Box 393 Gabrielino  
Covina , CA 91723  
(626) 926-4131  
gabrielenoindians@yahoo.  
com

Gabrielino-Tongva Tribe  
Bernie Acuna  
1875 Century Pk East #1500 Gabrielino  
Los Angeles , CA 90067  
(619) 294-6660-work  
(310) 428-5690 - cell  
(310) 587-0170 - FAX  
bacuna1@gabrieinotribe.org

Juaneno Band of Mission Indians Acjachemen Nation  
Joyce Perry, Representing Tribal Chairperson  
4955 Paseo Segovia Juaneno  
Irvine , CA 92612  
949-293-8522

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed sCH#2011031091; CEQA Notice of Completion; Supplemental Environmental Impact Report (SEIR) for the Biosolids Handling and Energy REcovery Facilities Project; located in Irvine; Orange County, California.



Department of Toxic Substances Control

*Matthew Rodriguez*  
Secretary for  
Environmental Protection

**Deborah O. Raphael, Director**  
5796 Corporate Avenue  
Cypress, California 90630

*Edmund G. Brown Jr.*  
Governor

August 3, 2012

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

**WATER RESOURCES**

**AUG 08 2012**

**IRVINE RANCH  
WATER DISTRICT**

NOTICE OF AVAILABILITY OF A DRAFT SUPPLEMENTAL ENVIRONMENTAL  
IMPACT REPORT NO.1 FOR BIOSOLIDS HANDLING AND ENERGY RECOVERY  
FACILITIES (BIOSOLIDS HANDLING COMPONENT) PROJECT, (SCH #2011031091),  
ORANGE COUNTY

Dear Mr. Weghorst:

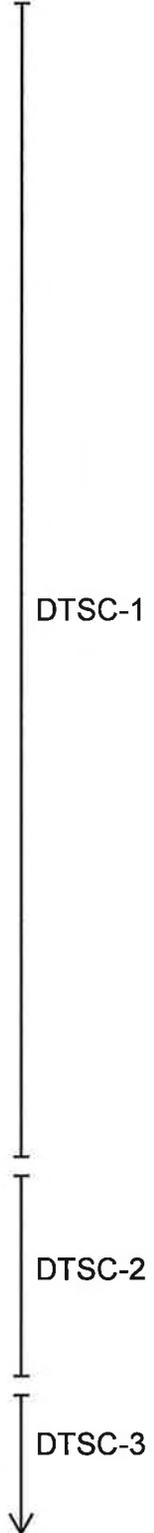
The Department of Toxic Substances Control (DTSC) has received your submitted Draft Supplemental Environmental Impact Report (SEIR) for the above-mentioned project. The following project description is stated in your document:

"The proposed project would integrate a new residuals-handling system at the Michelson Water Recycling Plant (MWRP), which would include biosolids processing, biogas management, and energy recovery systems. The proposed would process residuals produced at the MWRP and Irvine Ranch Water District (IRWD)'s Los Alisos Water Recycling Plant (LAWRP). The proposed project includes solids-handling facilities that would thicken, stabilize, dewater, and dry sludge to produce biosolids. The proposed project would be constructed onsite at the existing MWRP, which occupies approximately 69 acres and is located at 3512 Michelson Drive, Irvine, California 92612. The proposed Biosolids Handling Component would be constructed within an adjacent area that is disturbed vacant land, currently being used for construction staging for the Phase 2 Capacity Expansion Project. This area is bounded on three sides (generally north, west, and south) by a vegetated earthen berm separating and screening it from San Joaquin Wildlife Sanctuary and its trails, riparian habitat, and ponds. To the east, the project area is bounded by existing MWRP facilities and a concrete-lined storm water drainage swale. The proposed project is subject to the mitigation measures previously adopted by IRWD as part of the MWRP Final Environmental Impact Report."

Mr. Paul Weghorst  
August 3, 2012  
Page 2

Based on the review of the submitted document DTSC has the following comments:

- 1) The SEIR should evaluate whether conditions within the Project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:
  - National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
  - Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
  - Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
  - Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
  - Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
  - GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
  - Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
  - The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).
- 2) The SEIR should identify the mechanism to initiate any required investigation and/or remediation for any site within the proposed Project area that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.
- 3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of



Mr. Paul Weghorst  
August 3, 2012  
Page 3

- any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the SEIR. DTSC-3
- 4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies. DTSC-4
- 5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination. DTSC-5
- 6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. DTSC-6
- 7) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project. DTSC-7
- 8) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. DTSC-8

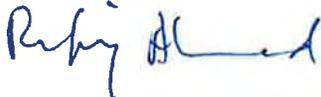
Mr. Paul Weghorst  
August 3, 2012  
Page 4

- 9) DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA or VCA, please see [www.dtsc.ca.gov/SiteCleanup/Brownfields](http://www.dtsc.ca.gov/SiteCleanup/Brownfields), or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489.

DTSC-9

If you have any questions regarding this letter, please contact Rafiq Ahmed, Project Manager, at [rahmed@dtsc.ca.gov](mailto:rahmed@dtsc.ca.gov), or by phone at (714) 484-5491.

Sincerely,



Rafiq Ahmed  
Project Manager  
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research  
State Clearinghouse  
P.O. Box 3044  
Sacramento, California 95812-3044  
[state.clearinghouse@opr.ca.gov](mailto:state.clearinghouse@opr.ca.gov).

CEQA Tracking Center  
Department of Toxic Substances Control  
Office of Environmental Planning and Analysis  
P.O. Box 806  
Sacramento, California 95812  
Attn: Nancy Ritter  
[nritter@dtsc.ca.gov](mailto:nritter@dtsc.ca.gov)

CEQA # 3608



# AIRPORT LAND USE COMMISSION

FOR ORANGE COUNTY

3160 Airway Avenue • Costa Mesa, California 92626 • 949.252.5170 fax: 949.252.6012

August 6, 2012

## WATER RESOURCES

AUG 08 2012

Paul Weghorst, Director of Water Resources  
Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA 926187

## IRVINE RANCH WATER DISTRICT

Subject: Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project  
Biosolids Handling Component

Dear Mr. Weghorst:

Thank you for the opportunity to review the proposed Draft Supplemental Environmental Impact Report (Draft SEIR) for the modification of the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project in the context of the Commission's *Airport Environs Land Use Plan for John Wayne Airport (JWA AELUP)* and the *Airport Environs Land Use Plan for Heliports (AELUP for Heliports)*. The project includes a new Biosolids Handling Component. The MWRP is located at 3512 Michelson Drive in the City of Irvine.

As noted in the SEIR, the proposed project would penetrate the Notification Surface for JWA and FAA form 7460-1 was filed for the proposed project. The SEIR also mentions that construction of the proposed project would require use of cranes, lights and other construction equipment that could pose hazards to aircraft operations. Please be aware that a Notice of Proposed Construction or Alteration, FAA form 7460-1 will be required for the crane and other construction equipment. In addition to the results of the FAA Aeronautical Study, we recommend that the SEIR include a description of the proposed project building heights above mean sea level (AMSL) using National Geodetic Vertical Datum of 1929 (NGVD29) or North American Vertical Datum 1988 (NAVD88). This information will assist in determining the project's impact on the Federal Aviation Regulation (FAR) Part 77 Obstruction Imaginary Surfaces for JWA. Please forward a copy of the FAA aeronautical study to our office when available.

ALUC-1

In addition, the SEIR should identify if the project allows for heliports as defined in the *AELUP for Heliports*. Should the development of heliports occur within your jurisdiction, proposals to develop new heliports must be submitted through the city to the ALUC for review and action pursuant to Public Utilities Code Section 21661.5. Proposed

ALUC-2

heliport projects must comply fully with the state permit procedure provided by law and with all conditions of approval imposed or recommended by FAA, by the ALUC for Orange County and by Caltrans/Division of Aeronautics.

↑  
ALUC-2

Thank you for the opportunity to comment on Draft SEIR. Please contact Lea Choum at (949) 252-5123 or via email at [lchoum@ocair.com](mailto:lchoum@ocair.com) if you need any additional details or information regarding the future referral of your project.

Sincerely,



Kari A. Rigoni  
Executive Officer



Rabbi Arnold Rachlis, D.D  
Cantor Ruti Braier  
Susan Penn,  
Director of Education  
Heidi Kahn,  
Pre-School Director

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Alice Rochverger  
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Len Simon  
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Ron Glickman  
Dennis Klarin  
Art Lipton  
Lisa Metzger  
Carol Richmond  
David Sandor  
Debbie Stern

August 7, 2012

Pamela Sapato  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92619

Dear Pamela,

On behalf of University Synagogue, thank you and your staff for the informative two hour-long presentation and discussion at University Synagogue on July 31, 2012 regarding the draft Environmental Impact Report ("DEIR") for the proposed Irvine Ranch Water District ("IRWD") Biosolids Facility and Process ("Proposed Project"). We appreciate the participation of senior staff, including Greg Heiertz, Steve Malloy, and Shannon Reed. The following sets forth our response and our thoughts as to how we might proceed. They consider and build upon our earlier letter of April 11, 2011.

At the outset, we want you to know that we hold IRWD in high esteem as a respected and trusted pillar of our community. We are aware of your high standing in the circle of public water agencies and know of your commitment to our community – providing safe drinking water, recycling wastewater, managing water quality and run-off, conserving wildlife habitat, providing high quality educational facilities for community use, and, now, furthering community sustainability through the recycling of what has been considered wastes to produce useful soils amendments, energy and other products. We also noted that both Greg and Steve have been with IRWD for more than 30 years, reflecting an organization respected by its employees.

**A Reconstructionist Congregation**

Andre & Katherine Merage Campus

3400 Michelson, Irvine, California 92612 ✦ Tel: 949-553-3535 ✦ Fax: 949-553-4034

[www.universitysynagogue.org](http://www.universitysynagogue.org)

One of 12 "Star" Synagogues Chosen Nationally for the Synaplex Initiative

In this spirit, we have one major concern: odor and the attendant risks to the Synagogue, its members, pre-schoolers and others using our facilities. While we provide several preliminary comments below, in our meeting we discussed the need for additional time beyond August 16<sup>th</sup> to further review the Proposed Project and respond to the District's request for comments. You mentioned the possibility that while the District would be unlikely to extend the general period for comments to the DEIR, it could agree to welcome our comments after August 16<sup>th</sup> and respond to them. Accordingly, we request that the District agree to accept and respond to our comments received prior to September 15, 2012. Please let us know if that is acceptable.

1

**Our major concern: odor impacts on the Synagogue and its Pre-School.**

The DEIR generally describes the Proposed Project, including new facilities, operations and commitments on the part of IRWD to comply with the Rules of the South Coast Air Quality Management District and to prepare an Odor Control Maintenance and Operating Plan to assure that no odors are detectable beyond the boundary of the IRWD property. It also refers to a specific state-of-the-art odor control system, noting that it would be modeled after a system installed by the City of Mesa, Arizona "which has a proven record of zero odors detected at the treatment plant boundary since it was put on-line in 1989".

While the staff assured us that the Proposed Project would preclude odor from being detected beyond the project boundaries, we would appreciate the cooperation of IRWD (and the City of Irvine) in confirming this and better understanding the system, the Operating Plan, and the various back-up and contingency provisions, procedures and staffing. The Synagogue is being assisted in this effort by Lindell Marsh, a member of the Synagogue and an attorney practicing in this area of law and Blake Anderson, former General Manager of the Orange County Sanitation District. It is our understanding that Greg Heiertz and Steve Malloy have already reached out to Blake to provide additional information in this regard. In addition, Joel Belding, Senior Planner, City of Irvine, participated in the discussion. It was suggested that IRWD might underwrite a field trip to investigate and experience the Mesa, Arizona facility, conducting not only a "sniff test", but also discussing the plant experience with staff, adjacent landowners and regulatory agency staff.

2

It is important that in assisting us to understand the Proposed Project you also appreciate the risks to us. The Synagogue includes a membership of over 600 families, a pre-school of 90 children, and other activities within its campus (including outdoor play areas), all located within 1600 feet down-wind of the Proposed Project facility. Odor control is an especially sensitive concern to us because our building (and outdoor play area) is in use seven days a week. On all of those days we have children attending either pre-school, religious school, or religious services. An odor mishap, even one or only a few, of any nature, could have a long-term, deleterious impact on enrollment in our programs, participation in the Synagogue generally, and our overall financial well-being. Odor is not only unpleasant in itself, but communicates the possibility of harmful air quality. Accordingly, we need to know specifically, e.g., what contingency plans will be in effect to address a failure of the system. Should such a mishap occur, will IRWD have insurance or other provisions to compensate us for such losses?

3

To some extent, the 70 foot high egg domes that will be part of the Proposed Project communicate that risk to our members and prospective members, both suggesting the possibility that we have just described and, in the event of an actual odor release, magnifying and reminding us all of the possibility of possible or further odor releases. In this regard, Steve provided a visual model of the project facility from the vantage point of the Synagogue. It was unclear as to whether and to what extent the domes were visible. It is critical that as part of the Proposed Project, provision is made (e.g., with landscaping) so that no part of the new facility is visible from the Synagogue and its environs.

4

More generally, the physical structure of the Proposed Project will have an impact on the physical environment of the Synagogue. Sight of the facility will convey a magnified sense of industrialization of the area. We do not argue with the desirability of further addressing our community's sustainability. That is a good objective, which we support. However, to the extent it economically benefits water users generally while reducing the value of our property, some accommodation should be made. This is particularly important in that we are in the midst of re-financing our facility and our need for a high evaluation is of an immediate and concrete nature. And, the value of the property as of two years ago, when prices were depressed, is known. We do not want to bear the financial burden for a more general public savings from the Proposed Project, that, if distributed over thousands of households, would be minimal. Again, it is important to assure that the facilities constructed are not visible from the Synagogue and its environs.

5

In the sense of community, we look forward to collaborating with you in further exploring our concerns. As set forth above, we would welcome and appreciate IRWD's agreement to accept and respond to our comments to the DEIR provided to you prior to September 15, 2012 and IRWD's willingness to cover our expenses in making a field trip, perhaps with the City representative, to the Mesa, Arizona Biosolids facility.

6

Your response to our concerns and specific requests would be most appreciated. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sari Schreiber', with a long horizontal flourish extending to the right.

**Sari Schreiber**  
President, University Synagogue

**Cc: Paul A. Weghorst, Principal Water Resources Manager**  
**Joel Belding, Senior Planner, City of Irvine**

DEPARTMENT OF TRANSPORTATION

District 12  
3347 Michelson Drive, Suite 100  
Irvine, CA 92612-8894  
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August 13, 2012

**WATER RESOURCES**

Paul Weghorst  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, California 92618

AUG 15 2012

**IRVINE RANCH  
WATER DISTRICT**

File: IGR/CEQA  
SCH#: 2011031091  
Log #: 3025  
I-405

**Subject: Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project,  
Biosolids Handling Component**

Dear Mr. Weghorst,

Thank you for the opportunity to review and comment on the **Draft Supplemental Environmental Impact Report (SEIR) for the Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project, Biosolids Handling Component**. The proposed project would implement modifications to the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project to include a new Biosolids Handling Component. This component would thicken, stabilize, dewater, and dry sludge to produce biosolids, and eliminate the need to export sludge/scum offsite. The proposed project would be constructed onsite at the existing MWRP, within a 4.6-acre rectangular-shaped site adjacent to the Phase 2 Capacity Expansion area. The project site is located at 3512 Michelson Drive in the City of Irvine. The nearest State Route to the project site is I-405.

**The Department of Transportation (Department) is a commenting agency** on this project and has no comment at this time. However, in the event of any activity in the Department's right-of-way, an encroachment permit will be required.

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Please continue to keep us informed of this project and any future developments that could potentially impact State transportation facilities. If you have any questions or need to contact us, please do not hesitate to call Marlon Regisford at (949) 724-2241.

Sincerely,

Christopher Herre, Branch Chief  
Local Development/Intergovernmental Review

C: Scott Morgan, Office of Planning and Research

NCL 12-020

August 14, 2012

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

**SUBJECT:** Notice of Availability of a Draft Supplemental Environmental Impact Report for the Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project, Biosoils Handling Component located in the City of Irvine

Dear Mr. Weghorst:

The County of Orange has reviewed Notice of Availability of a Draft Supplemental Environmental Impact Report for the Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project, Biosoils Handling Component and offers the following comments:

Flood/SARP/Trails

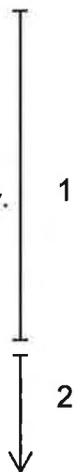
OC Public Works, SARP, Trails reviewed the subject Non County Lead and offers the following:

Page 3.12-3 Harvard Avenue

The paragraph refers to the "Peters Canyon Trail" as being on the east side of the San Diego Creek Channel. The San Diego Creek Class I (paved, off-road) Bikeway is the correct name for this facility. Beginning at the confluence of Peters Canyon Channel and San Diego Creek and extending downstream, the paved bikeway is designated as the San Diego Creek Class I Bikeway. The Peters Canyon Riding and Hiking Trail (a native soil dirt trail) is located on the west side of San Diego Creek Channel. For clarification bikeways have paved (usually asphalt) surfaces while trails are surfaced with native soil or decomposed granite.

Page 3.12-3 Bicycle and Pedestrian Transportation

Suggested edits are as follows;



Mr. Paul Weghorst  
City of Irvine  
August 14, 2012

The City of Irvine has an extensive non-motorized system that includes pedestrian walkways, Class I Bikeways and Class II Bike Lanes within open space corridors and along regional flood control facilities. The County of Orange also operates and maintains a separate master-planned system of riding and hiking trails, several of which are found in the City. These trails (the Peters Canyon, Hicks Canyon and Irvine Coast) are used by walkers, joggers, equestrian riders and mountain bicyclists. Class I Bikeways and Class II Bike Lanes, however, comprise the most extensive part of the City's non-motorized circulation network. The City's bicycle network connects with other off-road and on-road bicycle facilities, riding and hiking trails and other types of pathways in adjoining communities and throughout Orange County. The three categories of bikeways, as described in the Caltrans Highway Design Manual, Chapter 1000, are:

- Class I: a paved path that is separate from any motor vehicle travel lane;
- Class II: a restricted lane within the right-of-way of a paved roadway for the exclusive or semi-exclusive use of bicycles; and
- Class III: a bikeway that shares the street with motor vehicles or the sidewalk with pedestrians.

The City of Irvine contains 44.5 miles of off-road Class I Bikeways and 282 miles of On-road Bike Lanes. The closest bicycle facilities to the project site include a Class I Bikeway along San Diego Creek and Harvard Avenue and University Drive, and Class II Bike Lanes located along Campus Drive, Culver Drive, Carlson Avenue, Michelson Drive, Harvard Avenue, and University Drive (OCTA, 2010).

**3.9-1 Recreational Facilities**

This section of the document refers to a "bike path" on the east side of San Diego Creek. The correct name for the bike path is the San Diego Creek Class I (paved, off-road) Bikeway. The San Diego Creek Class I Bikeway is a regional, master-planned bikeway, part of a large network of off-highway routes, serving commuter and recreational cyclists and pedestrians. Please use the name "San Diego Creek Class I Bikeway" when referring to this route.

Consider similar changes on the following pages:

- Page 3.1-1 and 3.1-2 (2 places) under the heading of Project Area
- Page 3.1-18 under Impacts Discussion (Scenic Vistas)
- Page 3.2-5 under Sensitive Land Uses

**3.9-1 Recreational Facilities**

Please include a discussion about the Peters Canyon Regional Riding and Hiking Trail in this, and other applicable sections of the SEIR (such as Impacts Discussion and Sensitive Land Uses to name two). In addition to the existing master-planned Class I Bikeway (located on the east levee of the San Diego Creek) there exists a separate riding and hiking trail on the west levee of San Diego Creek Channel. The Peters Canyon Regional Riding and Hiking Trail is a master-planned trail and described in the Recreational Element of the County's General Plan. The trail begins at Irvine Regional Park, and continues south to Upper Newport Bay Nature Preserve. Much of the trail already exists, and is open for public use. Until recently the trail was usable between Michelson and Campus Drive until a portion of this length was paved with asphalt. The Irvine Ranch Water District has indicated that the paved surface is temporary and may later be

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Mr. Paul Weghorst  
City of Irvine  
August 14, 2012

removed. Additional impacts to the trail, and the public's use of such, should be discussed as part of the SEIR.

The Peters Canyon Regional Riding and Hiking Trail is almost 12 miles long. The route is surfaced with native soil or decomposed granite. Categorized as a mountain-to-sea riding and hiking trail, the trail is on the west side of the flood control channel from the confluence of Peters Canyon and San Diego Creek to Upper Newport Bay. When complete the trail will serve thousands of residents by connecting neighborhoods, commercial and business areas, and local and regional parks from the coast to the Anaheim foothills. Trails serve walkers, joggers, runners, equestrian riders and mountain bicyclists. Class I Bikeways serve commuter and recreational cyclists and pedestrians.

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Should you have questions or need additional information please call Jeff Dickman at (714) 647-3937.

County Property Permits:

The project is located close to San Diego Creek, which is part of the OC Flood Control District. If any portion of the project construction or operation affects the flood channel, then the project will require an encroachment permit.

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2. Noise Element:

Although this project is outside the jurisdiction of the County of Orange Noise Ordinance, the project will produce construction noise, therefore the following standard mitigation measures are recommended:

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- 1) All construction vehicles or equipment, fixed or mobile, operated within 1,000' of a dwelling shall be equipped with properly operating and maintained mufflers.
- 2) Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings.

Thank you for the opportunity to review this plan submittal. Please direct any questions regarding this memo to Doug Friedman at (714) 667-8841.

Sincerely,



Michael Balsamo  
Manager, OC Community Development  
OC Public Works/OC Planning  
300 North Flower Street  
Santa Ana, California 92702-4048  
[Michael.Balsamo@ocpw.ocgov.com](mailto:Michael.Balsamo@ocpw.ocgov.com)

cc: Mahrooz Ilkhanipour, County Property Permits  
Jeff Dickman, Flood/SARP/Trails



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August 14, 2012

**WATER RESOURCES**

**AUG 15 2012**

**IRVINE RANCH  
WATER DISTRICT**

Mr. Greg Heiertz  
Executive Director of Water Policy  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618  
[HEIERTZ@irwd.com](mailto:HEIERTZ@irwd.com)

**RE: Michelson Water Recycling Plant Phases 2 & 3 Capacity Expansion Project & Draft Supplemental Environmental Impact Report**

Dear Greg,

Thank you for the reaching out to LBA, the owners of Park Place, and providing us a presentation regarding the Irvine Ranch Water District's proposed treatment plant for recycling water and creating bio-solids. LBA appreciates IRWD taking the time to discuss our issues of concern and questions regarding the project.

Key concerns which affect the Park Place project were adequately addressed with regard to the impact to the Marsh, traffic, truck traffic, odors and hazardous waste releases and potential power outage.

We do however continue to have a concern regarding Aesthetics and the appropriate mitigation of the construction staging site which is adjacent to Michelson Drive. Since the duration of construction and utilization of this site is projected to be approximately 4 years, we request that greater consideration be given to screening this site from views from Park Place.

While we understand the challenge of screening views to this site from our buildings and parking structure, we do not believe adequate screening exists today even from street elevations of Michelson. We would like additional mitigation to be proposed which may include temporary fencing and additional landscaping.

We would be happy to meet with you to discuss further what some of these alternatives might be.

Please feel free to contact me should you have any questions.

Sincerely,

Eric Brown  
LBA Realty - Director, Leasing & Development

CC: Paul Weghorst, IRWD

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2



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**PUBLIC HEALTH SERVICES  
ENVIRONMENTAL HEALTH**

**MARK A. REFOWITZ**  
DIRECTOR

**DAVID M. SOULELES, MPH**  
DEPUTY AGENCY DIRECTOR

**RICHARD SANCHEZ, REHS, MPH**  
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FAX: (714) 754-1732  
E-MAIL: [ehhealth@ochca.com](mailto:ehhealth@ochca.com)



August 15, 2012

Paul Weghorst  
Director of Water Resources  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

**Project Title: Biosolids Handling and Energy Recovery Facilities Project**

**Subject: Draft Supplemental Environmental Impact Report for Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project, Biosolids Handling Component, Irvine, CA (SCH#2011031091)**

Dear Mr. Weghorst:

On July 27, 2012, the Orange County Solid Waste Local Enforcement Agency (LEA) was forwarded a copy of the Draft Supplemental Environmental Impact Report (DSEIR) from California Department of Resources Recycling and Recovery (CalRecycle). The DSEIR was prepared for Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project, Biosolids Handling Component. The proposed project would thicken, stabilize, dewater, and dry sludge to produce biosolids. Stabilization of sludge is achieved by anaerobic digestion which produces biogas as a byproduct. The anaerobic digestion chamber will be operated at temperatures below 125° Fahrenheit.

Under current regulations, some of the activities describe in the above mentioned document could potentially be regulated by our Agency however, discussions continue between several state agencies to revise current regulations. Until such revisions occur, the following activities could be regulated by the LEA.

- If compostable wastes (material that would typically be received at the site through the sewer system) are added to biosolids undergoing anaerobic digestion at a POTW, the activity shall comply with the Enforcement Agency Notification pursuant to 14 CCR 17859.1.

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Comment Letter OCPHS

Mr. Weghorst / Irvine Ranch Water District  
August 15, 2012  
Page 2

- If transformation of the biosolids is occurring on-site, then the facility is considered a "transformation facility" and is regulated as a "large volume transfer/processing facility" pursuant to 14 CCR 17402(a)(8) and (30) and will require a full solid waste facilities permit pursuant to 14 CCR 17403.7, and must comply with Public Resources Code sections 44016 and 44017. 2
- For activities where anaerobic digestion of other wastes, not including biosolids, is proposed to be conducted at a POTW, these activities may be subject to the requirements for a compostable materials handling activity or transfer station depending on the specifics of the activity as determined by the LEA. 3

The LEA can assist you in complying with the solid waste regulations. For more information or if you have any questions, please contact me at (714) 433-6270 or [kcross@ochca.com](mailto:kcross@ochca.com).

Respectfully Yours,



Kathryn Cross, PG, REHS  
Supervising Hazardous Waste Specialist  
Solid Waste Local Enforcement Agency  
Environmental Health

cc Robert Holmes, CalRecycle-Sacramento  
Diane Ohiosumua, CalRecycle-Riverside  
Cindy Li, RWQCB-Santa Ana  
David Jones, SCAQMD  
Anthony Martinez, OC EH

# Orange County Sanitation District

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- Costa Mesa Sanitary District
- Midway City Sanitary District
- Irvine Ranch Water District

August 15, 2012

Paul Weghorst, Director of Water Resources  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

**SUBJECT:** Draft Supplemental Environmental Impact Report for the  
Michelson Water Recycling Plant Phase 2 & 3 Capacity  
Expansion Project, Biosolids Handling Component

The Orange County Sanitation District (OCSD) has received and reviewed the above referenced Draft Supplemental Environmental Impact Report (SEIR).

As forecasted in our 2009 Facilities Master Plan, OCSD will reach capacity for solids processing treatment in 2016. As such, OCSD fully supports Irvine Ranch Water District's (IRWD) efforts to construct Biosolids handling and energy recovery systems which is consistent with our long-term capital improvement plan.

Based on our review of the document, OCSD has the following comments. The Supplemental Environmental Impact Report should:

1. Describe IRWD's plan for seasonal reductions in public demand (i.e. during winter) for Class A pellets and how biosolids product storage would be handled on or offsite, or disposed in the regional sewer.
2. Identify all project support facilities that are required from a construction and operational standpoint which may include, but are not limited to:
  - a. New preliminary treatment systems
  - b. Gas compressor systems
  - c. Debris removal systems for the centrifuge dewatering operations

Also, two corrections should be noted:

1. Delete the following statement from future environmental documents  
"~~...in addition, sending sludge to OCSD or Synagro prevents IRWD from making beneficial use of renewable resource.~~"



*We protect public health and the environment by providing effective wastewater collection, treatment, and recycling.*

Paul Weghorst  
Page 2  
August 15, 2012

OCSD's Biosolids Management Program strives for 100 percent biosolids recycling while realizing and balancing a diversification of markets. The SEIR could comment that as a result of this Project, OCSD will manage fewer solids, which will result in less truck traffic.



- 2. Revise language in environmental document "...The resulting Preliminary Evaluation of System-Wide Biosolids Management Alternatives Report (HDR, 2009) concluded that it would be cost-effective for IRWD to implement solids handling at the MWRP rather than continuing to transport 'discharge' sludge to OCSD."

OCSD appreciates the opportunity to review and comment on the proposed project. Should you have any questions or require further information, please call me at 714-593-7119.

*Daisy Covarrubias*

Daisy Covarrubias, MPA  
Senior Staff Analyst

DC:sa  
EDMS:003960947/1.8a





DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

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August 16, 2012

SIP  
8.31.12  
clear



Mr. Paul Weghorst  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92612

**Subject:** SCH No. 2011031091: Draft Supplemental Environmental Impact Report for the Biosolids Handling and Energy Recovery Facilities Project, Irvine Ranch Water District, County of Orange

Dear Mr. Weghorst:

Thank you for allowing the Department of Resources Recycling and Recovery (CalRecycle) staff to provide comments for this proposed project and for your agency's consideration of these comments as part of the California Environmental Quality Act (CEQA) process.

CalRecycle staff has reviewed the environmental document cited above and offers the following project description, analysis and our recommendations for the proposed project based on our understanding of the project. If CalRecycle's project description varies substantially from the project as understood by the Lead Agency, CalRecycle staff requests incorporation of any significant differences in the Final Environmental Impact Report. Significant differences in the project description could qualify as "significant new information" about the project that would require recirculation of the document before certification pursuant to CEQA Section 15088.5.

Project Description

The Irvine Ranch Water District, acting as Lead Agency, prepared a Draft Supplemental Environmental Impact Report (Draft SEIR) for the Biosolids Handling and Energy Recovery Facilities Project. The proposed project is to implement modifications to the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project to include a new Biosolid Handling Component (proposed project). The proposed project would integrate new residuals handling system at the MWRP, which would include biosolids processing, biogas management, and energy recovery systems. The proposed project would process residuals.

Comments

For clarity and convenience, questions and comments that Department staff is seeking a specific response to will be *italicized* so the reader can more easily locate and respond to them.

CalRecycle staff will make statements, which, in their opinion are fact - if these statements are incorrect or unclear please notify CalRecycle staff. The proponent or operator of a proposed project is not given tacit approval of an action or activity if that action or activity is not specifically prohibited in the environmental document.

CalRecycle is the permitting agency for solid waste handling activities and works together with the Orange County Health Care Agency-Department of Environmental Health Services, which is the Local

Mr. Weghorst  
Irvine Ranch Water District  
August 16, 2012  
Page 2 of 2

Enforcement Agency (LEA) for permitting and inspection of solid waste handling operations and facilities.

**Solid Waste Facilities Permit**

The proposed project is located at a POTW. The proposed project is proposing to use anaerobic digestion for biosolids on-site as a part of the process to treat biosolids.

*If a Publicly Operated Treatment Works (POTW) is adding other compostable waste (material that would typically be received at the site through the sewer system) to biosolids undergoing anaerobic digestion at the POTW, the activity would be subject to the CalRecycle's compostable materials handling regulation under Title 14, California Code of Regulations, Section 17859.1. Whether this proposed project falls under the jurisdiction of CalRecycle is the determination of the LEA. The LEA contact is the Orange County Health Care Agency, Environmental Health Division (Kathy Cross - 714.433.6270 or [kcross@ochca.com](mailto:kcross@ochca.com)). Refer to the CalRecycle's guidance document on anaerobic digestion for additional information: <http://www.calrecycle.ca.gov/Publications/Organics/2009021.pdf>*

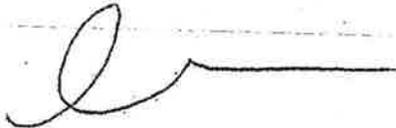
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Changes are currently being proposed to the compostable materials handling regulations. More details on these proposed changes can be found on the CalRecycle website at: <http://www.calrecycle.ca.gov/Laws/Rulemaking/Compost/default.htm>

**Conclusion**

Thank you for the opportunity to comment on the Supplemental Environmental Impact Report. If you have any questions regarding these comments, please contact me at (951) 782-4168 or via e-mail at [dianne.ohiosumua@calrecycle.ca.gov](mailto:dianne.ohiosumua@calrecycle.ca.gov).

Sincerely,



Dianne Ohiosumua  
Permitting and Assistance Branch - South  
Department of Resources Recycling and Recovery

cc: Virginia Rosales, Supervisor  
Permitting and Assistance Branch - South  
Department of Resources Recycling and Recovery

Kathleen Cross, Supervisor  
County of Orange- Health Care Agency, Public Services  
Environmental Health - L1241 e. Dyer Road, #120  
Santa Ana, CA 92705

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**To: Mr. Paul Weghorst, Director of Water Resources  
Irvine Ranch Water District  
15600 Sand Canyon Ave, Irvine, CA 92618  
[Weghorst@irwd.com](mailto:Weghorst@irwd.com)**

**From: Dr. Peter Bowler, San Joaquin Marsh Reserve Faculty Director  
Dr. William Bretz, San Joaquin Marsh Reserve Manager  
University of California Natural Reserve System's San Joaquin  
Marsh Reserve  
Office of Research  
University of California  
Irvine, CA 92697-1459  
[pabowler@uci.edu](mailto:pabowler@uci.edu)  
[wlbretz@uci.edu](mailto:wlbretz@uci.edu)**

**Re: Comments on the DSEIR for the Michelson Water Recycling Plant Phase 2 & 3  
Capacity Expansion Project, Biosolids Handling Component**

S:

**Dear Mr. Weghorst:**

The University of California Natural Reserve System's San Joaquin Marsh Reserve is located immediately adjacent to and downstream from IRWD's property surrounding the MWRP. The Marsh Reserve is an academic facility administered by the University of California, Irvine (UCI), and is heavily utilized as an outdoor classroom, laboratory and field station for teaching and research. The University of California Natural Reserve System (UCNRS) is a CEQA-designated Trustee Agency, and is responsible for protecting the natural resources of the Marsh Reserve for the Public Interest, in addition to managing the Reserve for academic and research purposes. The site is owned by the Regents of the University of California and is managed by the UCI's Office of Research. As a state-owned Reserve, the University's San Joaquin Marsh Reserve will be the first non-District property directly impacted if problems occur at MWRP resulting in sewage (or other pollutant) spills into the environment that cannot be contained on site.

In spite of the highest state-of-the art engineering, advanced best management practices, and IRWD’s commitment to excellence for its operations at MWRP, technology can fail at times, and stochastic environmental catastrophes can and do occur. Earthquakes that exceed MWRP engineering design expectations, such as the recent Fukushima disaster in Japan, could occur in Southern California. Ongoing global climate change increases the probability of severe flooding on the San Diego Creek watershed that could exceed existing flood protection measures at MWRP. In this regard, all aspects of IRWD’s operations at MWRP are a concern for the management of the San Joaquin Marsh Reserve, and the proposed Biosolids Handling Component project adds to these concerns.

We appreciate this opportunity to provide our comments concerning the DSEIR for the Irvine Ranch Water District’s Biosolids Handling Component of the MWRP Phase 2 & 3 Capacity Expansion Project.

According to the DSEIR, Chapter 2, page 2-4, “The proposed project would provide a residuals management system at the MWRP with capacity to handle all solids produced based on projected future demand in the IRWD service area, up to 33 million gallons per day at the MWRP and up to 5.5 million gallons per day at the LAWRP.....In addition to processing the sludge produced by the recycled water treatment process at the MWRP, the proposed project would be designed to have capacity to treat digested and dewatered sludge from the LAWRP and potentially other regional wastewater treatment plants.”

Table 2-2, page 2-19, Estimate Operational Vehicle Trips, shows that processing the solids from the 5.5 mgd LAWRP would require sludge deliveries from Los Alisos in the District. This table also shows the proposed project would receive an additional 24 sludge deliveries per week trucked from other regional wastewater treatment plants, which is four times greater than the deliveries from LAWRP. Using this factor of 4, it appears that the proposed project is scaled in size to receive the solids from other wastewater treatment plants up to a total capacity of 22 million gallons per day (mgd) [4 X 5.5 mgd = 22 mgd].

It appears that the proposed project is in fact designed to handle all of IRWD’s solids from 38.5 mgd of sewage treated at MWRP (33 mgd) and LAWRP (5.5 mgd), as well as the solids generated from another 22 mgd of sewage treated at other regional wastewater treatment plants. Evidently the proposed project has a planned capacity to handle the solids from 60.5 mgd of sewage, which means it is about 1.6 times bigger than is needed for IRWD’s total future needs.

The DSEIR contains no discussion about the justifications for a facility that is 60% larger than the District’s own future needs. Would the proposed project be feasible if it were smaller sized to meet only the District’s internal needs? Is the proposed project dependent in some ways on serving sewage treatment clients outside the District? Does IRWD need to import solids from other sewage treatment plants and earn income from this service to make the project work at the proposed oversized capacity? If the Orange County Sanitation District enlarges its solids processing capacity, will IRWD and OCSD



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become competitors for available regional sludge? If for some reason IRWD could not import the sludge from 22 mgd of sewage treated outside the District, how would this affect the proposed project?

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The DSEIR lists the following six objectives for IRWD’s proposed project:  
1) Allow IRWD to make efficient and sustainable use of its own renewable resources.  
2) Increase IRWD’s autonomy for residuals management.  
3) Allow for beneficial use of the biosolids produced during the treatment process.  
4) Allow for beneficial use of biogases produced during anaerobic digestion.  
5) Minimize environmental impacts associated with residuals management.  
6) Provide residuals management facilities that meet future solids handling needs of the MWRP Phase 2 and 3 Capacity Expansion Project.

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It seems possible that the proposed project could be 60% smaller, serving only the District’s own needs to treat the solids from 38.5 mgd of sewage, and still attain the six stated objectives. If this is not so, the Final SEIR should explain why.

The DSEIR does not explain why it is undesirable, infeasible, or uneconomic for IRWD to partner with the Orange County Sanitation District’s program in expanding its solids processing capacity sufficiently to meet IRWD’s future needs. From an Orange County or regional perspective, it seems that the only aspect of the six objectives of the proposed project that would not be attained by IRWD partnering with OCSD would be IRWD’s interest in increasing its own parochial autonomy (Objective 2).

Efficient and sustainable use of the renewable resources associated with IRWD’s sludge could occur at OCSD (Objective 1). Beneficial use of the biosolids produced could occur at OCSD (Objective 3). Beneficial use of biogases produced could occur at OCSD (Objective 4). Environmental impacts associated with residuals management could be minimized with treatment at OCSD (Objective 5). Meeting future solids handling needs of MWRP Phase 2 and 3 Capacity Expansion could occur at OCSD (Objective 6).

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Alternatives to the proposed project that are considered in the DSEIR are basically rejected for reasons of “institutional constraints regarding implementability, economic viability, and the lack of increased autonomy for IRWD in its residuals management.” Unfortunately, the DSEIR does not actually or adequately inform the reader about the specifics of these constraints, so it is not possible to compare the proposed project and the opportunities and/or drawbacks associated with the other alternatives, including IRWD partnering more closely with OCSD to take care of sludge.

The No Project Alternative is identified as the Environmentally Superior Alternative with the least environmental impacts, compared to implementation of the proposed project. The DSEIR states that with the No Project Alternative, however, potential benefits to air quality and traffic associated with the proposed project would not occur because there would be no reduction in operational truck trips, and no reduction in associated air emissions. The DSEIR fails to consider that IRWD could choose to export

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its LAWRP sludge to OCSD rather than all the way to Arizona; and that a cooperative partnership with OCSD could result in that District developing the process to produce Class A pellets utilized at less distant destinations. The DSEIR also fails to consider that through the No Project Alternative, IRWD could then choose not to develop the 4.6-acre site for the proposed project, but instead could restore that area to an unpaved, undeveloped natural landscape in ways that would eliminate impacts to hydrology and water quality. In fact, the No Project Alternative could become the Environmentally Superior Alternative with less severe and less intense impacts in all respects, if the above considerations were incorporated into IRWD's partnering with OCSD.

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We recommend that IRWD adopt the No Project Alternative and reject implementation of the Biosolids Handling Component. We recommend that IRWD choose to partner with Orange County Sanitation District in the expansion of its solids processing facilities, and to partner with OCSD to develop more local markets for Class A biosolids pellets that would reduce both Districts' greenhouse gas emissions and carbon footprints. Contingency funding for environmental cleanup should a catastrophe occur must be budgeted for the San Joaquin Marsh Reserve and the Newport Back Bay Ecological Preserve, another state-owned Ecological Preserve immediately downstream. Endangered species issues are present at both sites, including nesting light-footed clapper rails, among others.

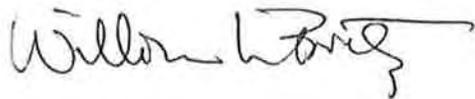
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Please include these comments in the DSEIR record, and the UC Natural Reserve System looks forward to participating fully in further consideration of the Biosolids Handling Component in the SEIR process.

Sincerely,



Dr. Peter Bowler, Faculty Director  
UCNRS San Joaquin Marsh Reserve



Dr. William Bretz, Reserve Manager  
UCNRS San Joaquin Marsh Reserve

August 28, 2012

Mr. Paul Weghorst  
Principal Water Resources Manager  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92619

Re: Comments of University Synagogue regarding the draft Environmental Impact Report (“DEIR”) for the proposed Irvine Ranch Water District (“IRWD”) Biosolids Handling and Energy Recovery Project Facilities Project (“Proposed Project”).

Dear Mr. Weghorst:

Thank you and your staff for briefing us on the Proposed Project and providing us with the opportunity to comment on the DEIR as set forth below.

Our comments further those set forth in our earlier letters of April 11, 2011 and August 7, 2012 and, in addition to the DEIR, are based on the very informative presentation by your senior staff at the Synagogue on July 31, 2012 and further discussions with your staff.

As I mentioned in my last letter, we hold IRWD in high esteem as a respected and trusted pillar of our community and are aware of your high standing in the circle of public water agencies and know of your commitment to our community – providing safe drinking water, recycling wastewater, managing water quality and run-off, conserving wildlife habitat, providing high quality educational facilities for community use, and, now, furthering community sustainability through the recycling of what has been considered wastes to produce useful soils amendments, energy and other products. Our major concern is odor and the attendant risks to the Synagogue, its members, pre-schoolers and others using our facilities. The DEIR describes the Proposed Project, including new facilities, operations and commitments on the part of IRWD to comply with the Rules of the South Coast Air Quality Management District and assure that no odors are detectable beyond the boundary of the IRWD property. It refers to a specific state-of-the-art odor control system, noting that it would be modeled after a system

1

installed by the City of Mesa, Arizona “which has a proven record of zero odors detected at the treatment plant boundary since it was put on-line in 1989.”

While the staff assured us that the Proposed Project would preclude odors from being detected beyond the project boundaries, we expressed our interest in the cooperation of IRWD (and the City of Irvine) in confirming this and better understanding the system, the Operating Plan, and the various back-up and contingency provisions, procedures and staffing. We mentioned that we were being assisted in our efforts by Lindell Marsh, a member of the Synagogue and an attorney practicing in this area of law, and Blake Anderson, former General Manager of the Orange County Sanitation District. It is our understanding that Steve Malloy, Principal Engineer with IRWD, reached out to Blake and provided additional information with respect to the Proposed Project, which we appreciate. In addition, Joel Belding, Senior Planner, City of Irvine, participated in the discussion session.

2

In that session we also discussed the value of having IRWD arrange for two of our members to visit and experience the Mesa, Arizona facility, conducting not only a “sniff test”, but also discussing the plant experience with staff, adjacent landowners and regulatory agency staff. Your staff verbally indicated that IRWD could not underwrite the costs of having one or two of our Directors visit the Mesa facility.

3

We have underscored that it is important that IRWD fully appreciate the risks to us from the Proposed Project: the Synagogue includes a membership of over 600 families, a pre-school of 90 children, and conducts other activities within its campus (including outdoor play areas), all located within 1600 feet down-wind of the Proposed Project facility. Odor control is an especially sensitive concern to us because our building (and outdoor play area) is in use seven days a week. On all of those days we have children attending either pre-school, religious school, or religious services. An odor mishap, even one or only a few, of any nature, could have a long-term, deleterious impact on enrollment in our programs, participation in the Synagogue generally, and our overall financial well-being. Odor is not only unpleasant in itself, but communicates the possibility of harmful air quality. Accordingly, we are especially concerned about what contingency plans will be in effect to address a failure of the system. Should such a mishap occur, will IRWD have insurance or other provisions to compensate us for such losses?

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To some extent, the 70 foot high egg domes that will be part of the Proposed Project communicate that risk to our members and prospective members, both suggesting the possibility that we have just described and, in the event of an actual odor release, magnifying and reminding us all of the possibility of further odor releases and the fear of attendant unhealthful air quality. In this regard, Steve provided a visual model of the project facility from the vantage point of the Synagogue. It was unclear as to whether and to what extent the domes will be visible. It is critical that, as part of the Proposed Project, provision is made (e.g., with landscaping) so that no part of the new facility is visible from the Synagogue and its environs.

5

More generally, the physical structure of the Proposed Project will have an impact on the physical environment of the Synagogue. Sight of the facility will convey a magnified sense of industrialization of the area. We do not argue with the desirability of further addressing our community’s sustainability. That is an objective that we support. However, to the extent it economically benefits water users generally while reducing the value of our property, some accommodation should be made. This is particularly important in that we are in the midst of re-financing our facility and our need for a high evaluation is of an immediate and concrete nature. And, the value of the property as of two years ago, when prices were depressed, is known. We do not want to bear the financial burden for a more general public savings from the Proposed Project, that, if distributed over thousands of households, would be minimal.



6

**Going forward with the Proposed Project**, we suggest and request the following with respect to:

- Order controls, Plans and Procedures
- Landscaping
- The opportunity to further experience and research the Mesa, Arizona facility

**Odor Controls, Plans and Procedures.**

On Aug 6, 2012, Blake Anderson advised us as follows:

“I have taken a look at the "Process Validation Study" that was recently completed by Black & Veatch Engineers. It followed the "Preliminary Design Report" that was completed last year by HDR Engineers. These are both very well known and respected civil engineering firms that do work all over the US. I know the firms very well and know several of the principals that worked on the studies or signed off on them. They are all top-notch. Both studies deal with the unit processes involved in the digestion, dewatering and handling of the biosolids (aka sludge) that will be produced, delivered, processed and managed at the treatment plant site.

The Process Validation Study took a second look at all of the design assumptions, conducted field visits to wastewater treatment plants in California and Arizona employing similar technologies and developed a set of recommendations that IRWD intends to follow. I can assure you that between the engineering and planning staff at IRWD, B&V and HDR, all of the bases have been covered. This project and this client are high stakes and high profile for the engineering firms and they have provided their very best people in this planning and evaluation process, so far.

My overall conclusion is that the engineering is certainly state of the art. The design is conservative and contains some system redundancies that are intended to achieve a high degree of reliability. I have no concerns about what they have proposed in their process designs.



7

My only lingering question is how well IRWD will be prepared to:

a.) start up systems that are presently not known by the organization or a majority of its operation and maintenance staff, and

b.) provide long-term operational reliability.

Having staff properly trained and ready for these new challenges will be essential for operating them competently. Budgeting, preventive maintenance, monitoring and adequate oversight are absolutely needed to keep the systems running as originally designed. The Process Validation Study acknowledges that the systems are complex. For this reason, IRWD must describe a well-thought out game plan and then make certain all elements are fulfilled.

All of that is certainly possible.

Your most recent draft letter to IRWD touches on our concern about operational effectiveness. I don't think there's more that can be said in the letter in this regard. What will be essential for IRWD to do (and for the Synagogue to monitor) is that "written plan" becomes "institutional intention" becomes "action" becomes "outcome". I have no doubt that IRWD is capable of all of that.

One of things that the Synagogue and the closest neighbors could request is the creation of a third-party operational review panel that would function for the life of the project or until IRWD and the community agree that the system is operating well and third-party review is no longer desirable. Two to three independent people would review operational reports, inspect the operational facilities from time-to-time, have unrestricted access to staff and everything else and would report directly to the community of interest. The panel would consist of people with expertise, experience or interest that would make them qualified to provide an informed opinion of how things are going. They would complete short evaluation reports that would be conveyed directly to the community of interest with copies going to IRWD.

I strongly recommend that their opinions and observations be advisory only to the community, the IRWD board and IRWD staff. Governance, budgeting, operational accountability and final decision-making must remain vested and managed by IRWD exclusively and in all respects. The buck stops with them.

But the operational review panel would be free to say what they think to whomever should hear it. The community of interest would have sole authority for determining how long the operational review panel should exist and would also have sole discretionary authority to re-establish the panel if it were to be retired at one point-in-time and they declared necessary to re-establish at another point-in-time.”



We embrace Blake’s advice and request that IRWD establish a third-party Operational Review Panel, in the form that he suggests. This would go a long way towards providing our community with assurances that our concerns will be addressed over the long term, while lending our support for your Project that will advance your objectives of sustainability (objectives that we share).

↑  
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**Landscaping.**

It is important to assure that the facilities constructed are not visible from the Synagogue or its environs. This, we believe, can be accomplished by landscaping – the planting and maintenance of trees and other vegetation. We would welcome working with you on implementing this suggestion.

8

**Opportunity to Experience and Research the Mesa, Arizona Facility.**

While we acknowledge the verbal “no” to our earlier request, we would welcome and appreciate the opportunity for one or two of our Board members to experience -- the “sniff test” -- and research the Mesa, Arizona facility that is the proto-type for the Proposed Project. It could provide our congregation with significant solace. We also appreciate the arrangements by your staff to allow Blake to follow up by telephone and email with the Mesa facilities staff. Blake has advised us that he will not be able to have those conversations until late September. Accordingly, this letter is subject to further comments following those conversations.

9

In summary, with a sense of community, we look forward to collaborating with you in further exploring and addressing our concerns and your quite commendable efforts. Please let me know if you have any questions or would like to explore them further.

Sincerely,



Sari Schreiber  
President, University Synagogue

Cc (via email):

- Pamela Sapeto, Consultant to IRWD
- Gregory P. Heiertz, Executive Director of Water Policy, IRWD
- Steve Malloy, Principal Engineer, IRWD
- Joel Belding, Senior Planner, City of Irvine
- Blake P. Anderson, Consultant
- Lindell L. Marsh, Attorney, Member, University Synagogue
- Anita Mishook, Member, University Synagogue



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4182  
(909) 396-2000 • [www.aqmd.gov](http://www.aqmd.gov)

E-Mailed: August 30, 2012  
Weghorst@irwd.com

August 30, 2012

Mr. Paul Weghorst  
Director of Water Resources  
Irvine Ranch Water District  
15600 San Canyon Ave  
Irvine, CA 92618

## Review of the Draft Supplemental Environmental Impact Report (Draft SEIR) for the Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project

The South Coast Air Quality Management District (AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The AQMD staff also appreciates that the project proponent consulted with us in a meeting in May 2011 to discuss this project. The following comments are intended to provide guidance to the lead agency and should be incorporated into the Final Environmental Impact Report (Final EIR) as appropriate.

Based on a review of the Draft Supplemental Environmental Impact Report (Draft SEIR) the lead agency has not provided sufficient technical information to determine the potential air quality impacts from the proposed project. Also, the lead agency has provided limited discussion to substantiate the Draft SEIR's treatment of baseline activities. Therefore, the AQMD staff recommends that the lead agency provide additional information in the Final EIR that addresses these concerns. Details regarding these comments are attached to this letter.

Pursuant to Public Resources Code Section 21092.5, please provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final EIR. Further, staff is available to work with the lead agency to address these issues and any



Comment Letter SCAQMD

Mr. Paul Weghorst

2

August 30, 2012

other questions that may arise. Please contact Dan Garcia, Air Quality Specialist CEQA Section, at (909) 396-3304, if you have any questions regarding the enclosed comments.



2

Sincerely,

A handwritten signature in black ink, appearing to read "Ian V. MacMillan".

Ian MacMillan  
Program Supervisor, CEQA Inter-Governmental Review  
Planning, Rule Development & Area Sources

Attachment

IM:DG

ORC120705-03  
Control Number

Peak Daily Operational Emissions

1. In Table 3.2-7 of the Draft SEIR the lead agency presents the project's peak daily operational emissions from the project, however, based on recent information provided in the project's permit application file it is not clear that the Draft SEIR captures the project's potential maximum daily air quality impacts. For example, based on information provided to the AQMD's engineering staff the maximum daily uncontrolled NOx emissions from the project are 66.84 pounds per day (lbs/day). However, the peak daily NOx emissions value reported in Table 3.2-7 is 61 lbs/day from the following emissions sources: dryers, flares, boilers, emergency generators, micro turbines and a thermal oxidizer. The lead agency should ensure that the Draft SEIR discloses the project's maximum daily operational air quality impacts, at a minimum. The Draft SEIR should also discretely identify all of the project's emissions from permitted stationary source equipment, mobile source equipment, and any other sources.

2. Mobile Source Emissions Baseline

The project's peak daily mobile source emissions reported in Table 3.2-7 and Table 3.6-2 of the Draft SEIR appear to include existing transportation activity associated with the Los Alisos Water Recycling Plant (LAWRP) and the Orange County Sanitation District (OCSD) in the baseline. Based on discussion provided in the Draft SEIR it appears that the lead agency assumed that the proposed project will replace biosolid processing activity that is occurring at OCSD and a facility in Arizona, and that this baseline activity will cease with the project. As a result, the lead agency subtracts the emissions from this baseline activity from the project's emissions. However, the lead agency does not provide the transportation emissions methodology in Appendix C of the Draft SEIR nor does it provide substantial evidence demonstrating that reduced operations at OCSD will not be replaced to maintain existing capacity. As was discussed in the consultation meeting last year, if the baseline emissions are subtracted from project emissions, then a robust description is needed to justify the assumption that baseline emissions will not be continued in the future. Therefore, the lead agency should provide sufficient technical information in the Final EIR to demonstrate that it is appropriate to assume that all baseline activity will cease in the future

3. Permitted Equipment

AQMD staff may have additional comments on the emissions analysis conducted for air quality permits. These comments will be made as part of the permitting process. Engineering and Compliance staff can be reached at (909) 396-2737 regarding the permit application.



Community Development

[www.cityofirvine.org](http://www.cityofirvine.org)

City of Irvine, One Civic Center Plaza, P.O. Box 19575, Irvine, California 92623-0575

(949) 724-6300

August 30, 2012

Mr. Paul Weghorst  
Director of Water Resources  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

Dear Mr. Weghorst:

**Subject: Michelson Biosolid Facility Draft Environmental Impact Report**

The City of Irvine appreciates the opportunity to review the Draft Environmental Impact Report (DEIR) for the Michelson Water Recycling Plant (MWRP) Phase 2 & 3 Capacity Expansion Project, Biosolids Handling Component. Following review of the DEIR for this project, the City has the following comments for your consideration and incorporation into the Final EIR.

**3.1 Aesthetics**

The City of Irvine requests the inclusion of topographic information to show the heights of the surrounding properties relative to the project site, including building heights to demonstrate the relative height of the proposed biosolids treatment facility. Please also provide a text discussion to describe the quantitative details in the exhibits.

1

Page 3.1-2 of the EIR states in reference to landscaping recently cleared from the adjacent flood control channel that "once this vegetation grows back, it will provide additional screening of the project site..." Please provide details on the types of landscaping within this area and also provide details on Orange County Flood Control District (OCFCD) plans for allowing permanent landscaping within this area. The City also recommends the addition of a Project Design Feature to provide for vegetative screening within or adjacent to the MWRP with the intent being able to provide screening for the new facility from views from Harvard Avenue.

2

Mr. Paul Weghorst  
August 30, 2012  
Page 2

**3.2 Air Quality**

Based on public concern over the potential for offensive odors from the new facility, trucks carrying sludge to the facility, and the lack of any technical analysis in the EIR, the City recommends IRWD prepare an independent third-party assessment of the existing Northwest Water Reclamation Plant (NWRP) in Mesa, Arizona, after which the MWRP expansion is being modeled to assess the potential for odors associated with the project. Within this assessment, please address potential odors from trucks transporting sludge to the facility.

3

The City suggests using either the Advanced Monitoring Systems (AMS)/Environmental Protection Agency (EPA) Regulatory Model AERMOD dispersion model, or comparable assessment techniques. Based upon the methodology and results, the City may also conduct a peer review of the assessment to evaluate its findings.

**3.4 Cultural Resources**

We request that mitigation measures CUL-4 and CUL-5 be modified with the following language as underlined below:

**CUL-4:** In the event that paleontological resources are encountered, the OCC Paleontologist shall develop a Paleontological Resources Mitigation and Monitoring Plan. The Plan shall address procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils, and the preparation of a final mitigation report. Once the find has been evaluated in accordance with the Plan, the OCC Paleontologist shall determine when work can resume in the vicinity of the find. The Director of Community Development shall also be notified of the discovery and the determination of the OCC Paleontologist related to recovery, handling and disposition of identified resources.

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**CUL-5:** If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC

Mr. Paul Weghorst  
August 30, 2012  
Page 3

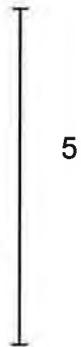
5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The Director of Community Development shall also be notified of the discovery and the determination of the NAHC related to recovery, handling and disposition of remains and associated artifacts.



**3.10 Noise**

We request that mitigation measure Noise-3 be modified with the following language:

**NOISE-3:** IRWD shall conduct a post-construction noise survey to ensure that operation of the MWRP is in compliance with the City of Irvine Noise Ordinance (Title 6, Division 8, Chapter 2) at the IRWD property boundary. If survey results indicate noncompliance with the Noise Ordinance, IRWD shall implement additional sound-dampening architectural and equipment improvements at the MWRP and conduct a follow-up survey to demonstrate compliance with noises thresholds. A copy of the noise survey shall be provided to the Director of Community Development, as well as details of any building or site improvements necessary to correct excess noise levels as well as a schedule for completion of the improvements.



**3.12 Transportation and Traffic**

Please consider revising the traffic analysis to incorporate the following comments:

Page 3.12-11: The report states that the project adds 46-60 daily trips to the surrounding roadway network. Does this include employee trips and truck trips? How many of those daily trips are added during the AM and PM peak periods? Note that traffic impacts within the City of Irvine are identified based on the analysis of AM and PM peak traffic conditions. Please provide additional information clarifying the number and type of trips (employee and/or truck) that the project adds to the AM and PM peak periods (6 – 9 a.m. and 3 – 7 p.m.). Further traffic analysis may be required if these trips occur during the peak periods.

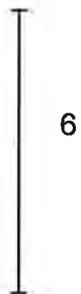
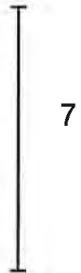


Table 3.12-2 (The Existing Level of Service Ratings for Intersections in the Project Area): As documented on page 2-18 of the report, trucks will be taking access to the project from Michelson & Riparian. It would appear that trucks would need to access this intersection via a route from Jamboree & Michelson, Harvard & Michelson or Culver/Michelson. Please add these three intersections within the City of Irvine to the existing LOS table. Please coordinate with Wendy Wang at (949) 724-6425 to obtain the intersection data for these three locations.

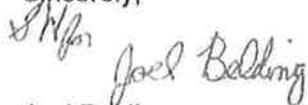


Mr. Paul Weghorst  
August 30, 2012  
Page 4

The City of Irvine looks forward to your responses to these items. We will continue to work with you on the Conditional Use Permit for the expansion project and may have additional questions, comments and corrections on the project.

8

Sincerely,



Joel Belding  
Senior Planner

cc: Eric Tolles, Director of Community Development  
Tim Gehrich, Deputy Director of Community Development  
Bill Jacobs, Principal Planner  
Steve Weiss, Principal Planner



*Sea & Sage Audubon*

P.O. BOX 5447, IRVINE, CA 92616-5447

August 31, 2012

Paul Weghorst  
Director of Water Resources  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

By email to [weghorst@irwd.com](mailto:weghorst@irwd.com)

Re: Draft Supplemental Environmental Impact Report for Biosolids and Energy Recovery Project

We are writing on behalf of Sea and Sage Audubon Society and the Sea and Sage Audubon Conservation Committee in response to the Draft Supplemental Environmental Impact Report for Biosolids and Energy Recovery Project (DSEIR).

Sea & Sage Audubon Society is an Orange County chapter of the National Audubon Society with over 3,000 members dedicated to the appreciation and protection of birds, other wildlife, and their habitats.

We want to thank IRWD personnel for attending our Conservation Committee meeting on August 7, 2012, and giving us a presentation about the project. Members of our committee are generally of the goals of this project: recovery of energy and mineral value from material that would otherwise largely be disposed of into the environment.

After review of the DSEIR we have found that we have one specific concern regarding a construction-related impact and we request that you address it in preparing a final SEIR.

Visitors to the public trail system adjacent to the project site may be alarmed by the construction if information about the project is not displayed. We encourage IRWD to post signage at locations from which construction will be visible especially in the vicinity of the trail behind the construction site, that explain what the project is. This will forestall some of the concerns that visitors will have and reduce some of the questions that our Audubon House volunteers will encounter from the public.



1

Yours truly,

G. Victor Leipzig, Ph.D.  
Co-chair  
Conservation Committee

Susan Sheakley  
Co-chair  
Conservation Committee

**From:** "<Christine\_Medak@fws.gov>" <Christine\_Medak@fws.gov>  
**Date:** September 6, 2012 11:19:36 AM PDT  
**To:** "Paul Weghorst" <Weghorst@irwd.com>  
**Subject:** DEIR for Michelson Water Recycling Plant Phase 2 & 3

In Reply Refer To:  
FWS-OR-12B0344-12TA0569

Mr. Weghorst,

The U.S. Fish and Wildlife Service was unable to provide comments on the subject DEIR within the allowed public comment period. Although the comment period has concluded, we request your consideration of the following measure to ensure construction of the proposed project does not result in impacts to the federally endangered least Bell's vireo (*Vireo bellii pusillus*, vireo). The vireo consistently nests in the riparian woodland adjacent to the proposed project site during the period between March 15 and September 15. The proposed project is anticipated to be initiated in the winter of 2013 and will be constructed over a period of 36 to 48 months. To ensure impacts to vireo are avoided, mitigation measure BIO-2 will be implemented, which includes surveys for vireo and identifies potential delays in construction and/or the erection of noise barriers to avoid abandonment of active nests as a result of construction noise and disturbance. Because of the high probability of vireo nesting immediately adjacent to the project site, we recommend the installation of a noise barrier prior to the first nesting season following the initiation of construction (i.e., winter of 2013/2014). The noise barrier should be of adequate height, length and materials to maintain ambient noise levels in the adjacent riparian woodland for the duration of the construction period. Assuming construction is initiated in the winter of 2013, the effectiveness of the fencing to reduce noise levels to ambient conditions should be tested with noise monitoring equipment prior to March 15, 2014. Fencing should be maintained in working condition until completion of the project. With this measure in place, and assuming effective noise attenuation, you will avoid the need to conduct vireo monitoring throughout the three or four vireo breeding seasons that may occur within the construction period.

1

We appreciate your coordination on this project. Should you have any questions regarding this message, please feel free to contact me.

Christine L. Medak  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
6010 Hidden Valley Road  
Carlsbad, CA 92011  
(760) 431-9440 ext. 298  
<http://www.fws.gov/carlsbad/>



EDMUND G. BROWN JR  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE of PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX  
DIRECTOR

September 4, 2012

Paul Weghonst  
Irvine Ranch Water District  
15600 Sand Canyon Avenue  
Irvine, CA 92618

Subject: Biosolids Handling and Energy Recovery Facilities Project  
SCH#: 2011031091

**ENGINEERING & PLANNING**

**SEP 06 2012**

**IRVINE RANCH  
WATER DISTRICT**

Dear Paul Weghonst:

The State Clearinghouse submitted the above named Supplemental EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 31, 2012, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

  
Scott Morgan  
Director, State Clearinghouse

Enclosures  
cc: Resources Agency

Document Details Report  
State Clearinghouse Data Base

Comment Letter SCH

**SCH#** 2011031091  
**Project Title** Biosolids Handling and Energy Recovery Facilities Project  
**Lead Agency** Irvine Ranch Water District

**Type** SIR Supplemental EIR  
**Description** Note: Extended per lead

The IRWD proposes to implement modifications to the Michelson Water Recycling Plant Phase 2 and 3 Capacity Expansion Project to include a new Biosolids Handling Component (proposed project). The proposed project would integrate a new residuals-handling system at the MWRP; which would include biosolids processing, biogas management, and energy recovery systems. The proposed project would process residuals.

**Lead Agency Contact**

**Name** Paul Weghonst  
**Agency** Irvine Ranch Water District  
**Phone** (949) 453-5632 **Fax**  
**email**  
**Address** 15600 Sand Canyon Avenue  
**City** Irvine **State** CA **Zip** 92618

**Project Location**

**County** Orange  
**City** Irvine  
**Region**  
**Lat / Long** 33° 39' 57" N / 117° 50' 24" W  
**Cross Streets** Michelson Drive/Carlson Avenue  
**Parcel No.**  
**Township**

**Proximity to:**

**Highways** I-405  
**Airports** John Wayne  
**Railways**  
**Waterways** San Diego Creek  
**Schools** UC Irvine  
**Land Use** City of Irvine Land Use: Institutional (Public Facilities); City of Irvine Zoning: Institutional

**Project Issues** Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Recreation/Parks; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

**Reviewing Agencies** Resources Agency; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Resources, Recycling and Recovery; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 12; CA Department of Public Health; Air Resources Board, Major Industrial Projects; Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; California Energy Commission; Native American Heritage Commission

**Date Received** 07/03/2012 **Start of Review** 07/03/2012 **End of Review** 08/31/2012



EDMUND G. BROWN JR.  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX  
DIRECTOR

## Memorandum

**Date:** August 16, 2012  
**To:** All Reviewing Agencies  
**From:** Scott Morgan, Director  
**Re:** SCH # 2011031091  
Biosolids Handling and Energy Recovery Facilities Project

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Pursuant to the attached letter, the Lead Agency has extended the review period for the above referenced project to **August 31, 2012** to accommodate the review process. All other project information remains the same.

**cc:** Jennifer Jacobus  
Irvine Ranch Water District  
15600 Sand Canyon Ave  
Irvine, CA 92618

# transmittal

date August 14, 2012  attached  via regular mail

to State Clearinghouse  
1400 Tenth Street  
Sacramento, CA 95814  via messenger  via overnight mail

project Irvine Ranch Water District, Michelson Water Recycling Plant, Phase 2 & 3 Capacity Expansion Project, Biosolids Handling Component (SCH# 2100031091)

items Fifteen (15) copies of Notice of Extension of Review Period for the Draft Supplemental Environmental Impact Report (SEIR)

comments The Draft SEIR for the above-mentioned project was previously submitted to the State Clearinghouse on July 3, 2012, for distribution to appropriate state agencies. Enclosed please find 15 copies of the above-mentioned Notice of Extension of Review Period. Please use the enclosed Notice of Extension to notify state agencies that the public review period for the Draft SEIR has been extended to August 31, 2012. If you have any questions please contact Jennifer Jacobus at (213) 599-4300.

sent by Jennifer Jacobus

cc

**Notice of Completion & Environmental Document Transmittal**

Mail to: State Clearinghouse, P O Box 3044, Sacramento, CA 95812-3044 (916) 445-0613  
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

**SCH # 2011031091**

**Project Title:** Biosolids Handling and Energy Recovery Facilities Project  
**Lead Agency:** Irvine Ranch Water District  
**Contact Person:** Paul Weghorst  
**Mailing Address:** 13600 Sand Canyon Avenue  
**Phone:** (949) 455-3632  
**City:** Irvine  
**Zip:** 92618  
**County:** Orange

**Project Location:** County: Orange City/Nearest Community: Irvine  
**Cross Streets:** Michelson Drive/Carlson Avenue Zip Code: 92612  
**Lat / Long:** 33° 29' 32" N / 117° 50' 24" W Total Acres: 4.6  
**Assessor's Parcel No:** Section: Twp: Range: Base:  
**Within 2 Miles:** State Hwy #: I-405 Waterways: San Diego Creek  
 Airports: John Wayne Airport Railways:  
 Schools: U.C. Irvine

**Document Type:**  
 CEQA:  NOP  Draft EIR  NEPA:  NOI  Final Document  
 Early Cons  Supplement/Subsequent EIR  EA  Final Document  
 Neg Dec (Prior SCH No.) 2005051174  Draft EIS  Other  
 Alt Neg Dec Other  FONSI



**Local Action Type:**  
 General Plan Update  Specific Plan  Rezone  Annexation  
 General Plan Amendment  Master Plan  Prezone  Redevelopment  
 General Plan Element  Planned Unit Development  Use Permit  Coastal Permit  
 Community Plan  Site Plan  Land Division (Subdivision, etc.)  Other

**Development Type:**  
 Residential: Units \_\_\_\_\_ Acres \_\_\_\_\_  Water Facilities: Type \_\_\_\_\_ MGD \_\_\_\_\_  
 Office: Sq ft \_\_\_\_\_ Acres \_\_\_\_\_ Employees \_\_\_\_\_  Transportation: Type \_\_\_\_\_  
 Commercial: Sq ft \_\_\_\_\_ Acres \_\_\_\_\_ Employees \_\_\_\_\_  Mining: Mineral \_\_\_\_\_  
 Industrial: Sq ft \_\_\_\_\_ Acres \_\_\_\_\_ Employees \_\_\_\_\_  Power: Type Microturbine MW 1.6  
 Educational  Waste Treatment: Type Biosolids Handling MGD 33  
 Recreational  Hazardous Waste: Type \_\_\_\_\_  
 Other \_\_\_\_\_

**Project Issues Discussed in Document:**  
 Aesthetic/Visual  Fiscal  Recreation/Parks  Vegetation  
 Agricultural Land  Flood Plain/Flooding  Schools/Universities  Water Quality  
 Air Quality  Forest Land/Fire Hazard  Septic Systems  Water Supply/Groundwater  
 Archeological/Historical  Geologic/Seismic  Sewer Capacity  Wetland/Riparian  
 Biological Resources  Minerals  Soil Erosion/Compaction/Grading  Wildlife  
 Coastal Zone  Noise  Solid Waste  Growth Inducing  
 Drainage/Absorption  Population/Housing Balance  Toxic/Hazardous  Land Use  
 Economic/Job  Public Services/Facilities  Traffic/Circulation  Cumulative Effects  
 Other \_\_\_\_\_

**Present Land Use/Zoning/General Plan Designation:**  
 City of Irvine Land Use: Institutional (Public Facilities); City of Irvine Zoning: Institutional  
 Project Description: (please use a separate page if necessary)

The Irvine Ranch Water District (IRWD) proposes to implement modifications to the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project to include a new Biosolids Handling Component (proposed project). The proposed project would integrate a new residuals-handling system at the MWRP, which would include biosolids processing, biogas management, and energy recovery systems. The proposed project would process residuals

State Clearinghouse Contact: (916) 445-0613  
 State Review Began: 07-03-2012  
 SCH COMPLIANCE: 08-31-2012

*NOTE: Extended review lead*

Please note State Clearinghouse Number (SCH#) on all Comments

SCH#: 2011031091  
 Please forward late comments directly to the Lead Agency

AQMD APCD 33

Resources: 07 07,

- Project Sent to the following State Agencies
- Resources
  - Boating & Waterways
  - Coastal Comm
  - Colorado Rvr Bd
  - Conservation
  - Fish & Game # 5
  - Delta Protection Comm
  - Cal Fire
  - Historic Preservation
  - Parks & Rec
  - Central Valley Flood Prot.
  - Bay Cons & Dev Comm
  - DWR
  - Cal EMA
  - Resources, Recycling and Recovery
  - Bus Transp Hous
  - Aeronautics
  - CHP
  - Caltrans # 12
  - Trans Planning
  - Housing & Com Dev
  - Food & Agriculture
  - Public Health
  - State/Consumer Svcs
  - General Services
  - Cal EPA
  - ARB: Airport/Energy Projects
  - ARB: Transportation Projects
  - ARB: Major Industrial Projects
  - SWRCB: Div. Financial Assist.
  - SWRCB: Wtr Quality
  - SWRCB: Wtr Rights
  - Reg. WQCB # 8
  - Toxic Sub Ctrl-CTC
  - Yth/Adlt Corrections
  - Corrections
  - Independent Comm
  - Energy Commission
  - NAHC
  - Public Utilities Comm
  - State Lands Comm
  - Tahoe Reg Plan Agency
  - Conservancy
  - Other \_\_\_\_\_

# CHAPTER 11

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## Responses to Comments

This chapter contains the responses to the comment letters received during the public review period for the Draft SEIR. The comment letters are provided in Chapter 10 (see Table 10-1). The individual comments in each letter have been bracketed and numbered. The responses are provided below and are labeled to correspond to the numbered bracketed comments that appear in the margins of the comment letters.

Where the responses indicate revisions, additions or deletions to the text of the Draft SEIR, the text is indented and additions are indicated in underline and deletions in ~~strikeout~~. All corrections and additions are compiled in Chapter 12.

### 11.1 Odor Control Master Response

Some comments received on the Draft SEIR related to odor control were duplicative or similar. As a result, a master response has been prepared to comprehensively and efficiently address these multiple comments. Individual responses to each comment as bracketed and numbered in Chapter 10 follow the master response (see Section 11.2 below). The individual responses cross-reference the master response where appropriate and applicable.

#### Odor Control System Description

Various comments pertain to the potential for the proposed project to create objectionable odors that may be detectable beyond the MWRP boundary. Odor impacts are evaluated in the Draft SEIR and are considered less than significant without mitigation (see Draft SEIR pages 3.2-21 and 3.2-22). As described in the Draft SEIR on pages 2-11 and 2-12, the proposed project includes a highly-reliable, state-of-the-art odor control system with built-in redundancy and back-up power generators to ensure the system would operate at full effectiveness. The odor control system design would remove odorous compounds associated with biosolids treatment beyond detectable levels, including removal of hydrogen sulfide (H<sub>2</sub>S) and ammonia, which are the compounds primarily associated with nuisance odor (rotten egg smell) at water reclamation facilities. The odor control system would reduce odor to a non-detectable level at the MWRP property boundaries.

The project features that ensure odor control are as follows:

- All biosolids handling equipment would be enclosed within the facility.
- Each piece of equipment would be connected to a very reliable system that vacuums odors off the equipment and sends them to a three-stage wet odor scrubbing system.

- The treatment and combustion of biogas would occur in a completely enclosed environment and odors never would be released into the atmosphere.
- The proposed odor control system would be operated under a regulatory permit by South Coast Air Quality Management District (SCAQMD) and thus would be required to comply with established permit conditions, including a requirement for maintaining control efficiency for hydrogen sulfide removal.

In addition, as explained in the Draft SEIR, IRWD would prepare and implement an Odor Control Maintenance and Monitoring Plan (Plan). The Plan would define a schedule for regular preventative maintenance of the odor control system equipment and back-up generators. The odor control system would be designed to allow any of the three scrubbers to be taken out of service for cleaning while maintaining full operational effectiveness through the remaining two scrubbers. The Plan would also include a schedule for odor monitoring along the IRWD property boundary, and a protocol for handling and resolving odor complaints. The Plan would thereby ensure that the odor control system will preclude detectable odor beyond the MWRP boundary.

### **Odor Control System Operators**

The proposed project includes systems that presently are not in use at other IRWD facilities. All IRWD operators have certification through the state and are required to renew their certification every two years; all operators at the MWRP would have state certification for wastewater treatment plant operations. In accordance with IRWD's standard operating and training procedures, the operators of the proposed project facilities, including the odor control system, would receive extensive training from the equipment manufacturers and process designers and undergo rigorous testing prior to operation of the facility. IRWD operators would receive hands-on cross training from other agencies and experts that manage similar biosolids processes. These procedures would ensure that, from initial start up through the life of the project, IRWD staff are properly trained and ready to operate the new facilities competently, including carrying out preventative maintenance and monitoring activities, such as those defined by the Odor Control Maintenance and Monitoring Plan, to ensure the systems are operated as originally designed. These procedures would ensure long-term operational safety and reliability.

### **Model System in Mesa, Arizona**

The odor control system has been modeled after an odor scrubbing system installed at the City of Mesa's Northwest Water Reclamation Plant, which has a proven record of zero odors detected at the treatment plant boundary since it came on-line in 1989 and started processing biosolids in 2001. The odor control system for the proposed project also has been designed by the same expert engineering firms that designed the system at the Mesa reclamation plant.

The City of Mesa has not had any odor complaints from its neighbors located within a quarter mile of the reclamation plant or any other neighbors. Neighbors include businesses, auto dealerships, recreational facilities (park, golf course), single family homes, and apartment buildings. The Mesa odor control system is so successful that investors are building a major league baseball spring training facility, as well as shops and restaurants, adjacent to the

reclamation plant in place of the park and golf course. The spring training facility will include nine baseball fields and seating for 10,000 spectators. Operation of the Mesa reclamation plant has had no impact on community development in the surrounding area.

The odor control system for IRWD's proposed project includes additional processes that improve upon the Mesa system. Rather than the two-stage odor scrubber system that is installed at the Mesa plant, the proposed odor control system includes a three-stage odor scrubber system, which provides for greater removal of odor-causing compounds and increased reliability of the effectiveness of the system.

Comments on the Draft SEIR include requests for visits to and tours of the Mesa plant in order to conduct a "sniff test" and discuss plant operations with staff and neighbors. The Mesa odor control system has been operating for over ten years and is fully effective. However, touring the Mesa plant would not be directly relevant to the assessment of potential impacts associated with the proposed project, since IRWD's proposed odor control system includes an additional stage of odor scrubbing, which would substantially increase the effectiveness and reliability of the system. In addition, the liquid treatment system at the Mesa plant is different from that at the MWRP. Therefore, a "sniff test" of the Mesa plant would not be representative of the system to be included as part of the proposed project.

### **Peer Review of Odor Control System Design**

Comments on the Draft SEIR from the University Synagogue include the results of a peer review of the Preliminary Design Report and Process Validation Study for the proposed project. Mr. Blake Anderson, former General Manager of Orange County Sanitation District (OCS), has provided a positive review, confirming that the design of the proposed project is state-of-the-art and that there are no concerns regarding the process designs.

Comments from the City of Irvine request an independent third-party assessment of the odor control system at the Mesa plant to determine the potential for odors associated with the proposed project. Since the proposed odor control system includes an additional stage of odor scrubbing that does not exist at the Mesa plant, it is not directly comparable to the Mesa plant systems. In lieu of a third-party assessment of the Mesa plant, IRWD retained engineers at Dudek to provide an additional peer review of the proposed project design of the odor control system. This review was conducted by recognized experts in the design, construction and management of wastewater collection, treatment, tertiary reclamation and advanced treatment facilities. A peer review letter was prepared by Dudek and is included as **Appendix E**. This review resulted in the conclusion that "the use of chemical scrubbers for treatment of odorous foul air has been successful in many odor control projects" and that the odor control strategy and specific odor control systems included in the proposed project "are robust and meet or exceed industry standard practices." In addition, it is expected that "the systems will effectively contain, convey and treat the volume and type of odorants that will be produced by the multitude of systems and equipment in the biosolids handling facilities."

## Public Outreach

Comments on the Draft SEIR from the University Synagogue include a suggestion that IRWD establish a third-party Operational Review Panel (Panel) that would serve as a liaison between the community and IRWD. The suggested Panel would have the ability to review operational reports, inspect operational facilities and have access to staff, and would complete evaluation reports that would be conveyed to the community.

IRWD's community outreach program already provides for direct communication with the surrounding community. Although not required as mitigation for any particular impact identified in the Draft SEIR, as part of IRWD's ongoing public outreach for the proposed project, IRWD will schedule quarterly community outreach meetings for the duration of project construction and through facility start-up activities. At the community meetings, IRWD will provide updates regarding construction progress, plans for project start-up, overviews of the start-up process, overviews of the Odor Control Maintenance and Monitoring Plan and plans for long-term operations and maintenance of the facilities. In addition IRWD will provide for periodic, independent, third-party technical reviews during construction and start-up of the project. The results of these third-party reviews will be presented at these meetings. IRWD will address issues of concern to the community as well. Once the project is operational, the quarterly outreach meetings will be discontinued and neighbors will be able to contact IRWD's Public Affairs Department with questions, concerns, or complaints. The Public Affairs Department will follow the protocol for handling and resolving complaints as described in the Odor Control Maintenance and Monitoring Plan. The text of the Draft SEIR has been revised as shown below to incorporate the public outreach commitments into the Project Description.

Page 2-15:

### 2.5.4 Public Outreach

As part of IRWD's ongoing public outreach for the proposed project, IRWD will schedule quarterly community outreach meetings for the duration of project construction and through facility start-up activities. At the community meetings, IRWD will provide updates regarding construction progress, plans for project start-up, overviews of the start-up process, overviews of the Odor Control Maintenance and Monitoring Plan and plans for long-term operations and maintenance of the facilities. In addition IRWD will provide for periodic, independent, third-party technical reviews during construction and start-up of the project. The results of these third-party reviews will be presented at these meetings. IRWD will address issues of concern to the community as well.

Page 2-20:

## **2.6.5 Community Relations**

Once the project is operational, the quarterly outreach meetings, mentioned in Section 2.5.4 above, will be discontinued and neighbors will be able to contact IRWD's Public Affairs Department with questions, concerns, or complaints. The Public Affairs Department will follow the protocol for handling and resolving complaints as described in the Odor Control Maintenance and Monitoring Plan.

## **11.2 Responses to Individual Comments**

### **Letter 1, Native American Heritage Commission**

#### **Comment NAHC-1**

The comment states that a NAHC Sacred Lands File search did not identify cultural resources in the project area. The comment also states that early consultation with Native American tribes is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). The comment urges contact with the list of Native American Contacts and requests that Native American consulting parties be provided pertinent project information. The NAHC recommends pursuing a project that would avoid damage to Native American cultural resources.

#### **Response to NAHC-1**

There are no known Native American cultural resources within the project APE. As part of the cultural resources research methods for the analysis in the Draft SEIR, archival research, historic map and aerial review, and contact with the NAHC was conducted. A records search for the project was conducted on March 15, 2011 at the South Central Coastal Information Center (SCCIC) at the California State University, Fullerton. A Sacred Lands File search with the NAHC was requested on March 8, 2011 and results were prepared by the NAHC on March 18, 2011 indicating Native American resources that were identified within ½ mile of the project area. As noted on page 3.4-7 of the Draft SEIR, contact letters to all individuals and groups indicated by the NAHC with affiliation to the project were prepared and mailed on March 18, 2011. The letters described the project and included a map indicating the location of the project area. Recipients were requested to reply with any information they were able to share about Native American resources that might be affected by the proposed project. To date, two responses were received: Alfred Cruz of the Juaneno Band of Mission Indians and Joyce Perry of the Juaneno Band of Mission Indians, Acjachemen Nation. Mr. Cruz and Ms. Perry requested Native American and archaeological monitoring during construction and all ground-disturbing activities. The Draft SEIR includes mitigation measures that require construction monitoring during ground-disturbing activities for both archaeological (Mitigation Measure CUL-1) and paleontological (Mitigation Measure CUL-3) resources. Mitigation Measure CUL-1 also states that "(d)ue to the sensitivity of

the project area for Native American resources, at least one Native American monitor may, if requested, also monitor ground-disturbing activities in the project area.”

**Comment NAHC-2**

The comment states that consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of the federal National Environmental Policy Act (NEPA) and Section 106 and 4(f) of the federal National Historic Preservation Act (NHPA) (16 U.S.C. 470 et seq), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 et seq. and NAGPRA (25 U.S.C. 3001- 3013) as appropriate.

**Response to NAHC-2**

Please refer to **Response to NAHC-1** above. There is no federal nexus at this time for the proposed project, and therefore NEPA and NHPA do not apply.

**Comment NAHC-3**

The comment states that confidentiality of “historic properties of religious and cultural significance” should also be considered as protected by California Government Code Section 6254(r) and may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places.

**Response to NAHC-3**

California Government Code Section 6254(r) exempts from disclosure public records of Native American graves, cemeteries, and sacred places maintained by the NAHC. The project area is highly sensitive for archeological resources as a total of eight archaeological sites and seven isolates have been previously recorded within ½ mile of the project area, as noted in Table 3.4-1 of the Draft SEIR. The exact locations of such sites have not been disclosed to the public in the Draft SEIR to protect confidentiality of protected cultural resources.

**Comment NAHC-4**

The comment states Public Resources Code Section 5097.98, California Government Code Section 27491 and Health & Safety Code Section 7050.5 provide provisions for accidental discovery of human remains and mandate the processes to be followed in the event of a discovery of any human remains in a project location other than a “dedicated cemetery.”

**Response to NAHC-4**

The proposed project would involve ground-disturbing activities with the possibility that such actions could unearth, expose, or disturb previously unknown human remains interred outside of a formal cemetery. The Draft SEIR includes Mitigation Measure CUL-5, which would ensure impacts to human remains are less than significant. The mitigation measure requires that if human remains are uncovered during project construction, all work shall be stopped, the Orange County Coroner will be contacted, and procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines shall be followed.

**Comment NAHC-5**

The comment states that to be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors.

**Response to NAHC-5**

The people and organizations identified by NAHC have been notified of the project as discussed on page 3.4-7 of the Draft SEIR. See **Response to NAHC-2** above.

**Comment NAHC-6**

The comment states that when Native American cultural sites and/or Native American burial sites are prevalent in the project site, the site should be avoided.

**Response to NAHC-6**

As stated above, there are no known Native American cultural or burial sites located within the project APE. Mitigation Measures CUL-1 and CUL-2 requires that prior to the start of any earth-moving activity, an archeological monitor would be retained by IRWD to monitor ground-disturbing activities. Due to the sensitivity of the project area for Native American resources, at least one Native American monitor may, if requested, also monitor ground-disturbing activities in the project area. In addition, if cultural resources are encountered, construction activities shall be redirected until it can be evaluated by a qualified archeologist. In addition, Mitigation Measure CUL-5 will require that the project adhere to the provision for the discovery of human remains. See **Responses to NAHC-3** and **NAHC-4** above.

## Letter 2, Department of Toxic Substances Control

**Comment DTSC-1**

The comment states that SEIR should evaluate whether conditions within the Project area may pose a threat to human health or the environment. The comment lists databases of associated regulatory agencies.

**Response to DTSC-1**

A search of Cortese List databases was conducted for locations of hazardous materials sites in the project area and is discussed on page 3.7-3 of the Draft SEIR. Regulatory databases researched included the State water Resources Control Board (SWRCB) Geotracker database for leaking underground fuel tanks (LUFTS) and underground storage tanks (USTs), the SWRCB Spills, Leaks, Investigations, and Cleanup Database (SLIC), and the State of California's Envirostor database maintained by the DTSC.

**Comment DTSC-2**

The comment states that the SEIR should identify the mechanism to initiate any required investigation and/or remediation for any site within the proposed project area that may be contaminated, and the government agency to provide appropriate regulatory oversight.

**Response to DTSC-2**

Discussed on page 3.7-3 and 3.7-11 of the Draft SEIR, the proposed project site has previously been listed as a hazardous materials site, with gasoline and diesel listed as potential contaminants of the subsurface soil. Underground storage tanks and associated piping were removed, and tests of soil and groundwater detected minor concentrations of petroleum hydrocarbons that were well below regulatory action levels. The case was closed in 2004. Typically, sites are closed once they have demonstrated there is no significant risk to human health or the environment. Nonetheless, in the event that hazardous materials are discovered during project construction and operation, the appropriate regulatory agency will be notified, and requirements for remediation implemented as necessary.

**Comment DTSC-3**

The comment states that any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The comment also states that the SEIR should summarize the findings of any investigations including environmental site assessments and a table summarizing all hazardous substances found. All closure, certification or remediation approval reports by regulatory agencies should be included in the SEIR.

**Response to DTSC-3**

Please refer to **Response to DTSC-2** above. The project site currently has no known releases of hazardous materials that would require investigation, sampling and/or remediation. In the event that hazardous materials contamination is discovered at the project site, IRWD would be required to comply with all federal and state regulations pertaining to abatement or disposal of hazardous materials and wastes to protect public health and the environment. IRWD would contact the appropriate regulatory agencies with jurisdiction over any and all hazardous substances and develop a Workplan if necessary.

**Comment DTSC-4**

The comment states that if buildings, structures, or other asphalt or concrete-paved surface areas are to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACM). The comment also states that proper precautions should be taken during demolition activities if any hazardous chemicals, lead-based paints or products, mercury or ACMs are identified, and the contaminants should be remediated in compliance with California environmental regulations and policies.

**Response to DTSC-4**

The comment is noted. The proposed project would not require the demolition of any existing buildings or structures.

**Comment DTSC-5**

The comment states that project construction may require soil excavation or filling that may require sampling. Contaminated must be properly disposed. Land Disposal Restrictions (LDRs) may be applicable to the soils. Imported soils used for backfill should be sampled to ensure the imported soil is free of contamination.

**Response to DTSC-5**

If contaminated soils are encountered during project construction, IRWD would be required to comply with the U.S. Environmental Protection Agency's (USEPA) LDR Program before disposal of such soils in any landfill. The LDR Program ensures that toxic constituents present in hazardous waste are properly treated before hazardous waste is land disposed. IRWD would ensure that any contaminated soils are treated to the standards required by the LDR Program before being placed in a landfill. The Draft SEIR includes Mitigation Measure HAZ-1 that would ensure that contaminated soils are removed and disposed of in accordance with applicable regulations. Any imported soils used for backfill for the proposed project would be engineered fill, with documented constituents and characteristics, to ensure it is free of contamination.

**Comment DTSC-6**

The comment states that human health and the environment of sensitive receptors should be protected during construction or demolition activities. The comment also requests that if necessary a health risk assessment overseen by the appropriate government agency and conducted by a qualified health risk assessor be conducted to determine if any potential releases of hazardous materials may pose a health or environmental risk.

**Response to DTSC-6**

The Draft SEIR determines on page 3.2-18 through 3.2-20 that sensitive receptors would not be adversely affected during project construction due to toxic air contaminants. IRWD has determined that a health risk assessment is not required. All schools are more than one-quarter mile from the project site (Draft SEIR, page 3.7-11). As assessment of risks to the public or environment associated with the routine transport, use, or disposal of hazardous materials is assessed in the Draft SEIR on pages 3.7-11 through 3.7-13. Mitigation Measure HAZ-1 includes Best Management Practices (BMPs) that the construction contractor would be required to implement to prevent the accidental release of hazardous materials during construction.

**Comment DTSC-7**

The comment states if the site was used for agricultural, livestock or related activities, onsite soils and groundwater may contain pesticides, agricultural chemical, organic waste or other related residue. The comment requests that if necessary, proper investigation and remedial actions be conducted by a government agency prior to project construction.

**Response to DTSC-7**

The comment is noted. The proposed project is not located on farmland that was once used for agriculture, livestock or related activities.

**Comment DTSC-8**

The comment states that if hazardous wastes are generated by project operations, waste must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If hazardous wastes will be generated, the facility should obtain a USEPA Identification Number. The comment further states that certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require

authorization from the local Certified Unified Program Agency (CUPA), and suggests contacting the local CUPA.

**Response to DTSC-8**

The applicability of the California Hazardous Waste Control Law to the project is acknowledged in the Draft SEIR on pages 3.7-5 and 3.7-6. The applicability of the Unified Program and identification of the Orange County Health Care Agency as the local CUPA can be found in the Draft SEIR on pages 3.7-6 through 3.7-8. The proposed project would not generate hazardous wastes but would require handling, storage, and use of hazardous materials. As such, IRWD would prepare a Risk Management Plan, which would be kept on file with the Orange County Fire Authority and USEPA. IRWD also would prepare a Hazardous Materials Business Plan and Emergency Response Plan, which would be submitted to local health and fires departments.

**Comment DTSC-9**

The comment states that DTSC can provide cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies that are not responsible parties, or a Voluntary Cleanup Agreement (VCA) for private parties.

**Response to DTSC-9**

The comment is noted.

## **Letter 3, Airport Land Use Commission**

**Comment ALUC-1**

The comment states that a Notice of Proposed Construction or Alteration, FAA Form 7460-1 will be required for the crane and other construction equipment. The comment also recommends that the SEIR include a description of the proposed building heights above mean sea level (AMSL) using National Geodetic Vertical Datum of 1929 (NGVD29) or North American Vertical Datum 1988 (NAVD88), which will assist in determining the project's impact on the Federal Aviation Regulation (FAR) Part 77 Obstruction Imaginary Surfaces for JWA. The comments request a copy of the FAA aeronautical study.

**Response to ALUC-1**

The general topography of the proposed project is described in page 2-1 of the Draft SEIR. The MWRP property is generally flat varying between 10 and 24 feet above mean sea level (amsl) and is generally recessed below grade from the San Diego Creek but separated by the floodwall. The site of the proposed Biosolids Handling Component gently slopes from east to west with elevations ranging from 16 to 24 feet amsl. The maximum building height for the proposed project would be the Solids Handling Building which would rise to approximately 70 feet above grade. Therefore the maximum potential building height would be 94 feet amsl. IRWD will provide the ALUC with a copy of the FAA aeronautical study.

**Comment ALUC-2**

The comment states that the SEIR should identify if the project allows for heliports as defined in the AELUP for Heliports. If heliports are developed, proposals to develop new heliports must be

submitted through the city to the ALUC for review and action pursuant to Public Utilities Code Section 21661.5. Heliport projects must comply fully with the state permit procedure provided by law and with all applicable conditions of approval.

**Response to ALUC-2**

The proposed project does not include the development of a new heliport.

## Letter 4, University Synagogue (1)

**Comment US(1)-1**

The comment states that University Synagogue is primarily concerned with odor and the attendant risks to the Synagogue, its members, and the users of its facilities. It also requests additional time for preparation and submission of comments and requests that the District accept comments from the University Synagogue after August 16, 2012, which was the close of the public review period for the Draft SEIR.

**Response to US(1)-1**

There would be no risks to the Synagogue, its members, or users due to odor. Please refer to the **Odor Control Master Response**. In addition, IRWD extended the public review period for the Draft SEIR to August 30, 2012, in response to the request by University Synagogue to accept comments beyond August 16, 2012. The additional comment letter submitted by University Synagogue on August 28, 2012, is also included in this Final SEIR (see Letter 12 below).

**Comment US(1)-2**

The comment discusses the odor control system modeled after one in Mesa, Arizona. The comment requests confirmation that the proposed project “would preclude odor from being detected beyond the project boundaries” and better understanding of the system, Operating Plan, back-up and contingency procedures.

The comment states that a suggestion was made for IRWD to underwrite a field trip to Mesa, Arizona, to “investigate and experience” the facility in Mesa, Arizona, and to conduct a “sniff test” and discuss plant operation with staff, adjacent landowners, and regulatory agency staff.

**Response to US(1)-2**

The proposed project design, goal, and SCAQMD permits all include requirements for no odor to be detectable at the boundary of the IRWD property. Please refer to the **Odor Control Master Response** for an overview of the system. Also please refer **Appendix E** for the results of a peer review of the proposed odor control system prepared by Dudek.

IRWD has determined that it would not be appropriate to underwrite the suggested field trip. A field trip to the facility in Mesa, Arizona would not be relevant because, as described in the **Odor Control Master Response**, the proposed odor control system has an additional odor scrubber that would render it more effective at controlling odor and allow the system to be maintained at full effectiveness during maintenance activities. A comparison between the two odor control systems

would not be considered an “apples-to-apples” comparison. Please refer to the **Odor Control Master Response**.

**Comment US(1)-3**

The comment details the membership and facilities of University Synagogue, and reiterates how important odor control is to the Synagogue because a mishap could have long-term deleterious effects on enrollment, participation, and the general financial well-being of the Synagogue.

The comment states that “odor is not only unpleasant in itself but communicates the possibility of harmful air quality.” If the system fails, the Synagogue wishes to know what contingency plans will go into effect and how the IRWD will compensate for potential losses.

**Response to US(1)-3**

As explained in the **Odor Control Master Response**, the design of the odor control system, combined with implementation of the Odor Control Maintenance and Monitoring Plan, would remove the potential for system failure and release of nuisance odors. In the event of a power failure, the proposed odor control system design includes back-up power generators to ensure the odor control system continues to operate at full effectiveness. Please refer to the **Odor Control Master Response**.

The comments related to potential economic impacts to University Synagogue due to potential odors from the proposed project do not directly address the analyses presented in the Draft SEIR and are beyond the scope of CEQA requirements. CEQA requires the lead agency to respond to comments on environmental issues from parties that have reviewed the Draft SEIR (*CEQA Guidelines* §15088(a)). CEQA does not require an analysis of economic impacts (*CEQA Guidelines* §15131). Economic impacts do not constitute significant effects on the environment, unless it can be demonstrated that the economic impacts subsequently have a direct and deleterious effect on the environment, such that the chain of cause and effect can be traced (*CEQA Guidelines* §15131). The proposed project would not result in significant effects due to odor, and therefore no economic impacts would occur as a result.

**Comment US(1)-4**

The comment states that that the proposed egg-shaped digesters communicate an odor risk. The comment states that IRWD provided a visual model of the project facility from the Synagogue vantage point and that it was unclear as to whether and what extent the domes would be visible. The comment requests that a provision is made (e.g., with landscaping) so that no part of the proposed new facilities are visible from the Synagogue and its grounds.

**Response to US(1)-4**

Please refer to the **Odor Control Master Response** for discussion regarding potential odor releases. In addition, according to the independent third-party peer review of the odor control system conducted by Dudek (see Appendix E), the egg-shaped digesters have been chosen because, relative to other digester shapes, they would be more efficient at mixing sludge and require less frequent maintenance. As stated in the peer review, “[t]he use of egg shaped digesters is anticipated to introduce an odorless facility” (Dudek, 2012, Appendix E).

As explained in the Draft SEIR, Chapter 3.1 Aesthetics, page 3.1-17, the significance criteria for impacts to aesthetic resources are based on Appendix G of the *CEQA Guidelines*. With respect to scenic views, the *CEQA Guidelines* state that a project would result in a significant impact if it would create a substantial adverse effect on a scenic vista, defined as an expansive view of a highly valued landscape from a particular public vantage point.

The Draft SEIR includes an analysis of visual impacts associated with the proposed project, including visual simulations that show the effect of the proposed project on public views from 11 vantage points located on perimeter roadways. The vantage point locations are shown in Figure 3.1-4 in the Draft SEIR, and the visual simulations that show the views from those vantage points both before and after the proposed facilities are built are included in Figures 3.1-5 through 3.1-15. The visual simulation shown in Figure 3.1-6 illustrates the effect of the proposed project on the view from the parking lot of the University Synagogue. As the Draft SEIR concludes on page 3.1-18, impacts to scenic views would be negligible since the existing views are already dominated by low-lying vegetation that screens existing development and would similarly screen the proposed new facilities, which are barely visible in Figure 3.1-6. Although not necessary to mitigate scenic views from University Synagogue, the proposed project does include a Landscape Plan that would include screenings to soften the appearance of the proposed facilities and ensure that tall landscaping trees are planted along or near the earthen berm that forms the outer perimeter boundary of the project area (Draft SEIR, page 2-12). In addition, IRWD will revegetate the two areas of the MWRP that were impacted during construction of the Phase 2 Capacity Expansion Project, including the boundary of the MWRP along Riparian View. Please refer to **Response to CICD-2** below under Letter 14, City of Irvine – Community Development.

In addition to the visual simulations provided in the Draft SEIR and in response to the comment, IRWD has prepared additional photo simulations to further demonstrate that the proposed project would have a less than significant effect on views from University Synagogue. IRWD has photographed the view of the proposed project site from eight street-level locations along the western University Synagogue property boundary, at locations where the view of the project site is not otherwise completely obscured by the Synagogue's own buildings or vegetative screens. **Exhibit A** includes a key map of the photo points and the correspondingly numbered photo simulations. The photo simulations provide a mark showing the approximate location and maximum height of the proposed solids handling building and methane digesters. The photo simulations provide additional analysis of the potential effects of the proposed structures on scenic views and support the conclusions of the Draft SEIR. **Exhibit A** illustrates that the impacts to scenic views from the University Synagogue property would be negligible since the existing views are already dominated by low-lying vegetation that screens existing development and would similarly screen the proposed new facilities. As the Draft SEIR concludes, impacts would be less than significant.

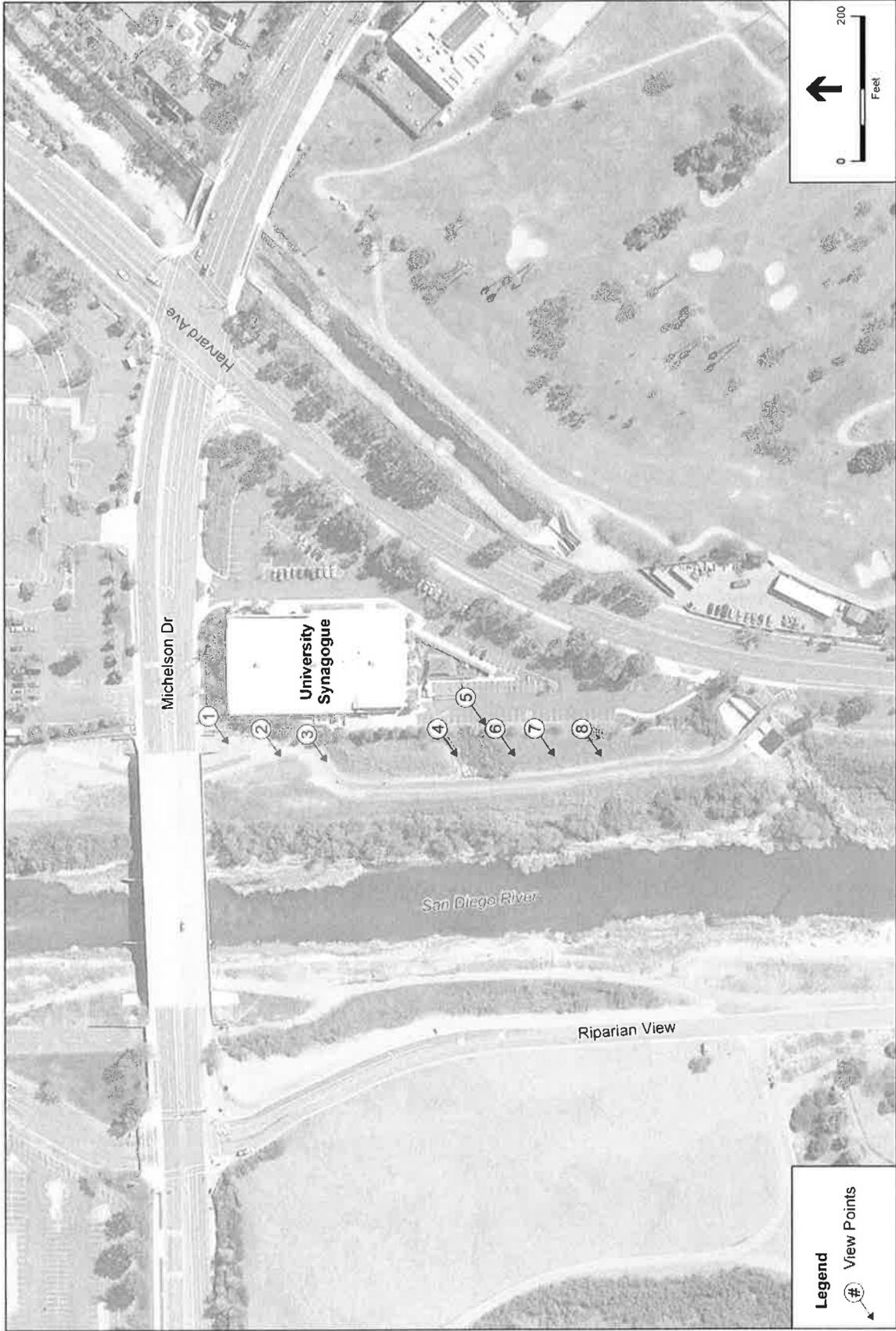




Photo View Point #1



Photo View Point #2

—70' Approximate height of proposed Solids Handling Building

SOURCE: IRWD, 2012.

MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 . 210480

**Exhibit A-1**  
Photo View Points #1 and #2



Photo View Point #3



Photo View Point #4

--70' Approximate height of proposed Solids Handling Building

SOURCE: IRWD, 2012.

MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 . 210480

**Exhibit A-2**  
Photo View Points #3 and #4



Photo View Point #5: The Solids Handling Building would not be visible from this view point.



Photo View Point #6

—70' Approximate height of proposed Solids Handling Building

SOURCE: IRWD, 2012.

MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 . 210480

**Exhibit A-3**  
Photo View Points #5 and #6



Photo View Point #7



Photo View Point #8

—70' Approximate height of proposed Solids Handling Building

SOURCE: IRWD, 2012.

MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 . 210480

**Exhibit A-4**  
Photo View Points #7 and #8

**Comment US(1)-5**

The comment expresses concern that the physical environment of University Synagogue will be negatively impacted by the physical presence of the project, conveying a magnified sense of industrialization. The Synagogue supports the increased sustainability for the community that the project will provide, but believes the project will devalue its property. The comment states that the University Synagogue does not wish “to bear the financial burden for a more general public savings from the Proposed Project that, if distributed over thousands of households, would be minimal.” The comment once again stresses the importance that the project facility is not visible from the synagogue or its environs.

**Response to US(1)-5**

The Draft SEIR does not identify any physical environmental effects to the University Synagogue as a result of the proposed project. As stated in **Response to US(1)-4**, the proposed project would not have significant effects on scenic views from the University Synagogue. Therefore, no economic impacts would occur as a result. Currently existing views of the project area are dominated by a backdrop of high-rise buildings and urban development screened by low-lying vegetation that would also screen the proposed new facilities, which would be barely visible as shown in Figure 3.1-6 of the Draft SEIR. The proposed project would neither create nor magnify an appearance of industrialization.

**Comment US(1)-6**

The comment expresses appreciation for IRWD’s willingness to accept and respond to comments provided after the close of the original comment period and to consider underwriting a field trip to the City of Mesa’s treatment facility.

**Response to US(1)-6**

IRWD extended the public review period for the Draft SEIR to August 30, 2012, in response to the request by University Synagogue to accept comments beyond August 16, 2012, which was the close of the original review period. The additional comment letter submitted by University Synagogue on August 28, 2012, is also included in this Final SEIR (see Letter 12 below).

IRWD has determined that it would not be appropriate to underwrite the suggested field trip to the Mesa facility. Please refer to **Response to US(1)-2**.

## Letter 5, Department of Transportation

**Comment DOT-1**

The Department has no comment at this time, but in the event of any activity in the Department’s right-of-way, an encroachment permit will be required.

**Response to DOT-1**

The comment is noted.

## Letter 6, Orange County Public Works

### Comment OCPW-1

The comment provides clarification about the proper names for the trails and bikeways in and around the project area.

### Response to OCPW-1

In response to the comment, the following changes have been made on page 3.12-3 of the Draft SEIR:

**Harvard Avenue** runs along the eastern boundary of the MWRP site on the east side of San Diego Creek. Between Michelson Drive and University Drive, Harvard Avenue traverses in a northeast/southwest direction and transitions between a two- to four-lane undivided roadway. This roadway is designated as a Commuter Highway in the City of Irvine Master Plan of Arterial highways. The posted speed limit is 50 miles per hour, and there is no on-street parking allowed within this portion of the roadway. Adjacent to the east side of Harvard Avenue along this stretch is the Rancho San Joaquin Golf Course, while the paved San Diego Creek Class I Bikeway ~~Peters Canyon Trail~~ runs adjacent to the west side. A sidewalk is located on the southbound roadway (approximately 5 feet in width) at the beginning of the Harvard Avenue and Michelson Drive intersection, but ends after approximately 700 feet further down Harvard Avenue. The sidewalk continues near the Harvard Avenue and University Drive intersection for approximately 1,300 feet. A bike lane (approximately 7 feet in width) is available on both sides of the roadway.

### Comment OCPW-2

The comment suggests detailed edits to page 3.12-5 of the Draft SEIR regarding bikeways, bike paths, and trails.

### Response to OCPW-2

In response to the comment, the following changes have been made on page 3.12-5 of the Draft SEIR:

#### ***Bicycle and Pedestrian Transportation***

The City of Irvine has an extensive ~~trail~~ non-motorized system that includes pedestrian walkways, Class I Bikeways, and Class II Bike Lanes and bike trails within open space corridors and along regional ~~trails~~ flood control facilities. The County of Orange also operates and maintains a separate master-planned system of riding and hiking trails, several of which are found in the City. These trails (the Peters Canyon, Hicks Canyon and Irvine Coast) are used by walkers, joggers, equestrian riders and mountain bicyclists. Class I Bikeways and Class II Bike Lanes, however, comprise the most extensive part of the City's non-motorized circulation network. The City's bicycle network connects with other off-road and on-road bicycle facilities, riding and hiking trails and other types of pathways in adjoining

~~communities and throughout Orange County. The County maintains a coordinated system of trails, including bikeways, equestrian trails and hiking trails within the cities. Bikeways comprise the most extensive part of the City's trail network. The biking network in Irvine connects with other trails and paths in adjacent communities and throughout Orange County. The three categories of bikeways as described in the Caltrans Highway Design Manual, Chapter 1000, are:~~

- Class I: a paved path that is separate from any motor vehicle travel lane;
- Class II: a restricted lane within the right-of-way of a paved roadway for the exclusive or semi-exclusive use of bicycles; and
- Class III: a bikeway that shares the street with motor vehicles or the sidewalk with pedestrians.

The City of Irvine contains 44.5 miles of off-road Class I Bikeways ~~bicycle trails~~ and 282 miles of on-road Bike Lanes ~~bicycle lanes within the City~~. The closest bicycle facilities ~~bike paths~~ to the project site include a Class I Bikeway ~~bike path~~ along San Diego Creek and Harvard Avenue and University Drive, and Class II Bike Lanes ~~Bikeways~~ located along Campus Drive, Culver Drive, Carlson Avenue, Michelson Drive, Harvard Avenue, and University Drive (OCTA, 2010).

### **Comment OCPW-3**

The comment states that the “bike path” described as being on the east side of San Diego Creek should be called the “San Diego Creek Class I Bikeway” and suggests editing the name on pages 3.9-1, 3.1-1, 3.1-2, 3.1-18, and 3.2-5.

### **Response to OCPW-3**

In response to the comment, the following changes have been made to the Draft SEIR:

#### Page 3.9-2:

The San Diego Creek Class I Bikeway is located ~~A bike path~~ on the east side of San Diego Creek, ~~is~~ approximately 1400 feet or 0.25 miles from the project site. This bike path runs between Harvard Avenue and San Diego Creek.

#### Page 3.1-1:

The San Diego Creek Class I Bikeway ~~A bike path~~ and the Rancho San Joaquin Golf Course are located across the San Diego Creek to the east of the property. Distant views in the vicinity of the project area include a mixture of residential apartment buildings and commercial developments to the north and south.

#### Page 3.1-2:

The proposed project could be visible from vantage points that the public has access to in the immediate project vicinity. The project site is visible from the San Diego Creek Class

I Bikeway ~~bike path~~ along San Diego Creek, segments of Harvard Avenue, and the Michelson Drive bridge.

Page 3.1-18:

Scenic views from the San Diego Creek Class I Bikeway ~~San Diego Creek bike path~~ and Harvard Avenue already include the existing MWRP facilities, and some views are partially screened by existing vegetation (see Figures 3.1-7 through 3.1-10).

Page 3.2-5:

The San Diego Creek Class I Bikeway ~~bike path~~ on the east side of San Diego Creek is approximately 1,400 feet or 0.25 miles from the project site.

**Comment OCPW-4**

The comment requests a discussion about the Peters Canyon Regional Riding and Hiking Trail in Chapter 3.9 and other applicable sections of the SEIR (e.g., Impacts Discussion and Sensitive Land Uses) regarding additional impacts to the trail and the public's use of such.

**Response to OCPW-4**

In response to the comment, the text of the Draft SEIR has been revised as follows:

Page 3.9-2 under "Recreational Facilities":

Peters Canyon Regional Riding and Hiking Trail is almost 12 miles long. The route is surfaced with native soil or decomposed granite. Categorized as a mountain-to-sea riding and hiking trail, the trail is on the west side of the flood control channel from the confluence of Peters Canyon and San Diego Creek to Upper Newport Bay. When complete the trail will serve thousands of residents by connecting neighborhoods, commercial and business areas, and local and regional parks from the coast to the Anaheim foothills. Trails serve walkers, joggers, runners, equestrian riders and mountain bicyclists. Class I Bikeways serve commuter and recreational cyclists and pedestrians.

Page 3.9-5 under "Physical Deterioration of Recreational Facilities":

In addition, the proposed project would have no additional impact on the portion of the Peters Canyon Regional Riding and Hiking Trail that is located between Michelson and Campus Drive on the west side of the San Diego Creek levee. The proposed project would not affect the temporary roadway located next to the Trail.

**Comment OCPW-5**

If any portion of the project affects the San Diego Creek, which is a flood channel controlled by the Orange County Flood Control District, the project will require an encroachment permit.

**Response to OCPW-5**

The proposed project would not have a direct effect on the San Diego Creek. No encroachment permit would be required.

**Comment OCPW-6**

The comment suggests standard noise mitigation strategies although the project is outside the jurisdiction of the County of Orange Noise Ordinance, including equipping construction vehicles operating within 1,000' of a dwelling with mufflers and locating vehicle stockpiling/staging areas as far from dwellings as is practicable.

**Response to OCPW-6**

The proposed project would comply with the City of Irvine's Noise Ordinances, as described in the Draft SEIR on pages 3.10-11 through 3.10-13. Mitigation Measure NOISE-1 would be implemented requiring IRWD to use noise control techniques on construction equipment to lessen the potential temporary noise impacts. The staging areas for the proposed project are identified in Figure 2-5 of the Draft SEIR.

**Letter 7, LBA Realty****Comment LBAR-1**

The comment expresses a continuing concern regarding aesthetics and mitigation of views of the proposed construction staging site adjacent to Michelson Drive. Given the fact that construction is projected to be about four years, LBA Realty requests greater consideration is given to screening this site from view from Park Place.

**Response to LBAR-1**

As explained in the Draft SEIR, Chapter 3.1 Aesthetics, page 3.1-17, the significance criteria for impacts to aesthetic resources are based on Appendix G of the *CEQA Guidelines*. With respect to scenic views, the *CEQA Guidelines* state that a project would result in a significant impact if it would create a substantial adverse effect on a scenic vista, which is defined as an expansive view of a highly valued landscape from a particular public vantage point. In addition, a project would result in a significant impact if it would degrade the existing visual character or quality of the site and its surroundings.

Currently, existing views of the project area from public vantage points are dominated by a backdrop of high-rise buildings and urban development screened by low-lying vegetation. Elevated views from Park Place are considered to be private views and are not part of the environmental analysis in the Draft SEIR. Utilization of the proposed staging area would not substantially affect scenic views from public vantage points at street level in the project vicinity.

Furthermore, existing screening of the staging area site is adequate as the earthen berm and existing vegetation obscure views of the staging area site from the street level. The berm and vegetative screening would be adequate to continue to obscure views of the staging site during project construction. Utilizing the proposed staging area would not substantially change the

existing visual character or quality of the site or its surroundings when viewed from public vantage points.

**Comment LBAR-2**

The comment states that existing screening of the staging site is not adequate even from street elevations. The comment requests additional screening of views from Michelson, possibly including temporary fencing or additional landscaping.

**Response to LBAR-2**

Please refer to **Response to LBAR-1**. When viewed at street level, the equipment and materials to be stored at the proposed staging area would be screened by existing vegetation and an earthen berm, with the exception of oversize equipment such as a drill rig or pile driver. The berm and vegetative screening would be adequate to continue to obscure views of the staging site during project construction. Utilizing the proposed staging area would not substantially change the existing visual character or quality of the site or its surroundings when viewed from public vantage points. In addition, IRWD has received a letter requesting that LBA Realty be allowed to use the subject site for its own construction staging as well.

## **Letter 8, County of Orange Public Health Services**

**Comment COPHS-1**

The comment states that under current regulations, the proposed project potentially could be regulated by the Orange County Solid Waste Local Enforcement Agency (LEA), although revisions to applicable regulations are pending. The comment states that the addition of compostable wastes (material that would typically be received at the site through the sewer system) to biosolids undergoing anaerobic digestion shall comply with the Enforcement Agency Notification pursuant to 14 CCR 17859.1.

**Response to COPHS-1**

It is our understanding that several state agencies, including the California Department of Resources Recycling and Recovery (CalRecycle) and the State Water Resources Control Board (SWRCB), are working to resolve policy and regulatory jurisdictional questions whereby a publicly operated treatment works (POTW) that receives specific types of organic solid waste for co-digestion in POTW anaerobic digesters will be excluded from CalRecycle transfer/processing and in-vessel digestion regulations; and the SWRCB will assume jurisdiction through regulation and the NPDES permit process. It is expected that the final regulations and exemption will be in place prior to start-up of the proposed project. Nonetheless, IRWD will obtain any necessary permits and would be required to comply with any applicable solid waste regulations regardless of the outcome of current negotiations and regulatory process.

**Comment COPHS-2**

The comment states that if on-site transformation of biosolids would occur at the project site, then the facility would be considered a “transformation facility” and would be regulated as a “large volume transfer/processing facility,” requiring a full solid waste facilities permit (14 CCR 17403.7) and must comply with Public Resources Code (PRC) Sections 44016 and 44017.

**Response to COPHS-2**

Please refer to **Response to COPHS-1**.

**Comment COPHS-3**

The anaerobic digestion of other wastes (not biosolids) at a publicly operated treatment works (POTW), such as the MWRP, may be subject to the requirements for a compostable-materials handling activity or a transfer station, as determined by the LEA.

**Response to COPHS-3**

The proposed project would be designed and operated in compliance with all applicable solid waste regulations, including those determined as applicable by the LEA.

## Letter 9, Orange County Sanitation District

**Comment OCSD-1**

OCSD fully supports IRWD's proposed construction of the biosolids handling and energy recovery system, consistent with OCSD's long-term capital improvement plan.

**Response to OCSD-1**

The comment is noted.

**Comment OCSD-2**

The comment states the SEIR should describe the IRWD's plan for seasonal reductions in public demand for Class A pellets and how biosolids product storage would be handled on- or off-site or disposed of.

**Response to OCSD-2**

As described in the Draft SEIR in Chapter 2, Project Description, the proposed project would not include substantial onsite storage of the biosolids end products. The Draft SEIR includes a variety of potential end uses for biosolids, the diversity of which would allow for year-round use and minimize any effects of seasonal demand fluctuations. Initially, IRWD expects that the majority of the Class A pellets produced would be used as biofuel in cement kilns, which would represent a consistent year-round demand. If necessary, landfills represent the contingency outlet for both Class A pellets and Class B cake during periods when other beneficial reuse options may not be available. The proposed project would not result in disposal of biosolids into the regional sewer.

**Comment OCSD-3**

The SEIR should identify all project support facilities that are required, such as new preliminary treatment systems, gas compressor systems, and debris removal systems.

**Response to OCSD-3**

All project support facilities are described in the Draft SEIR in Chapter 2, Project Description. The following addresses the facilities specifically mentioned in the comment:

- a. New preliminary treatment systems: New headworks are part of the Phase 2 Capacity Expansion Project.
- b. Gas compressor systems: Such systems are part of the Biogas Conditioning System (Draft SEIR page 2-10).
- c. Debris removal systems: Strained presses would remove debris before entering the thickening centrifuges (Draft SEIR page 2-7).

**Comment OCSD-4**

The following should be deleted from future environmental documents: "...in addition, sending sludge to OCSD or Synagro prevents IRWD from making beneficial use of renewable resource." The SEIR could comment that OCSD will manage fewer solids, resulting in less traffic, as a result of the project.

**Response to OCSD-4**

The quoted text is found in the Notice of Preparation that was published prior to preparation of the Draft SEIR. The statement was not intended to suggest that the sludge sent to OCSD is not eventually put to beneficial use. The statement is intended to address IRWD's autonomy over its renewable resources.

In addition, the Draft SEIR does consider that the proposed project would result in fewer truck trips from OCSD's Plant 1 as a result of the proposed project. This effect of the proposed project is included in the analysis of air quality (Chapter 3.2), greenhouse gas emissions (Chapter 3.6), and traffic (Chapter 3.12).

**Comment OCSD-5**

The comment suggests revision to language in the Draft SEIR that pertains to the conveyance of sludge from the MWRP to OCSD.

**Response to OCSD-5**

The quoted text is found in the Notice of Preparation. In response to the comment, similar text of the Draft SEIR has been revised as follows:

Page 1-10:

**MWRP Phase 2 and 3 Capacity Expansion Project**

The Phase 2 and 3 Capacity Expansion Project will expand recycled water production at the MWRP in phases to 28 mgd (Phase 2) and to 33 mgd (Phase 3), to meet projected ultimate demand for non-potable water, enhance water supply reliability by maximizing the use of recycled water in lieu of imported water from the State Water Project and the Colorado River and instead of local groundwater, meet state mandates to reduce urban demand on freshwater supplies, reduce wastewater diverted to regional treatment facilities and optimize water supply, wastewater treatment life cycle and construction cost economics. The Phase 2 and 3 Capacity Expansion Project will provide for tertiary treatment and disinfection of wastewater while continuing to ~~deliver~~ discharge residual

sludge and scum from the water recycling process and any excess raw wastewater through force mains and gravity pipelines to OCSD's Plant 1 in Fountain Valley.

Page 6-6:

### ***Ability to Meet Project Objectives***

Under the No Project Alternative, most of the project objectives would not be achieved. There would be no opportunity for IRWD to recapture biogases to implement any energy recovery facilities or allow IRWD to make use of its own renewable resources through the beneficial reuse of biosolids. IRWD's autonomy for residuals management would not be increased as the need to transfer residual solids to OCSD would continue. However, the future solids handling needs of the Phase 2 and 3 Capacity Expansion Project would be met by continuing to ~~send~~ discharge all residuals to OCSD through the existing force main and by OCSD upgrading their facilities. This is the only project objective that would be met under the No Project Alternative. A renewed MOU/agreement with OCSD would be required.

## **Letter 10, Department of Resources Recycling and Recovery**

### **Comment DRRR-1**

The comment states that the proposed project is located at a publicly operated treatment works (POTW). If a POTW adds other compostable waste to biosolids undergoing anaerobic digestion, the activity would be subject to the CalRecycle's compostable materials handling regulation (14 CCR 17859.1). Whether or not this is the case is the determination of the LEA (Orange County Health Care Agency, Environmental Health Division).

### **Response to DRRR-1**

Please refer to **Response to COPHS-1**.

## **Letter 11, University of California, Irvine**

### **Comment UCI-1**

The comment states that it appears that the proposed project is designed to handle all of IRWD's solids as well as solids generated from other wastewater treatment plants and is about 1.6 times bigger than is needed for IRWD's total future needs.

### **Response to UCI-1**

The proposed project is sized to process the residuals produced at the MWRP, up to a capacity of 33 mgd, through the digestion and dewatering process and production of Class B biosolids, as shown in Figure 2-3 of the Draft SEIR. The proposed project includes a dryer to continue processing biosolids produced at the MWRP into Class A pellets. The dryer size is based upon the maximum month digested sludge production at Design Capacity (28 mgd liquid treatment) and average day digested sludge production at Ultimate Capacity (33 mgd liquid treatment). The dryer is sized so that it will run five days per week in either situation – Design Capacity or Ultimate Capacity – allowing for two days of weekly maintenance as recommended by the dryer

manufacturer. However, initially at Start-Up (23.6 mgd liquid treatment), the dryer would only be used about 3.5 days per week during maximum month digested sludge production, and thus there would be excess capacity until influent to the MWRP reached Design Capacity. During the Start-Up period, there would be excess capacity in the dryer, which would allow IRWD to accept and process digested, dewatered sludge from other wastewater treatment plants.

Therefore, the proposed project is not bigger than necessary to meet IRWD's total future needs. The proposed project cannot be smaller sized and still meet IRWD's internal needs. The proposed project does not depend on serving the other wastewater treatment clients or earning income from the service. The proposed project is not dependent on treating digested sludge from other agencies. The proposed project cannot be 60 percent smaller.

**Comment UCI-2**

The comment states that the Draft SEIR has no discussion about the justifications for a facility that is 60 percent larger than the District's own future needs. The comment states that it seems possible that the project could be 60 percent smaller, serving only the District's own needs and still attain the six objectives listed in the Draft SEIR. If not, the Draft SEIR should explain why.

**Response to UCI-2**

Please refer to **Response to UCI-1**.

**Comment UCI-3**

The comment states that it seems possible that the proposed project could be 60 percent smaller, serving only the District's own needs, and still obtain the project objectives.

**Response to UCI-3**

Please refer to **Response to UCI-1**.

**Comment UCI-4**

The comment states that the Draft SEIR does not explain why it is undesirable, infeasible, or uneconomic for IRWD to partner with OCSD in expanding its solids processing capacity sufficiently to meet IRWD's future needs. The comment states that only one of the six objectives of the proposed project would not be attained by doing so. The comment states that alternatives to the proposed project are rejected for reasons of "institutional constraints regarding implementability, economic viability, and the lack of increased autonomy for IRWD and its residuals management," and that the Draft SEIR does not provide specifics about the constraints to allow for a comparison to the proposed project.

**Response to UCI-4**

As described in the Draft SEIR, the No Project Alternative would likely result in IRWD participating in the expansion of OCSD facilities to meet future treatment demands. The ability of the No Project Alternative to meet project objectives is explained in the Draft SEIR on page 6-6. The Draft SEIR compares the relative potential environmental effects of the proposed project and the No Project Alternative. The rejection of the No Project Alternative is not based on desirability, feasibility, or economics.

Three alternatives to the proposed project are analyzed in the Draft SEIR in Section 6.6, starting on page 6-5. These alternatives, which include the No Project Alternative, are compared to the proposed project, and the relative potential environmental effects are evaluated and summarized in Table 6-2 on page 6-13. The alternatives that are considered but eliminated from consideration are described in Section 6.5 of the Draft SEIR, starting on page 6-3. These alternatives are rejected for various reasons, including institutional constraints regarding implementability, economic viability, difficulty obtaining permits, and lack of increased autonomy for IRWD. Such factors may be considered when addressing the feasibility of an alternative, as explained on page 6-1 of the Draft SEIR.

**Comment UCI-5**

The comment states that No Project Alternative is identified as the Environmentally Superior Alternative and provides alternate possible iterations of the No Project Alternative. The comment states that IRWD could choose not to develop the 4.6-acre site and instead restore it to a natural landscape, eliminating impacts to hydrology and water quality.

**Response to UCI-5**

The Draft SEIR does not conclude that the No Project Alternative is the environmentally superior alternative. The proposed project and Alternative 1 are concluded to be environmentally equivalent alternatives (see Draft SEIR page 6-14). Regarding the suggested iterations of the No Project Alternative, CEQA does not require a lead agency to consider every conceivable alternative but rather consider a reasonable range of alternatives to foster informed decision-making (see Draft SEIR page 6-1). IRWD has conducted an extensive alternatives screening analysis as described on page 6-3 of the Draft SEIR and has put forth the most feasible alternatives for consideration in the Draft SEIR. The Draft SEIR has not identified any significant and unavoidable impacts to hydrology and water quality, and therefore restoration of the project site as part of an alternative would not serve to lessen any significant impacts of the proposed project, which is the goal of the CEQA alternatives analysis (see Draft SEIR page 6-1).

**Comment UCI-6**

The comment recommends that IRWD adopt the No Project Alternative and partner with OCSD to expand its solids processing and develop local markets for Class A biosolids pellets. The comment states that contingency funding for environmental cleanup should a catastrophe occur must be budgeted for the San Joaquin Marsh Reserve and the Newport Back Bay Ecological Preserve, both of which are home to endangered species.

**Response to UCI-6**

The Draft SEIR explains on page 6-14 that IRWD has determined that the proposed project and Alternative 1 are environmentally equivalent alternatives and that IRWD has determined that the proposed project is the preferred alternative. There are no significant impacts identified in the Draft SEIR for which contingency funding for environmental clean-up is required.

## Letter 12, University Synagogue (2)

### **Comment US(2)-1**

The comment states that the University Synagogue's major concern is odor and the attendant risks to the synagogue, members, pre-schoolers, and other facilities users.

### **Response to US(2)-1**

There would be no risks to the Synagogue, its members, or users due to odor. Please refer to the **Odor Control Master Response**.

### **Comment US(2)-2**

Though assured that the project would preclude odors from being detected beyond the project's boundaries, the synagogue expressed interest in further confirmation and understanding of the system, its Operating Plan, and various contingency provisions.

### **Response to US(2)-2**

The proposed project design, goal, and the AQMD permits all include requirements for no odor to be detectable at the boundary of the IRWD property. Please refer to the **Odor Control Master Response** for an overview of the system.

### **Comment US(2)-3**

The comment states that University Synagogue has requested for IRWD to underwrite the costs of have one or two Directors from University Synagogue visit the Mesa facility to conduct a "sniff test" and discuss the plant with staff, adjacent landowners, and regulatory agency staff. The comment states the IRWD has declined to underwrite this cost.

### **Response to US(2)-3**

IRWD has determined that it would not be appropriate to underwrite the suggested field trip. IRWD has provided the University Synagogue with contact information for staff at the City of Mesa's treatment facility. Please refer to the **Odor Control Master Response**. Also please refer **Appendix E** for the results of a peer review of the proposed odor control system prepared by Dudek.

### **Comment US(2)-4**

The comment details the membership and facilities of University Synagogue, and reiterates how important odor control is to the synagogue because a mishap could have long-term deleterious effects on enrollment, membership, participation, and the general financial well-being of the Synagogue.

The comment states that "odor is not only unpleasant in itself but communicates the possibility of harmful air quality." If the system fails, the Synagogue wishes to know what contingency plans will go into effect and how the IRWD will compensate for potential losses.

### **Response to US(2)-4**

Please refer to **Response to US(1)-3**.

**Comment US(2)-5**

The comment states that the proposed egg-shaped digesters communicate risks associated with odors and unhealthy air quality to current and prospective members of University Synagogue. The comment states that IRWD provided a visual model of the project facility from the Synagogue vantage point and that it was unclear as to whether and what extent the domes would be visible. The comment requests that a provision is made (e.g., with landscaping) so that no part of the proposed new facilities are visible from the Synagogue and its grounds.

**Response to US(2)-5**

The odor control system would reduce odor to a non-detectable level at the MWRP property boundaries. There would be no health risks to current or prospective members of University Synagogue due to potential odor releases. Additional visual simulation has been provided that shows no significant effect on scenic views from University Synagogue. Please refer to **Response to US(1)-4**.

**Comment US(2)-6**

The comment expresses concern that the physical environment of University Synagogue will be negatively impacted by the physical presence of the project, conveying a magnified sense of industrialization. The Synagogue supports the increased sustainability for the community that the project will provide, but believes the project will devalue its property. The comment states that the University Synagogue does not wish “to bear the financial burden for a more general public savings from the Proposed Project that, if distributed over thousands of households, would be minimal.”

**Response to US(2)-6**

Please refer to **Response to US(1)-5**.

**Comment US(2)-7**

The comment includes a quote from Blake Anderson, former General Manager of the Orange County Sanitation District, who has been assisting University Synagogue with understanding the project and odor control system. The quote from Mr. Anderson describes his peer review of the Preliminary Design Report and Process Validation Study prepared by HDR Engineers and Black & Veatch Engineers, respectively. Mr. Anderson concludes that “the engineering is certainly state of the art” and that the design for the proposed project “is conservative and contains some system redundancies that are intended to achieve a high degree of reliability.” Mr. Anderson states that “between the engineering and planning staff at IRWD, B&V and HDR, all of the bases have been covered” and that the very best people have been involved in the planning process, so far. Mr. Anderson states that he has “no concerns about what they have proposed in their process designs.” The only concerns expressed by Mr. Anderson are regarding how IRWD would be prepared to (a) start up systems that presently are not known by the organization or a majority of its staff, and (b) provide long-term operational reliability. Mr. Anderson states that IRWD is no doubt capable of operating the proposed facilities effectively and having staff properly trained.

Mr. Anderson suggests that the University Synagogue and its neighbors request that IRWD creates a “third-party operational review panel” that would review operational reports, inspect the

proposed facilities sporadically, and have unrestricted access to staff. The review panel would consist of qualified people with expertise, experience or interest. The review panel would complete short evaluation reports that would be conveyed directly to the community of interest. The opinions and observations of the review panel would be advisory only to the community, IRWD board, and IRWD staff. The comment states that the University Synagogue embraces Mr. Anderson's suggestion that IRWD establish such an Operational Review Panel in order to provide assurances that the Synagogue's concerns will be addressed over the long term.

**Response to US(2)-7**

Please refer to the **Odor Control Master Response**.

**Comment US(2)-8**

The comment states that the Synagogue would like to implement a landscaping solution to ensure that the project facilities are not visible from Synagogue's property or environs.

**Response to US(2)-8**

Please refer to **Response to US(1)-4**. Although not necessary to mitigate scenic views from University Synagogue, the proposed project does include a Landscape Plan that would include screenings to soften the appearance of the proposed facilities and ensure that tall landscaping trees are planted along or near the earthen berm that forms the outer perimeter boundary of the project area (Draft SEIR, page 2-12). In addition, IRWD will revegetate the two areas of the MWRP that were impacted during construction of the Phase 2 Capacity Expansion Project, including the boundary of the MWRP along Riparian View. Please refer to **Response to CICD-2** below under Letter 14, City of Irvine – Community Development.

**Comment US(2)-9**

The comment states that the Synagogue welcomes the opportunity for one or two of its Board members to experience the Mesa plant, while acknowledging the verbal "no" response when the request was first made. The comment also states that the Synagogue appreciates arrangements by IRWD staff to allow Mr. Blake Anderson will follow up with Mesa facilities staff. The Synagogue may submit additional comments after Mr. Anderson speaks with the Mesa staff.

**Response to US(2)-9**

The comment is noted.

## **Letter 13, South Coast Air Quality Management District**

**Comment AQMD-1**

The comment states that the lead agency has not provided sufficient technical information to determine the potential air quality impacts from the project. Also, the lead agency has provided limited discussion to substantiate the Draft SEIR's treatment of baseline activities. The South Coast Air Quality Management District (AQMD) requests that the lead agency provide additional information in the Final SEIR to address these concerns.

**Response to AQMD-1**

Please refer to **Responses to AQMD-3** and **AQMD-4** below.

**Comment AWMD-2**

The AQMD requests written responses to all comments contained in their letter prior to the adoption of the Final SEIR and states that staff are available to work with the lead agency on any issues or questions.

**Response to AQMD-2**

IRWD will provide AQMD with written responses to its comments at least ten (10) days prior to consideration of the Final SEIR for certification, as required by CEQA.

**Comment AQMD-3**

**Peak Daily Operational Emissions:** The comment states that it is not clear that the project's maximum daily air quality impacts are accurately captured, as reported in Table 3.2-7 of the Draft SEIR. The Draft SEIR should identify all of the project's emissions from permitted stationary source equipment, mobile source equipment, and any other sources.

**Response to AQMD-3**

The Draft SEIR discloses all of the proposed project's maximum daily operational air quality impacts, including permitted stationary source equipment and mobile source emissions. The on-site emissions provided in Table 3.2-7 of the Draft SEIR, including the reported 61 lbs/day of NOx emissions, are based on the *Draft Standard Evaluation for Permit to Construct* for the proposed project (Environ, 2012, Tables 6a and 6b). The NOx emissions reported by AQMD in the comment (66.84 lbs/day) are not found in the permit application for the proposed project.

Since publication of the Draft SEIR, IRWD has revised the maximum daily air emissions estimates, to more accurately reflect realistic operating conditions for purposes of the CEQA analysis. To reflect these updated emissions estimates, Table 3.2-7 of the Draft EIR has been revised to show maximum daily operational air emissions for the proposed project for two operating scenarios – (1) production of Class A biosolids and (2) production of Class B biosolids. As shown in the revised Table 3.2-7 below, air emissions estimates have decreased compared to the estimates provided in the Draft SEIR. The revised emissions estimates are based on design-level operating conditions and therefore are more precise than those provided in the Draft SEIR.

For on-site emissions, the difference between the two operating scenarios (production of Class A or Class B biosolids) is primarily due to operation of the dryer. When Class A biosolids are being produced the dryer is on, and when Class B biosolids are being produced the dryer is off. The mobile source emissions associated with each operating scenario vary due to relative differences in truck trips associated with hauling biosolids offsite from both the MWRP and LAWRP for disposal or reuse. New employee vehicle trips and chemical deliveries would be the same, regardless of the class of biosolids being produced. Under normal operating conditions when the dryer is on, there would be fewer trucks leaving the MWRP since Class A biosolids would be produced; the Class A pellets have a lesser water content than Class B cake and thus fewer truck trips would be needed to haul away the end product.

With respect to the LAWRP, mobile emissions differ with the operating scenarios due to differences in the end user locations for biosolids. Currently, IRWD contracts with Synagro to haul Class B biosolids produced at the LAWRP to facilities in La Paz, Arizona (Draft SEIR, page 1-10). Under the proposed project, the only modification to the LAWRP operations would be to redirect the truck trips, depending on the operating scenario. There would be no change in the number of truck trips leaving the LAWRP. When the dryer is on at the MWRP and Class A biosolids are being produced, the Class B biosolids from the LAWRP would be trucked to the MWRP for further processing. When the dryer is off at the MWRP, the Class B biosolids from the LAWRP would continue to be trucked elsewhere for disposal, potentially to Arizona, and therefore there would be no change in existing baseline conditions for this operating scenario.

**Appendix F** provides the supporting calculations and additional details of the assumptions in support of the revised Table 3.2-7. The updated on-site and mobile emissions do not alter the original significance conclusions as reported in the Draft SEIR.

**REVISED TABLE 3.2-7  
MAXIMUM PROPOSED PROJECT OPERATIONAL EMISSIONS**

| Emissions Source                           | Estimated Emissions (lbs/day) |                 |                |                 |                  |                                |
|--|-------------------------------|-----------------|----------------|-----------------|------------------|--------------------------------|
|  | ROG                           | NO <sub>x</sub> | CO             | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> <sup>o</sup> |
| <b>Proposed Project: Class A Biosolids</b> |                               |                 |                |                 |                  |                                |
| On-site Facilities <sup>b</sup>            | 12.40                         | 49.60           | 39.51          | 4.70            | 20.09            | 19.77                          |
| Mobile Sources <sup>c</sup>                | (0.63)                        | (5.53)          | (3.92)         | (0.01)          | (0.20)           | (0.17)                         |
| Total Emissions for Class A Biosolids      | 11.77                         | 44.07           | 35.59          | 4.69            | 19.89            | 19.60                          |
| <b>Proposed Project: Class B Biosolids</b> |                               |                 |                |                 |                  |                                |
| On-site Facilities <sup>b</sup>            | 4.24                          | 14.71           | 5.16           | 3.49            | 6.22             | 6.21                           |
| Mobile Sources <sup>c</sup>                | 1.04                          | 6.80            | 7.31           | 0.02            | 0.28             | 0.23                           |
| Total Emissions for Class A Biosolids      | 5.28                          | 21.51           | 12.47          | 3.51            | 6.50             | 6.44                           |
| <b>Existing OCSO Solids Disposal Trips</b> |                               |                 |                |                 |                  |                                |
| Mobile Sources <sup>d</sup>                | 6.21                          | 45.91           | 41.78          | 0.10            | 1.80             | 1.47                           |
| <b>Net Project Operational Emissions</b>   |                               |                 |                |                 |                  |                                |
| <b>Class A Biosolids</b>                   | <b>5.56</b>                   | <b>(1.84)</b>   | <b>(6.19)</b>  | <b>4.59</b>     | <b>18.09</b>     | <b>18.13</b>                   |
| <b>Class B Biosolids</b>                   | <b>(0.93)</b>                 | <b>(24.40)</b>  | <b>(29.31)</b> | <b>3.41</b>     | <b>4.70</b>      | <b>4.97</b>                    |
| <i>Regional Significance Threshold</i>     | <i>55</i>                     | <i>55</i>       | <i>550</i>     | <i>150</i>      | <i>100</i>       | <i>55</i>                      |
| <u>Potentially Significant Impact?</u>     | No                            | No              | No             | No              | No               | No                             |

NOTE: Emissions would be different during summer and winter. Maximum daily emissions of ROG, and NO<sub>x</sub> would be higher during the winter while emissions of CO would be higher in the summer. Maximum emissions are shown for the respective seasons.

<sup>a</sup> The PM<sub>2.5</sub> emissions were calculated from the PM<sub>10</sub> emissions based on the recommended PM<sub>2.5</sub> fractions provided in Appendix A of SCAQMD's *Final Methodology to Calculate PM<sub>2.5</sub> and PM<sub>2.5</sub> Significance Thresholds* document.

<sup>b</sup> On-site emissions calculations and assumptions provided in Appendix F.

<sup>c</sup> Mobile source emissions calculations and assumptions provided in Appendix F.

<sup>d</sup> OCSO mobile source emissions estimated for solids disposal trips associated with Class B biosolids.

SOURCE: On-site facility emissions calculations performed by ENVIRON, 2012 (Appendix F); Vehicle trip modeling performed by ESA, 2012 (Appendix F).

**Comment AQMD-4**

**Mobile Source Emissions Baseline:** The comment states that the peak daily mobile source emissions reported in Table 3.2-7 of the Draft SEIR accounts for existing transportation activity associated with the LAWRP and OCSD in the baseline. The emissions associated with these baseline activities are subtracted from the project's emissions. The comment requests a robust description of the baseline emissions assumptions and transportation emissions methodology that are part of the analysis of operational air emissions. The comment states that the lead agency should demonstrate that it is appropriate to assume all baseline activity will cease in the future.

**Response to AQMD-4**

Please refer to **Response to AQMD-3** above for a discussion of baseline mobile emissions associated with operations at the LAWRP.

As described in the Draft SEIR, currently the sludge from the MWRP liquid treatment facility is discharged to OCSD's Plant 1 for processing and disposal. As described in the Draft SEIR, the proposed project would modify the residuals management system at the MWRP such that discharge of sludge to OCSD would be discontinued and residuals produced at the MWRP would be processed onsite at the proposed Biosolids Handling Component. The proposed project effectively would transfer the location of the processing of sludge from OCSD's Plant 1 to the MWRP. The proposed project would eliminate the capacity constraints at OCSD's Plant 1 and would lower the volume of sludge to be processed at Plant 1. Through its own facilities planning process, OCSD has accounted for all current and future wastewater treatment demands within its overall sewer-shed including the contribution from IRWD. Once IRWD stops discharging its sludge to Plant 1, there would be no replacement demands for biosolids processing because all demands for wastewater treatment and associated residuals management within OCSD's sewer-shed are already known and planned for.

Currently, the sludge from the MWRP is processed into Class B biosolids at OCSD's Plant 1 and applied to various beneficial uses as described in Chapter 1 of the Draft SEIR (page 1-14). Currently, OCSD contracts with third party vendors to haul the majority of the Class B biosolids produced at Plant 1 either to Kern County or to Arizona for composting and/or land application as fertilizer. In 2010, biosolids also were hauled offsite to EnerTech in Rialto, CA for processing into a synthetic coal and subsequently used in cement kilns as a fuel source. However, OCSD has recently terminated its contract with EnerTech, and future management of OCSD's biosolids may or may not include this beneficial use.

As a result of the proposed project, OCSD has stated that fewer truck trips from Plant 1 would result (see Letter 9 from OCSD above) due to the reduction in the volume of solids that would be processed at Plant 1 when sludge discharges from IRWD are eliminated. As a result of the proposed project, biosolids reuse and disposal truck trips would originate from the MWRP rather than OCSD's Plant 1. Therefore, the analysis of operational emissions for the proposed project accounts for mobile source emissions associated with these existing truck trips as part of the baseline. Under the proposed project, production of Class B biosolids would result in approximately 46 truck trips per week to haul solids offsite. It is assumed that baseline conditions at OCSD include the same amount of truck trips to haul the Class B biosolids associated with

IRWD's portion of sludge currently processed at Plant 1. Baseline emissions assume that the trucks originating at Plant 1 travel approximately 400 miles round-trip to the end user sites in Arizona. Therefore, the emissions offset for existing OCSD solids disposal truck trips, as shown in Table 3.2-7, represent emissions associated with approximately 46 truck trips per week (approximately 9 per day) hauling Class B biosolids to Arizona for beneficial use. This calculation is provided in Appendix C of the Draft SEIR.

When the proposed project's mobile-source emissions are offset by elimination of certain existing OCSD truck trips that are part of the baseline emissions, there would be a net reduction in mobile-source emissions for all criteria pollutants shown in Table 3.2-7. The existing truck trips associated with disposal and reuse of IRWD's sludge at OCSD's Plant 1 would be eliminated by the proposed project and replaced by fewer trips traveling shorter distances from IRWD's MWRP. This trade-off is accurately described in Table 3.2-7 of the Draft SEIR as revised above, resulting in total project operational emissions that are less than SCAQMD thresholds of significance.

**Comment AQMD-5**

AQMD staff may have additional comments on emissions analysis that will be made during the air quality permitting process.

**Response to AQMD-5**

IRWD will work with AQMD to satisfy all requests and respond to all comments during the permitting process for the proposed project.

## Letter 14, City of Irvine – Community Development

**Comment CICD-1**

The City of Irvine requests the inclusion of topographic information showing the heights of the surrounding properties relative to the project site, as well as building heights to illustrate the relative height of the biosolids treatment facility. The city also requests a text discussion of these quantitative details.

**Response to CICD-1**

Relative building heights are inherent in the visual simulations shown in Figures 3.1-5 through 3.1-15 in the Draft SEIR. In response to the comment, IRWD has prepared additional simulations to illustrate the relative height of the proposed facilities when viewed from the Rancho San Joaquin area. **Exhibit B** shows the approximate location and maximum height of the proposed biosolids handling building (70 feet) when viewed from the Rancho San Joaquin Golf Course and Irvine Historical Society to the east. The project site is located in a topographic depression relative to these visual vantage points. Therefore, the proposed 70-foot structure would not alter the existing skyline and would blend into the visual landscape of urban development, proportionate to surrounding buildings. **Exhibit B** supports the conclusions of the Draft SEIR that although the proposed project would introduce a new feature into the visual landscape, the effects of the proposed project on scenic views and visual character would be less than significant.



SOURCE: IRWD, 2012.

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**Exhibit B-1**

Photo Simulation:  
View from Irvine Historical  
Society Parking Lot



SOURCE: IRWD, 2012.

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**Exhibit B-2**

Photo Simulation:  
View from Rancho San Joaquin  
Golf Course Club House



SOURCE: IRWD, 2012.

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**Exhibit B-3**

Photo Simulation:

View from Rancho San Joaquin Golf Course  
South of Historical Society

**Comment CICD-2**

The City requests details on the types of landscaping recently cleared from the adjacent flood control channel and the plans for allowing permanent landscaping of this area. The City recommends a new Project Design Feature of vegetative screening of the facility from Harvard Ave.

**Response to CICD-2**

The Draft SEIR makes incidental mention of the vegetation recently cleared from San Diego Creek by Orange County Flood Control District (OCFCD). Maintenance and management of San Diego Creek is within the jurisdiction of OCFCD. Any regrowth of this vegetation would be controlled by OCFCD and would not be necessary to mitigate any project impacts.

The proposed project includes development and implementation of a Landscape Plan that would screen and soften the appearance of project facilities (see Draft SEIR, page 2-12). The Landscape Plan would include tall landscaping trees planted along or near the earthen berm that forms the outer perimeter boundary of the project area. In addition, IRWD will reestablish vegetation in the two areas of the MWRP that were impacted during construction of the Phase 2 Capacity Expansion Project. The boundary of the Biosolids Handling Component site, which is shown in green in **Exhibit C-1**, is currently being replanted with a dense planting of Canary Island pines, sycamore trees and toyons. The boundary of the MWRP along Riparian View, which is shown in yellow in **Exhibit C-1**, will be replanted with dense, fast-growing, evergreen vegetation that will provide maximum screening potential of the MWRP facilities when viewed from Harvard Avenue. In both areas, preconstruction conditions will be reestablished after replanting. Preconstruction conditions along Riparian View are shown in **Exhibit C-2**. Although not required as a mitigation measure for the proposed Biosolids Handling Component, the restoration planting is an environmental commitment for the Phase 2 and 3 Capacity Expansion Project.

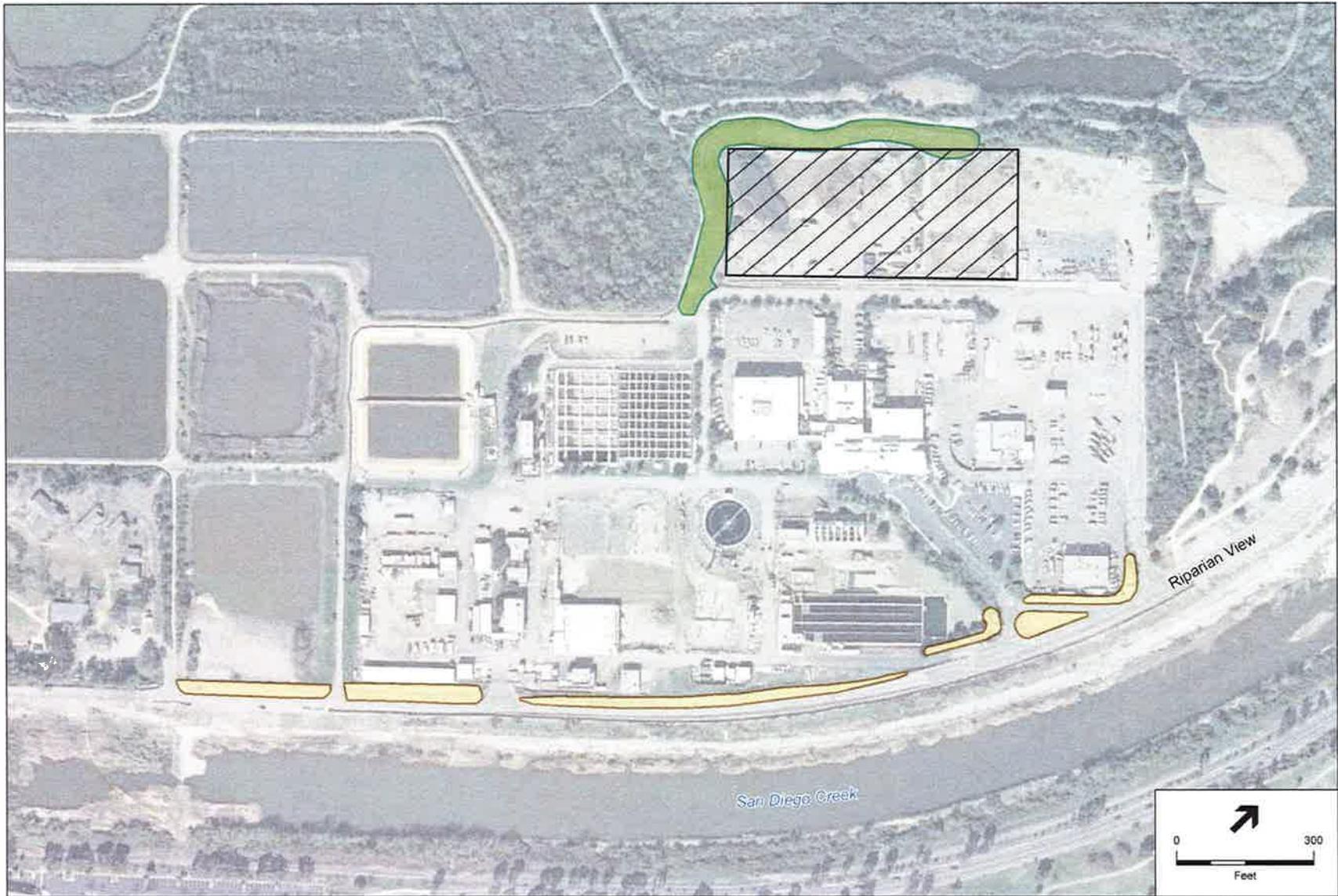
**Comment CICD-3**

The City of Irvine requests an independent third-party assessment of the Northwest Water Reclamation Plan in Mesa, Arizona, after which the MWRP odor control system is being modeled to assess the potential for odors. The City also requests an assessment of the potential odors associated with trucks transporting sludge to the MWRP. The City suggests using the AERMOD dispersion model or comparative techniques.

**Response to CICD-3**

Please refer to the **Odor Control Master Response** for the results of an independent third-party assessment of the MWRP odor control system as designed.

Sludge (digested and dewatered Class B cake) would be transported by truck to the MWRP from the LAWRP and potentially other wastewater treatment plants. Photos of typical trucks that would be used to transport sludge are shown in **Exhibit D**. To contain any odors during transport, the trucks would have a sealed cover. The rear gate on the truck has a gasket to seal in any liquids so that the truck would not leak while in transport. Although the AERMOD dispersion model can be adapted to evaluate odor, IRWD has determined such modeling is not required since the inherent design of trucks transporting sludge is adequate to contain odor.



SOURCE: ESRI, 2011; ESA, 2012.

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**Exhibit C-1**

MWRP Phase 2 Revegetation Map



SOURCE: IRWD, 2012.

MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 . 210480

**Exhibit C-2**

Preconstruction Conditions Along Riparian View



SOURCE: IRWD, 2012.

MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 . 210480

**Exhibit D**  
Typical Sludge Hauling Truck

For the proposed project, the truck bed would only be opened when the truck is inside the solids receiving bays within the Solids Handling Building as described in the Draft SEIR (page 2-7). After the truck pulls in, the roll-up doors to the receiving bay would be closed and the room would be put under a negative pressure by fans that direct all the room air to the odor control system.

**Comment CICD-4**

The City requests that mitigation measures for cultural resources be revised to include a requirement for the City's Director of Community Development to be contacted in the event of a discovery of paleontological resources or human remains.

**Response to CICD-4**

In response to the comment the text of the Draft SEIR has been revised as follows:

Page 3.4-17:

**CUL-4:** In the event that paleontological resources are encountered, the OCC Paleontologist shall develop a Paleontological Resources Mitigation and Monitoring Plan. The Plan shall address procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils, and the preparation of a final mitigation report. Once the find has been evaluated in accordance with the Plan, the OCC Paleontologist shall determine when work can resume in the vicinity of the find. The Director of Community Development at the City of Irvine shall also be notified of the discovery and the determination of the OCC Paleontologist related to recovery, handling, and disposition of identified resources.

Page 3.4-18:

**CUL-5:** If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The Director of Community Development at the City of Irvine shall also be notified of the discovery and the determination of the NAHC related to recovery, handling, and disposition of remains and associated artifacts.

**Comment CICD-5**

The City requests that IRWD provide a copy of the post-construction noise survey to the City's Director of Community Development, along with any site improvements necessary to correct for any excess noise levels.

**Response to CICD-5**

In response to the comment the text of the Draft SEIR has been revised as follows:

Page 3.10-15:

**NOISE-3:** IRWD shall conduct a post-construction noise survey to ensure that operation of the MWRP is in compliance with the City of Irvine Noise Ordinance (Title 6, Division 8, Chapter 2) at the IRWD property boundary. If survey results indicate non-compliance with the Noise Ordinance, IRWD shall implement additional sound-dampening architectural and equipment improvements at the MWRP and conduct a follow-up survey to demonstrate compliance with noises thresholds. A copy of the noise survey shall be provided to the Director of Community Development at the City of Irvine, as well as information on site improvements necessary to correct excess noise levels as well as a schedule for completion of the improvements.

**Comment CICD-6**

The comment requests additional information about the number and types of trips that the project will add to the AM and PM peak traffic periods (6-9 AM, 3-7 PM); further traffic analysis may be required if the stated 40-60 daily trips occur during peak periods.

**Response to CICD-6**

The 46-60 daily trips include trips made by 10 additional employees (20 daily trips, or 10 round trips). Some of these trips will occur during peak AM and PM periods while others will occur off peak, including weekends. Operational schedules will include shift work to support the project facilities being staffed 24 hours per day, 7 days per week. The remainder of the trips is delivery, trucking, etc., and will occur throughout the day, with a fraction possibly falling during peak hours.

**Comment CICD-7**

The comment requests the following intersections to be added to Table 3.12-2 in the Draft SEIR: Jamboree & Michelson, Harvard & Michelson, and Culver & Michelson.

**Response to CICD-7**

In response to the comment, the requested intersections have been added to Table 3.12-2 as shown below. The additional information does not change the results of the analysis of traffic impacts provided in the Draft SEIR. Nonetheless, for clarity and completeness, the text on page 3.12-12 of the Draft SEIR has been revised as follows:

The closest intersections that are monitored for LOS in the CMP are the I-405 Northbound and Southbound ramps at Jamboree Road (Table 3.12-2). The City of Irvine has provided information on LOS ratings for intersections closer to the project site, including Jamboree Road / Michelson, Harvard Avenue / Michelson Drive and Culver Drive / Michelson Drive ~~(There are no LOS ratings for Culver Drive.)~~ These intersections currently operate at LOS C ~~and D~~ during the P.M. peak period, ~~depending on time of day.~~ It is likely that operational vehicles accessing the project site would pass through these intersections. However, given the typical daily number of vehicles traveling on ~~I-405 and~~ Jamboree Road, Harvard Avenue, Culver Drive,

and Michelson Drive in the vicinity of these intersections, the proposed project would not introduce enough vehicles to affect LOS. ~~I-405 has an ADT of 603,000 in the segments just north and south of Jamboree Road.~~ Jamboree Road has an ADT of 141,000 in the segments just east and west of I-405. Culver Drive and Harvard Drive between University Drive and I-405 have ADTs of 89,000 and 17,000, respectively. Michelson Drive between Culver Drive and Jamboree Road has an ADT of 29,000. Assuming all operational vehicles for the proposed project pass through ~~this~~ these intersections, an addition of 20 to 36 trips per day during the A.M. or P.M. peak period would not substantially affect traffic volume or LOS. Impacts would be less than significant.

**TABLE 3.12-2  
EXISTING LEVEL OF SERVICE RATINGS FOR INTERSECTIONS IN THE PROJECT AREA**

| <b>Intersection</b>                     | <b>LOS<br/>A.M. / P.M.</b> |
|---|----------------------------|
| I-405 NB Ramps / Jamboree Road          | C / D                      |
| I-405 SB Ramps / Jamboree Road          | D / D                      |
| MacArthur Boulevard / Jamboree Road     | A / C                      |
| Laguna Canyon Rd / SR-73 NB Ramps       | E / D                      |
| Laguna Canyon Rd / SR-73 SB Ramps       | A / A                      |
| <u>Jamboree Road / Michelson Drive</u>  | <u>C / D</u>               |
| <u>Harvard Avenue / Michelson Drive</u> | <u>B / D</u>               |
| <u>Culver Drive / Michelson Drive</u>   | <u>A / D</u>               |

LOS = Level of Service. LOS is based on peak-hour traffic counts during A.M. (6:00 to 9:00) and P.M. (3:00 to 7:00) periods and volume to capacity ratios.

SOURCE: Orange County Transportation Authority, CMP, 2011. Pers. Comm. W. Wang, City of Irvine, 2012.

## Letter 15, Sea and Sage Audubon

### Comment SSA-1

The comment states that visitors to the public trail system adjacent to the project site may be alarmed by project construction if information about the project is not displayed. The comment requests IRWD to post signage at locations from which construction will be visible – especially in the vicinity of the trail behind the project site – that explain what the construction is, in order to reduce visitor concerns as well questions that Audubon House volunteers will encounter from the public.

### Response to SSA-1

In response to the comment, the text of the Project Description in the Draft SEIR has been revised as follows:

Page 2-24:

## Public Health and Safety

- In the event that grading, construction, or operation of the proposed facilities encounter hazardous waste, IRWD will ensure compliance with the State of California CCR Title 23 Health and Safety Regulations as managed by the Orange County Department of Environmental Health.
- IRWD shall close the surrounding Sanctuary hiking trails as necessary during project construction to protect public health and safety.
- IRWD shall post signage at Sanctuary hiking trail locations from which construction will be highly visible, explaining the nature of construction to alleviate visitor concerns and to protect public health and safety.

## Letter 16, US Fish and Wildlife Service

### Comment USFWS-1

Although the comment period has closed, USFWS requests consideration of a measure to ensure project construction does not result in impacts to the federally endangered least Bell's vireo, which nests in the riparian woodland adjacent to the project site. USFWS recommends the installation of a noise barrier of adequate height, length, and materials to maintain ambient noise levels prior to the first nesting season following the initiation of construction. Fencing should be maintained in working condition until project completion. This will avoid the need to conduct vireo monitoring throughout the construction period.

### Response to USFWS-1

In response to the comment, the following has been added to Mitigation Measure BIO-2:

**BIO-2:** If initiation of ground-disturbing construction activities must occur during the specific nesting season of least Bell's vireo and southwestern willow flycatcher (March 15 through September 15), impacts to these species would be avoided through implementation of one of the ~~three~~four of the following measures. Implementation of one of the measures below would reduce impacts to less than significant levels.

1. Conduct surveys to determine the presence or absence of least Bell's vireo or southwestern willow flycatcher in suitable habitat within 500 feet of the project area in accordance with USFWS protocols (USFWS 1999, 2000). If neither species is detected by these surveys, construction may proceed without additional mitigation.
2. If protocol surveys detect the presence of either species, delay construction within a distance of occupied territory determined by a qualified biologist until after the least Bell's vireo and/or southwestern willow flycatcher have migrated from the site. If nesting is detected, delay construction within a distance determined by a qualified biologist until the biologist determines that the young have fledged the nests and/or the nests are no longer active.

3. If protocol surveys detect the active nests of either species, noise barriers may be erected to reduce sound levels at nest sites to reduce the “no construction” buffer distance around the nest as determined by a qualified biologist. If noise barriers are utilized, a qualified biologist shall conduct monitoring of noise levels at the nest sites to determine if construction noise has the potential to affect nesting behavior. If construction activities are determined to affect nesting behavior of least Bell’s vireo and/or southwestern willow flycatcher, the biological monitor shall halt construction-related activities that may impact the nests until the juveniles have fledged and/or the nests are no longer active.
4. Erect noise barriers prior to the first nesting season (starting March 15<sup>th</sup>) following the initiation of construction. The noise barrier shall be of adequate height, length and materials to maintain ambient noise levels in the adjacent riparian woodland for the duration of the construction period. The effectiveness of the barriers to reduce noise levels to ambient conditions shall be tested with noise monitoring equipment prior to the first nesting season. Barriers shall be maintained in working condition until completion of the project.

## CHAPTER 12

# Corrections and Additions to the Draft SEIR

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This chapter contains a compilation of revisions made to the text of the Draft SEIR by the Lead Agency, in response to the comments received during the 60-day public review period. All revisions are previously introduced in Chapter 11 of this Final SEIR but are summarized here for convenience of the reader.

The revisions appear as indented text. Where the responses indicate additions or deletions to the text of the Draft SEIR, additions are indicated in underline and deletions in ~~strikeout~~.

Page 1-10:

### ***MWRP Phase 2 and 3 Capacity Expansion Project***

The Phase 2 and 3 Capacity Expansion Project will expand recycled water production at the MWRP in phases to 28 mgd (Phase 2) and to 33 mgd (Phase 3), to meet projected ultimate demand for non-potable water, enhance water supply reliability by maximizing the use of recycled water in lieu of imported water from the State Water Project and the Colorado River and instead of local groundwater, meet state mandates to reduce urban demand on freshwater supplies, reduce wastewater diverted to regional treatment facilities and optimize water supply, wastewater treatment life cycle and construction cost economics. The Phase 2 and 3 Capacity Expansion Project will provide for tertiary treatment and disinfection of wastewater while continuing to ~~deliver~~ discharge residual sludge and scum from the water recycling process and any excess raw wastewater through force mains and gravity pipelines to OCSD's Plant 1 in Fountain Valley.

Page 2-24:

### **Public Health and Safety**

- In the event that grading, construction, or operation of the proposed facilities encounter hazardous waste, IRWD will ensure compliance with the State of California CCR Title 23 Health and Safety Regulations as managed by the Orange County Department of Environmental Health.
- IRWD shall close the surrounding Sanctuary hiking trails as necessary during project construction to protect public health and safety.

- IRWD shall post signage at Sanctuary hiking trail locations from which construction will be highly visible, explaining the nature of construction to alleviate visitor concerns and to protect public health and safety.

Page 3.1-1:

The San Diego Creek Class I Bikeway ~~A bike path~~ and the Rancho San Joaquin Golf Course are located across the San Diego Creek to the east of the property. Distant views in the vicinity of the project area include a mixture of residential apartment buildings and commercial developments to the north and south.

Page 3.1-2:

The proposed project could be visible from vantage points that the public has access to in the immediate project vicinity. The project site is visible from the San Diego Creek Class I Bikeway ~~bike path~~ along San Diego Creek, segments of Harvard Avenue, and the Michelson Drive bridge.

Page 3.1-18:

Scenic views from the San Diego Creek Class I Bikeway ~~San Diego Creek bike path~~ and Harvard Avenue already include the existing MWRP facilities, and some views are partially screened by existing vegetation (see Figures 3.1-7 through 3.1-10).

Page 3.2-5:

The San Diego Creek Class I Bikeway ~~bike path~~ on the east side of San Diego Creek is approximately 1,400 feet or 0.25 miles from the project site.

Page 3.2-17

**REVISED TABLE 3.2-7  
MAXIMUM PROPOSED PROJECT OPERATIONAL EMISSIONS**

| Emissions Source                           | Estimated Emissions (lbs/day) |                 |                |                 |                  |                                |
|--|-------------------------------|-----------------|----------------|-----------------|------------------|--------------------------------|
|  | ROG                           | NO <sub>x</sub> | CO             | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> <sup>a</sup> |
| <b>Proposed Project: Class A Biosolids</b> |                               |                 |                |                 |                  |                                |
| On-site Facilities <sup>b</sup>            | 12.40                         | 49.60           | 39.51          | 4.70            | 20.09            | 19.77                          |
| Mobile Sources <sup>c</sup>                | (0.63)                        | (5.53)          | (3.92)         | (0.01)          | (0.20)           | (0.17)                         |
| Total Emissions for Class A Biosolids      | 11.77                         | 44.07           | 35.59          | 4.69            | 19.89            | 19.60                          |
| <b>Proposed Project: Class B Biosolids</b> |                               |                 |                |                 |                  |                                |
| On-site Facilities <sup>b</sup>            | 4.24                          | 14.71           | 5.16           | 3.49            | 6.22             | 6.21                           |
| Mobile Sources <sup>c</sup>                | 1.04                          | 6.80            | 7.31           | 0.02            | 0.28             | 0.23                           |
| Total Emissions for Class A Biosolids      | 5.28                          | 21.51           | 12.47          | 3.51            | 6.50             | 6.44                           |
| <b>Existing OCSD Solids Disposal Trips</b> |                               |                 |                |                 |                  |                                |
| Mobile Sources <sup>d</sup>                | 6.21                          | 45.91           | 41.78          | 0.10            | 1.80             | 1.47                           |
| <b>Net Project Operational Emissions</b>   |                               |                 |                |                 |                  |                                |
| <b>Class A Biosolids</b>                   | <b>5.56</b>                   | <b>(1.84)</b>   | <b>(6.19)</b>  | <b>4.59</b>     | <b>18.09</b>     | <b>18.13</b>                   |
| <b>Class B Biosolids</b>                   | <b>(0.93)</b>                 | <b>(24.40)</b>  | <b>(29.31)</b> | <b>3.41</b>     | <b>4.70</b>      | <b>4.97</b>                    |
| <i>Regional Significance Threshold</i>     | <i>55</i>                     | <i>55</i>       | <i>550</i>     | <i>150</i>      | <i>100</i>       | <i>55</i>                      |
| <u>Potentially Significant Impact?</u>     | No                            | No              | No             | No              | No               | No                             |

NOTE: Emissions would be different during summer and winter. Maximum daily emissions of ROG, and NO<sub>x</sub> would be higher during the winter while emissions of CO would be higher in the summer. Maximum emissions are shown for the respective seasons.

<sup>a</sup> The PM<sub>2.5</sub> emissions were calculated from the PM<sub>10</sub> emissions based on the recommended PM<sub>2.5</sub> fractions provided in Appendix A of SCAQMD's *Final Methodology to Calculate PM<sub>2.5</sub> and PM<sub>2.5</sub> Significance Thresholds* document.

<sup>b</sup> On-site emissions calculations and assumptions provided in Appendix F.

<sup>c</sup> Mobile source emissions calculations and assumptions provided in Appendix F.

<sup>d</sup> OCSD mobile source emissions estimated for solids disposal trips associated with Class B biosolids.

SOURCE: On-site facility emissions calculations performed by ENVIRON, 2012 (Appendix F); Vehicle trip modeling performed by ESA, 2012 (Appendix F).

Page 3.3-13:

**BIO-2:** If initiation of ground-disturbing construction activities must occur during the specific nesting season of least Bell's vireo and southwestern willow flycatcher (March 15 through September 15), impacts to these species would be avoided through implementation of one of the ~~three~~ four of the following measures. Implementation of one of the measures below would reduce impacts to less than significant levels.

1. Conduct surveys to determine the presence or absence of least Bell's vireo or southwestern willow flycatcher in suitable habitat within 500 feet of the project area in accordance with USFWS protocols (USFWS 1999, 2000). If neither species

is detected by these surveys, construction may proceed without additional mitigation.

2. If protocol surveys detect the presence of either species, delay construction within a distance of occupied territory determined by a qualified biologist until after the least Bell's vireo and/or southwestern willow flycatcher have migrated from the site. If nesting is detected, delay construction within a distance determined by a qualified biologist until the biologist determines that the young have fledged the nests and/or the nests are no longer active.
3. If protocol surveys detect the active nests of either species, noise barriers may be erected to reduce sound levels at nest sites to reduce the "no construction" buffer distance around the nest as determined by a qualified biologist. If noise barriers are utilized, a qualified biologist shall conduct monitoring of noise levels at the nest sites to determine if construction noise has the potential to affect nesting behavior. If construction activities are determined to affect nesting behavior of least Bell's vireo and/or southwestern willow flycatcher, the biological monitor shall halt construction-related activities that may impact the nests until the juveniles have fledged and/or the nests are no longer active.
4. Erect noise barriers prior to the first nesting season (starting March 15<sup>th</sup>) following the initiation of construction. The noise barrier shall be of adequate height, length and materials to maintain ambient noise levels in the adjacent riparian woodland for the duration of the construction period. The effectiveness of the barriers to reduce noise levels to ambient conditions shall be tested with noise monitoring equipment prior to the first nesting season. Barriers shall be maintained in working condition until completion of the project.

Page 3.4-17:

**CUL-4:** In the event that paleontological resources are encountered, the OCC Paleontologist shall develop a Paleontological Resources Mitigation and Monitoring Plan. The Plan shall address procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils, and the preparation of a final mitigation report. Once the find has been evaluated in accordance with the Plan, the OCC Paleontologist shall determine when work can resume in the vicinity of the find. The Director of Community Development of the City of Irvine shall also be notified of the discovery and the determination of the OCC Paleontologist related to recovery, handling, and disposition of identified resources.

Page 3.4-18:

**CUL-5:** If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are

located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The Director of Community Development of the City of Irvine shall also be notified of the discovery and the determination of the NAHC related to recovery, handling, and disposition of remains and associated artifacts.

Page 3.9-2:

The San Diego Creek Class I Bikeway is located A bike path on the east side of San Diego Creek, is approximately 1400 feet or 0.25 miles from the project site. This bike path runs between Harvard Avenue and San Diego Creek.

Page 3.9-2 under "Recreational Facilities":

Peters Canyon Regional Riding and Hiking Trail is almost 12 miles long. The route is surfaced with native soil or decomposed granite. Categorized as a mountain-to-sea riding and hiking trail, the trail is on the west side of the flood control channel from the confluence of Peters Canyon and San Diego Creek to Upper Newport Bay. When complete the trail will serve thousands of residents by connecting neighborhoods, commercial and business areas, and local and regional parks from the coast to the Anaheim foothills. Trails serve walkers, joggers, runners, equestrian riders and mountain bicyclists. Class I Bikeways serve commuter and recreational cyclists and pedestrians.

Page 3.9-5 under "Physical Deterioration of Recreational Facilities":

In addition, the proposed project would have no additional impact on the portion of the Peters Canyon Regional Riding and Hiking Trail that is located between Michelson and Campus Drive on the west side of the San Diego Creek levee. The proposed project would not affect the temporary roadway located next to the Trail.

Page 3.10-15:

**NOISE-3:** IRWD shall conduct a post-construction noise survey to ensure that operation of the MWRP is in compliance with the City of Irvine Noise Ordinance (Title 6, Division 8, Chapter 2) at the IRWD property boundary. If survey results indicate non-compliance with the Noise Ordinance, IRWD shall implement additional sound-dampening architectural and equipment improvements at the MWRP and conduct a follow-up survey to demonstrate compliance with noises thresholds. A copy of the noise survey shall be provided to the Director of Community Development of the City of Irvine, as well as information on site improvements necessary to correct excess noise levels as well as a schedule for completion of the improvements.

Page 3.12-3:

**Harvard Avenue** runs along the eastern boundary of the MWRP site on the east side of San Diego Creek. Between Michelson Drive and University Drive, Harvard Avenue traverses in a northeast/southwest direction and transitions between a two- to four-lane

undivided roadway. This roadway is designated as a Commuter Highway in the City of Irvine Master Plan of Arterial highways. The posted speed limit is 50 miles per hour, and there is no on-street parking allowed within this portion of the roadway. Adjacent to the east side of Harvard Avenue along this stretch is the Rancho San Joaquin Golf Course, while the paved San Diego Creek Class I Bikeway ~~Peters Canyon Trail~~ runs adjacent to the west side. A sidewalk is located on the southbound roadway (approximately 5 feet in width) at the beginning of the Harvard Avenue and Michelson Drive intersection, but ends after approximately 700 feet further down Harvard Avenue. The sidewalk continues near the Harvard Avenue and University Drive intersection for approximately 1,300 feet. A bike lane (approximately 7 feet in width) is available on both sides of the roadway.

Page 3.12-5:

**REVISED TABLE 3.12-2  
EXISTING LEVEL OF SERVICE RATINGS FOR INTERSECTIONS IN THE PROJECT AREA**

| <b>Intersection</b>                     | <b>LOS<br/>A.M. / P.M.</b> |
|---|----------------------------|
| I-405 NB Ramps / Jamboree Road          | C / D                      |
| I-405 SB Ramps / Jamboree Road          | D / D                      |
| MacArthur Boulevard / Jamboree Road     | A / C                      |
| Laguna Canyon Rd / SR-73 NB Ramps       | E / D                      |
| Laguna Canyon Rd / SR-73 SB Ramps       | A / A                      |
| <u>Jamboree Road / Michelson Drive</u>  | <u>C / D</u>               |
| <u>Harvard Avenue / Michelson Drive</u> | <u>B / D</u>               |
| <u>Culver Drive / Michelson Drive</u>   | <u>A / D</u>               |

LOS = Level of Service. LOS is based on peak-hour traffic counts during A.M. (6:00 to 9:00) and P.M. (3:00 to 7:00) periods and volume to capacity ratios.

SOURCE: Orange County Transportation Authority, CMP, 2011. Pers. Comm. W. Wang, City of Irvine, 2012.

### ***Bicycle and Pedestrian Transportation***

The City of Irvine has an extensive ~~trail~~ non-motorized system that includes pedestrian walkways, Class I Bikeways, and Class II Bike Lanes and bike trails within open space corridors and along regional ~~trails~~ flood control facilities. The County of Orange also operates and maintains a separate master-planned system of riding and hiking trails, several of which are found in the City. These trails (the Peters Canyon, Hicks Canyon and Irvine Coast) are used by walkers, joggers, equestrian riders and mountain bicyclists. Class I Bikeways and Class II Bike Lanes, however, comprise the most extensive part of the City's non-motorized circulation network. The City's bicycle network connects with other off-road and on-road bicycle facilities, riding and hiking trails and other types of pathways in adjoining communities and throughout Orange County. ~~The County maintains a coordinated system of trails, including bikeways, equestrian trails and hiking trails within the~~

cities. Bikeways comprise the most extensive part of the City's trail network. The biking network in Irvine connects with other trails and paths in adjacent communities and throughout Orange County. The three categories of bikeways as described in the Caltrans Highway Design Manual, Chapter 1000, are:

- Class I: a paved path that is separate from any motor vehicle travel lane;
- Class II: a restricted lane within the right-of-way of a paved roadway for the exclusive or semi-exclusive use of bicycles; and
- Class III: a bikeway that shares the street with motor vehicles or the sidewalk with pedestrians.

The City of Irvine contains 44.5 miles of off-road Class I Bikeways ~~bicycle trails~~ and 282 miles of on-road Bike Lanes ~~bicycle lanes within the City~~. The closest bicycle facilities ~~bike paths~~ to the project site include a Class I Bikeway ~~bike path~~ along San Diego Creek and Harvard Avenue and University Drive, and Class II Bike Lanes ~~Bikeways~~ located along Campus Drive, Culver Drive, Carlson Avenue, Michelson Drive, Harvard Avenue, and University Drive (OCTA, 2010).

Page 3.12-12:

The closest intersections that are monitored for LOS in the CMP are the I-405 Northbound and Southbound ramps at Jamboree Road (Table 3.12-2). The City of Irvine has provided information on LOS ratings for intersections closer to the project site, including Jamboree Road / Michelson, Harvard Avenue / Michelson Drive and Culver Drive / Michelson Drive ~~(There are no LOS ratings for Culver Drive.)~~ These intersections currently operate at LOS C and D during the P.M. peak period, ~~depending on time of day~~. It is likely that operational vehicles accessing the project site would pass through these intersections. However, given the typical daily number of vehicles traveling on I-405 and Jamboree Road, Harvard Avenue, Culver Drive, and Michelson Drive in the vicinity of these intersections, the proposed project would not introduce enough vehicles to affect LOS. I-405 has an ADT of 603,000 in the segments just north and south of Jamboree Road. Jamboree Road has an ADT of 141,000 in the segments just east and west of I-405. Culver Drive and Harvard Drive between University Drive and I-405 have ADTs of 89,000 and 17,000, respectively. Michelson Drive between Culver Drive and Jamboree Road has an ADT of 29,000. Assuming all operational vehicles for the proposed project pass through ~~this~~ these intersections, an addition of 20 to 36 trips per day during the A.M. or P.M. peak period would not substantially affect traffic volume or LOS. Impacts would be less than significant.

Page 6-6:

***Ability to Meet Project Objectives***

Under the No Project Alternative, most of the project objectives would not be achieved. There would be no opportunity for IRWD to recapture biogases to implement any energy

recovery facilities or allow IRWD to make use of its own renewable resources through the beneficial reuse of biosolids. IRWD's autonomy for residuals management would not be increased as the need to transfer residual solids to OCSD would continue. However, the future solids handling needs of the Phase 2 and 3 Capacity Expansion Project would be met by continuing to ~~send~~ discharge all residuals to OCSD through the existing force main and by OCSD upgrading their facilities. This is the only project objective that would be met under the No Project Alternative. A renewed MOU/agreement with OCSD would be required.

Appendix E  
Peer Review Comment Letter  
for Odor Control System



October 5, 2012

7036-3

Mr. Paul Weghorst, P.E.  
Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA 92619-1799

**Subject: Peer Review Comment Letter for the Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities Odor Control Systems**

Dear Mr. Weghorst:

At the request of Irvine Ranch Water District, Dudek conducted a peer review of the design for the proposed Michelson Water Recycling Plant Biosolids and Energy Recovery Facilities. Our peer review focused on the proposed facilities, the proposed odor control strategies and specific systems (which included our assessment of the anticipated effectiveness and reliability of the system), and the odor mitigation features of the proposed equipment.

Currently, the biosolids generated by the wastewater treatment processes at the Michelson Water Recycling Plant (MWRP) are delivered to the Orange County Sanitation District for treatment and disposal. However, such practice of biosolids disposal will cease by the year 2016 and the biosolids will be processed by a new biosolids and energy recovery project at MWRP. Control of the odor that may be emitted by the various project facilities is a major concern to the Irvine Ranch Water District (IRWD).

Summarized herein is our review team and our review.

## **REVIEW TEAM INTRODUCTIONS**

Our review was substantially performed by Mr. Louis Yu, P.E. and Mr. Wyatt Troxel, Grade V Operator. A brief bio of these team members is as follows:

Mr. Yu is a professional engineer specializing in the engineering of municipal water and wastewater facilities throughout California. His 45 years of engineering experience encompasses the planning, design and construction management of wastewater treatment plants, wastewater collection systems as well as pump stations. Mr. Yu earned a Bachelor's of Science and Master's Degrees in Civil Engineering from the University of Notre Dame.

Mr. Troxel has over 40 years of active process management experience throughout California. He is well recognized throughout the U.S. for his leadership and acumen in troubleshooting and optimization of activated sludge and related systems. He has been a certified WWTP operator for over 35 years, receiving his Grade IV Operator Certificate in California in 1974, and Grade V Operator Certificate in 1985. He is a recognized expert in biological treatment, systemic assessment of wastewater collection, tertiary disinfection, and advanced treatment facilities. Mr. Troxel earned a Bachelor's of Science degree in Biological Sciences, Aquatic Microbiology, Limnology from the University of California, Riverside.

## **DESIGN DOCUMENTS REVIEWED**

The design of the odor control systems are presented in a number of reports, drawings and specifications prepared by Black and Veatch for IRWD's Biosolids and Energy Recovery Facilities Project as follows:

- Report of Special Study: Vapor Phase Odor Control, June 24, 2011
- Basis of Design Report, dated July 22, 2011
- Technical Specifications, Division 11: Mechanical, Plumbing and HVAC, date April 30, 2010
- Reviewed pertinent sections of the Drawings Vol. 3A: Civil, Architectural and Structural, date April 30, 2010
- Reviewed pertinent sections of the Drawings Vol. 3B: Mechanical, Plumbing and HVAC, date April 30, 2010
- Reviewed pertinent sections of the Drawings Vol. 3DS3-3D: Instrumentation, date April 30, 2010
- Draft Appendix 17335-A-6000, Software Control Block Description

Our review was based on the descriptions of the odor control system as presented in these documents and a review of relevant design criteria and odor control strategies presented by the design engineer at a workshop on October 4, 2012.

## **OVERVIEW OF PROPOSED BIOSOLIDS AND ENERGY RECOVERY FACILITIES**

The biosolids facilities are designed not only to treat the sludge generated at MWRP, but also have the capability to treat fats, oil and grease (FOG), as well as dewatered sludge cake from the Los Alisos Water Reclamation Plant (LAWRP). MWRP produced sludge will be thickened by centrifuges before it is pumped to the anaerobic sludge digestion system. The thickened sludge, together with the imported FOG, will first be processed in the acid phase digesters, and the discharge from the acid phase digesters will then be processed by the methane phase digesters. Digested sludge will be temporarily stored in the sludge holding tanks and then

pumped up to several centrifuges for dewatering. Dewatered sludge cake can be delivered to the wet material bins, from which it will be pumped to the sludge cake dryer, or delivered to the sludge cake storage hopper for hauling to offsite disposal. The biosolids facilities will also be designed to receive sludge cakes imported by truck from LAW RP. Cake from the trucks is first off-loaded into cake receiving bins and then the imported cake is conveyed to the wet material bins and then to the sludge cake dryer. Dried sludge in the form of pellets from the sludge dryer will be delivered to two, parallel pellet storage hoppers for collection by the hauling trucks.

Centrate from the digested sludge goes directly back to the MWRP Nitrification/denitrification (NdN) process train or Membrane Bio-Reactor (MBR) aeration basins for treatment. The treated centrate will then be returned to the treatment plant's primary sedimentation tanks or to the anoxic zone of the NdN process. Digester gas from the acid phase digesters will be delivered to the methane phase digesters to mix with digested gas being produced there. All of the digester gas will be conditioned and then used to fuel microturbines, hot water boilers for digester heating, for the sludge cake dryer, or directed to the enclosed gas burner.

While the sludge digesters, FOG receiving station, chemical storage facilities and the centrate treatment units are located outdoors, all of the other solids processing facilities are housed in a new Solids Handling Building. For odor control, the odor producing facilities, such as centrifuges, storage bins, screw conveyors, and hoppers will be enclosed and ducted to the odor control system. Also the cake receiving bay and the cake/pellet load-out bay will be ducted to the same odor control system. A network of ducting will be provided to collect the foul air from these facilities to an odor removal wet scrubber outside of the building. The odor removal scrubber will be a 3-stage chemical scrubber using sodium hypochlorite, sodium hydroxide and/or sulfuric acid for removal of the odorous compounds in the foul air.

## **DISCUSSION**

The designer's odor control strategy is to positively seal all equipment, tanks, bins, and spaces that may contain odorous products and to maintain these spaces under negative pressure such that the foul air is prohibited from escaping to atmosphere. All areas exposed to malodorous products are properly sealed and ventilated to the odor control system. This approach has been successfully implemented at many similar facilities. Specific findings resulting from our review are summarized as follows:

- I. The odor sources inside the Solids Handling Building are to be covered or enclosed in isolated rooms to minimize the quantity of foul air to be treated. A ducting system is provided to withdraw the foul air from the various odor sources to the chemical scrubber. According to the reports, the odor sources in this building are to be ventilated with an air change rate of 12 per hour and to create a slightly negative pressure inside the enclosure of the odor source necessary to remove/convey the foul

air for treatment. This ventilation method meets the requirements of NFPA, and it has been successfully implemented in other similar projects to prevent odor from leaking out to the atmosphere while continuously purging the air space inside the odor source.

2. Referring to the schematic diagram of the foul air collection system shown in P&ID I6001, the total foul air flow from the various odor sources to the odor removal scrubber amounts to 40,785 cubic feet per minute (cfm) when the foul air from the two cake receiving bins is shut off. According to the draft control strategy and in discussions with the design engineer, when the door of one of the sealed subgrade cake receiving bins is opened, foul air withdrawal from this bin will start and foul air from one of the truck bays will dampen to maintain a nearly constant foul air flow to the scrubber. This directs the air from the cake receiving bay through the cake receiving bin thereby ensuring that any odors from the imported cake are fully captured. This arrangement is preferable because it permits the use of the same foul air fan and scrubber to accommodate alternate modes of foul air withdrawal without the need for variable speed controls, more complicated control instrumentation, or additional scrubber capacity.
3. In addition to the solids processing facilities, certain "clean" areas are provided in the second floor of the Solids Handling Building. These areas include the control, electrical and lunch rooms, as well as the toilets and stairwells. While these areas are separated from the rest of the building, they are still connected to the foul air producing areas through access doors. Our review confirms that to prevent the odorous and corrosive foul air from leaking into the "clean" areas, these areas will be ventilated to provide a positive pressure to prevent intrusion of the odorous atmosphere into the clean areas.
4. Our review confirmed that all the odor generating areas will be ventilated to create a negative pressure in these areas to remain completely contained and treated to eliminate the odor.
5. The odor removal scrubber is a 3-stage system with the interconnecting ducting arranged in a manner that the three stages can be operated in series or operated with anyone of the stages bypassed for cleaning or other maintenance activities. The scrubber is also designed to use three types of chemicals such that the operator may select to use sodium hypochlorite and sodium hydroxide for removal of odorous organic compounds and hydrogen sulfide in subsequent stages, and sulfuric acid in the third stage if it's necessary for ammonia removal. Our review confirms that this meets standards of practice in the wastewater industry and is an appropriate odor control strategy for this application.
6. The off gas from the sludge dryer will be treated separately from the odor control system discussed above. As shown in the drawings, after exiting the furnace, the gas will

be cooled by the condenser, passed through a Venturi scrubber where it will be scrubbed with sulfuric acid for ammonia removal, and cleaned of its organic compounds by a regenerative thermal oxidizer (RTO). This is a process that has proven effective in other installations, including sludge dryers.

7. Outside of the Solids Handling Building, a ducting system has been provided to withdraw the foul air from the FOG storage tanks in the receiving station and convey it for elimination by the odor control system.

## **OTHER CONSIDERATIONS**

There are many effective methods, processes, and equipment to treat biosolids effectively and mitigate odors. Both the District and the design engineer conveyed the importance of selecting advantageous processes and equipment to mitigate and treat odors. To further reinforce the decision to utilize the selected biosolids treatment and handling processes, and equipment, both the District and the design engineer visited many similar and alternate facilities. The advantages and disadvantages of all the equipment and processes were chronicled and refined to reinforce the decision to utilize the proposed equipment and processes. We would like to highlight several reasons why the proposed equipment and processes were selected as follows:

Egg shaped digesters are more costly to construct than pancake digesters, but they were selected because they are more efficient at mixing sludge and require less frequent maintenance and cleaning. The use of egg shaped digesters is anticipated to introduce an odorless facility.

Biogas produced from the digesters are captured and contained in a closed piping system that is connected to the digesters and the biogas treatment systems. The biogas treatment systems are comprised of iron sponges and siloxanes are removed with a granular activated carbon system. The biogas is then used to fuel the microturbines decreasing energy demands.

Should the microturbines be off-line and there are no other beneficial uses of the biogas available such as the boilers or the dryer, the digester gas is routed via the biogas piping system to the Mentrion Barber enclosed burner system. This type of burner features a high-efficiency enclosed (no off-gassing) burner that significantly reduces NOX emissions.

The District has taken measures to provide enhanced training to operations staff as part of this project. This will provide operators with additional comfort and reliability in operating the biosolids handling and odor control systems equipment. The biosolids facilities will be staffed 24 hours per day, 7 days per week.

Odors in the form of off-gases from the FOG receiving station are vented and collected into the odor control system. This feature further enhances the MWRP's odor control system.

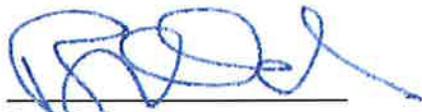
Odors collected from the combustible gases generated from the sludge dryer are collected and treated with sulfuric acid to minimize and mitigate the release of NOX.

The design includes many examples of multiple or standby units to provide more reliability should one unit fail. Examples are 3 acid digesters, 3 methane digesters, 2 sludge storage tanks, 1 standby thickening centrifuge, 1 standby dewatering centrifuge, 3 odor control scrubbers, 2 SBR centrate tanks, 2 cake receiving bins, 3 wet material bins, redundant screw conveyors, 2 boilers, and many other standby pieces of equipment on smaller systems.

## CONCLUSION

In summary, the use of chemical scrubbers for treatment of odorous foul air has been successful in many odor control projects. It is our opinion that the odor control strategy and the specific odor control systems included in the MWRP Biosolids and Energy Recovery Project are robust and meet or exceed industry standard practices. We fully expect that the systems will effectively contain, convey and treat the volume and type of odorants that will be produced by the multitude of systems and equipment in the biosolids handling facilities.

Sincerely,



Bob Oblund, P.E.  
Vice President

# Appendix F

## Air Emissions Calculations



**MAXIMUM DAILY MOBILE-SOURCE OPERATIONAL EMISSIONS**

| Criteria<br>Pollutant | Class A Biosolids             |                    |                      |        | Class B Biosolids             |                    |                      |       |
|-----------------------|-------------------------------|--------------------|----------------------|--------|-------------------------------|--------------------|----------------------|-------|
|                       | MWRP Biosolids<br>+ Employees | LAWRP<br>Biosolids | Chemical<br>Delivery | Total  | MWRP Biosolids +<br>Employees | LAWRP<br>Biosolids | Chemical<br>Delivery | Total |
| ROG                   | 0.27                          | (1.18)             | 0.28                 | (0.63) | 0.76                          | -                  | 0.28                 | 1.04  |
| NOx                   | 1.15                          | (8.74)             | 2.06                 | (5.53) | 4.75                          | -                  | 2.06                 | 6.80  |
| CO                    | 2.16                          | (7.95)             | 1.87                 | (3.92) | 5.44                          | -                  | 1.87                 | 7.31  |
| SOx                   | 0.00                          | (0.02)             | 0.00                 | (0.01) | 0.01                          | -                  | 0.00                 | 0.02  |
| PM10                  | 0.06                          | (0.34)             | 0.08                 | (0.20) | 0.20                          | -                  | 0.08                 | 0.28  |
| PM2.5                 | 0.05                          | (0.28)             | 0.07                 | (0.17) | 0.16                          | -                  | 0.07                 | 0.23  |

**MWRP-related Mobile Emissions - Class B Biosolids**

|                                  |    |
|----------------------------------|----|
| Daily Employee Trips:            | 10 |
| Daily Biosolids Truck Trips:     | 9  |
| Employee Roundtrip Miles:        | 20 |
| Biosolids Truck Roundtrip Miles: | 40 |

**Project Worker Trip Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.13271  |
| NOx   | 0.120375 |
| CO    | 1.228215 |
| SOx   | 0.002141 |
| PM10  | 0.018518 |
| PM2.5 | 0.01203  |

**Project Delivery Truck Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.626006 |
| NOx   | 4.626095 |
| CO    | 4.210002 |
| SOx   | 0.009869 |
| PM10  | 0.181107 |
| PM2.5 | 0.148566 |

**Total Proposed Project Mobile Emissions**

|       |          |
|-------|----------|
| ROG   | 0.758715 |
| NOx   | 4.74647  |
| CO    | 5.438218 |
| SOx   | 0.01201  |
| PM10  | 0.199625 |
| PM2.5 | 0.160596 |

**MWRP-related Mobile Emissions - Class A Biosolids**

|                                 |    |
|---------------------------------|----|
| Daily Worker Trips:             | 10 |
| Daily Delivery Truck Trips:     | 2  |
| Worker Roundtrip Miles:         | 20 |
| Delivery Truck Roundtrip Miles: | 40 |

**Project Worker Trip Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.13271  |
| NOx   | 0.120375 |
| CO    | 1.228215 |
| SOx   | 0.002141 |
| PM10  | 0.018518 |
| PM2.5 | 0.01203  |

**Project Delivery Truck Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.139112 |
| NOx   | 1.028021 |
| CO    | 0.935556 |
| SOx   | 0.002193 |
| PM10  | 0.040246 |
| PM2.5 | 0.033015 |

**Total Proposed Project Mobile Emissions**

|       |          |
|-------|----------|
| ROG   | 0.271822 |
| NOx   | 1.148396 |
| CO    | 2.163772 |
| SOx   | 0.004334 |
| PM10  | 0.058764 |
| PM2.5 | 0.045045 |

**Assumptions:**

10 new employees = 10 daily worker roundtrips.

When dryer is off, Class B disposal requires 46 truck trips per week roundtrip, or approximately 9 daily.

When dryer is on, Class A disposal required 11 truck trips per week, or approximately 2 daily.

Class A or Class B biosolids would be delivered to landfill approx. 20 miles from MWRP (40 mi roundtrip).

Estimate local employees travel 20 miles round trip.

**LAWRP-related Mobile Emissions - Class B To La Paz, Arizona (dryer off)**

|                                  |                 |
|----------------------------------|-----------------|
| Daily Biosolids Truck Trips:     | 2               |
| Biosolids Truck Roundtrip Miles: | 360 within SCAB |

**Project Delivery Truck Emissions:**

|       |          |
|-------|----------|
| ROG   | 1.252012 |
| NOx   | 9.252189 |
| CO    | 8.420004 |
| SOx   | 0.019738 |
| PM10  | 0.362214 |
| PM2.5 | 0.297133 |

**LAWRP-related Mobile Emissions - Class B To MWRP (dryer on)**

|                                  |                |
|----------------------------------|----------------|
| Daily Biosolids Truck Trips:     | 2              |
| Biosolids Truck Roundtrip Miles: | 20 within SCAB |

**Project Delivery Truck Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.069556 |
| NOx   | 0.514011 |
| CO    | 0.467778 |
| SOx   | 0.001097 |
| PM10  | 0.020123 |
| PM2.5 | 0.016507 |

**Net Decrease in Project Mobile Emissions.**

|       |          |
|-------|----------|
| ROG   | -1.18246 |
| NOx   | -8.73818 |
| CO    | -7.95223 |
| SOx   | -0.01864 |
| PM10  | -0.34209 |
| PM2.5 | -0.28063 |

**Assumptions:**

Under the project, the number of trucks leaving LAW RP to haul Class B biosolids does not change (approximately 6 per week). Class B biosolids are hauled from LAW RP using 2 trucks 3 times per week. When dryer is on, trucks will haul Class B biosolids from LAW RP to MWRP instead of La Paz, Arizona, resulting in fewer miles traveled. When dryer is off, trucks will continue to haul Class B biosolids to Arizona resulting in no change from existing conditions. For truck trips to La Paz, Arizona, existing round-trip miles within the South Coast air basin = 360 miles. Round-trip miles between the LAW RP and MWRP = 20 miles.

**Chemical Delivery Emissions - Baseline**

|                                 |    |
|---------------------------------|----|
| Daily Delivery Truck Trips:     | 2  |
| Delivery Truck Roundtrip Miles: | 40 |

**Project Delivery Truck Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.139112 |
| NOx   | 1.028021 |
| CO    | 0.935556 |
| SOx   | 0.002193 |
| PM10  | 0.040246 |
| PM2.5 | 0.033015 |

**Chemical Delivery Emissions - Project**

|                                 |    |
|---------------------------------|----|
| Daily Delivery Truck Trips:     | 6  |
| Delivery Truck Roundtrip Miles: | 40 |

**Project Delivery Truck Emissions:**

|       |          |
|-------|----------|
| ROG   | 0.417337 |
| NOx   | 3.084063 |
| CO    | 2.806668 |
| SOx   | 0.006579 |
| PM10  | 0.120738 |
| PM2.5 | 0.099044 |

**Net Increase in Project Mobile Emissions**

|       |          |
|-------|----------|
| ROG   | 0.278225 |
| NOx   | 2.056042 |
| CO    | 1.871112 |
| SOx   | 0.004386 |
| PM10  | 0.080492 |
| PM2.5 | 0.066029 |

**Assumptions:**

Baseline conditions include 2 deliveries per week of ferrous chloride.

Ferrous chloride no longer required once sludge discharges to OCSD are discontinued.

Six weekly chemical deliveries associated with the project would be offset by decrease in two ferrous chloride deliveries.

Chemical deliveries are the same regardless of class of biosolids being produced.

**Highest (Most Conservative) EMFAC2007 (version 2.3)  
Emission Factors for On-Road Passenger Vehicles & Delivery Trucks**

Projects in the SCAQMD (Scenario Years 2007 - 2026)  
Derived from Peak Emissions Inventory (**Winter**, Annual, **Summer**)

**Vehicle Class:**

**Passenger Vehicles (<8500 pounds) & Delivery Trucks (>8500 pounds)**

The following emission factors were compiled by running the California Air Resources Board's EMFAC2007 (version 2.3) Burden Model, taking the weighted average of vehicle types and simplifying into two categories:

**Passenger Vehicles & Delivery Trucks.**

These emission factors can be used to calculate on-road mobile source emissions for the vehicle categories listed in the tables below, by use of the following equation:

$$\text{Emissions (pounds per day)} = N \times TL \times EF$$

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

This methodology replaces the old EMFAC emission factors in Tables A-9-5-J-1 through A-9-5-L in Appendix A9 of the current SCAQMD CEQA Handbook. All the emission factors account for the emissions from start, running and idling exhaust. In addition, the ROG emission factors include diurnal, hot soak, running and resting emissions, and the PM10 & PM2.5 emission factors include tire and brake wear.

Scenario Year: **2009**

All model years in the range 1965 to 2009

| Passenger Vehicles<br>(pounds/mile) |            |
|-------------------------------------|------------|
| CO                                  | 0.00968562 |
| NOx                                 | 0.00100518 |
| ROG                                 | 0.00099245 |
| SOx                                 | 0.00001066 |
| PM10                                | 0.00008601 |
| PM2.5                               | 0.00005384 |
| CO2                                 | 1.09755398 |
| CH4                                 | 0.00008767 |

| Delivery Trucks<br>(pounds/mile) |            |
|----------------------------------|------------|
| CO                               | 0.02016075 |
| NOx                              | 0.02236636 |
| ROG                              | 0.00278899 |
| SOx                              | 0.00002679 |
| PM10                             | 0.00080550 |
| PM2.5                            | 0.00069228 |
| CO2                              | 2.72330496 |
| CH4                              | 0.00013655 |

Scenario Year: **2015**

All model years in the range 1971 to 2015

| Passenger Vehicles<br>(pounds/mile) |            |
|-------------------------------------|------------|
| CO                                  | 0.00614108 |
| NOx                                 | 0.00060188 |
| ROG                                 | 0.00066355 |
| SOx                                 | 0.00001070 |
| PM10                                | 0.00009259 |
| PM2.5                               | 0.00006015 |
| CO2                                 | 1.10192837 |
| CH4                                 | 0.00005923 |

| Delivery Trucks<br>(pounds/mile) |            |
|----------------------------------|------------|
| CO                               | 0.01169445 |
| NOx                              | 0.01285026 |
| ROG                              | 0.00173890 |
| SOx                              | 0.00002741 |
| PM10                             | 0.00050307 |
| PM2.5                            | 0.00041268 |
| CO2                              | 2.81247685 |
| CH4                              | 0.00008076 |

**Table 1: Peak Day NO<sub>x</sub> Emissions - Class A Pellets**

Irvine Ranch Water District (IRWD)  
Irvine, California

| Equipment                         | 6 MT Operating<br>Producing Class A Pellets<br>Excess Biogas to Burner |                      |                           |                              |                 |                              |                               |                                |                  |
|-----------------------------------|--|----------------------|---------------------------|------------------------------|-----------------|------------------------------|-------------------------------|--------------------------------|------------------|
|                                   | # Units  | Biogas<br>(Mscf/day) | Natural Gas<br>(Mscf/day) | NO <sub>x</sub><br>(lbs/day) | CO<br>(lbs/day) | SO <sub>x</sub><br>(lbs/day) | PM <sub>10</sub><br>(lbs/day) | PM <sub>2.5</sub><br>(lbs/day) | VOC<br>(lbs/day) |
| Dryer                             | 1  | 0                    | 348                       | 33.84                        | 33.84           | 1.20                         | 13.45                         | 13.45                          | 8.06             |
| RTO                               | 1  | 0                    | 14.40                     | 1.05                         | 0.50            | 0.01                         | 0.11                          | 0.11                           | 0.10             |
| Microturbines                     | 6  | 864.00               | 0                         | 14.40                        | 5.04            | 3.37                         | 6.22                          | 6.21                           | 3.01             |
| Boilers                           | 2  | 0                    | 0                         | 0.00                         | 0.00            | 0.00                         | 0.00                          | 0.00                           | 0.00             |
| Emergency Generator (Testing)     | 1  | 0                    | 0                         | 0.00                         | 0.00            | 0.00                         | 0.00                          | 0.00                           | 0.00             |
| Burner                            | 1  | 35.62                | 0                         | 0.31                         | 0.12            | 0.12                         | 0.00                          | 0.00                           | 0.07             |
| Sludge Thickening                 | --   | --                   | --                        | --                           | --              | --                           | --                            | --                             | 0.58             |
| Digested Sludge Dewatering        | --   | --                   | --                        | --                           | --              | --                           | --                            | --                             | 0.58             |
| Cake and Pellet Loading/Unloading | --   | --                   | --                        | --                           | --              | --                           | 0.31                          | 0.01                           | 0.00             |
| <b>Total:</b>                     |  | <b>899.62</b>        | <b>362.62</b>             | <b>49.60</b>                 | <b>39.51</b>    | <b>4.70</b>                  | <b>20.09</b>                  | <b>19.77</b>                   | <b>12.40</b>     |

**Class A Pellet Production - Assumptions**

- The dryer emissions are based on lb/hr emission factors provided by Andritz. Unit would operate 24 hr/day. Note that the emissions listed in the table above include non-combustion emissions from the drying of the biosolids and the separation of the dried biosolids from the air stream at the dryer outlet.
- The RTO will be operating as an air pollution control system when the dryer is operating. Unit would operate 24 hr/day. The natural gas emission factors for VOC, CO, PM<sub>10</sub>, and SO<sub>x</sub> are based on the default emission factors in SCAQMD's online AER Help and Support document, "Default Emission Factors for External Combustion Equipment for Forms B1 and B1U". The NO<sub>x</sub> emission factor is based on the Rule 1147 NO<sub>x</sub> limit of 60 ppm at 3% O<sub>2</sub> for thermal oxidizers operating at temperatures ≥1200°F.

$$NO_x \text{ emission factor} = \frac{60 \text{ ppm}}{1,000,000} \times 8,710 \frac{\text{scf}}{\text{MMBtu}} \times 1,000 \frac{\text{MMBtu}}{\text{Mscf}} \times \frac{\text{lb} - \text{mol}}{385 \text{ scf}} \times 46 \frac{\text{lb}}{\text{lb} - \text{mol}} \times \frac{20.9}{20.9 - 3}$$

- The microturbine emission factor is based on a 0.4 lb/MWh emission factor provided by the manufacturer's specifications. Unit would operate 24 hr/day. Each MT would operate on 144 Mscf/day of biogas. The microturbines are assumed to have a total 1.5 MW generating capacity.

4. The boilers would not be operating when producing Class A pellets.

5. Testing of the emergency generator would not take place when producing Class A pellets and the dryer is on.

6. Excess biogas that is not combusted in the MTs will be sent to the burner. Only a small amount of excess biogas is expected (13,000,000 scf/yr / 365 day/yr = 35,600 scf/day), which can be combusted in approximately 30 minutes/day.

7. The sludge thickening emissions were calculated based on VOC emission factors (3.70 × 10<sup>6</sup> lb/gal for sludge dewatering centrifuges, 0.451 lb/lb in wastewater for flow equalization, primary effluent) and assuming a wastewater VOC concentration of 89 ug/L, as found in the 1993 JEIP report. The total sludge throughput used in the calculation was 1.60 million gallons per day. Unit would operate 24 hr/day.

$$VOC \text{ emissions (flow equalization)} = 89 \frac{\mu\text{g VOC in wastewater}}{\text{L wastewater}} \times \frac{\text{g}}{1,000,000 \mu\text{g}} \times \frac{\text{lb}}{454 \text{ g}} \times 3.785 \frac{\text{L}}{\text{gal}} \times 0.451 \frac{\text{lb VOC}}{\text{lb VOC in wastewater}} \times 1.60 \frac{\text{million gal}}{\text{day}} \times 1,000,000 \frac{\text{gal}}{\text{million gal}}$$

8. The digested sludge dewatering emissions were calculated based on VOC emission factors (3.70 × 10<sup>6</sup> lb/gal for sludge dewatering centrifuges, 1.70 × 10<sup>9</sup> lb/lb solids for sludge conveyors, 0.451 lb/lb in wastewater for flow equalization, primary effluent) and assuming a wastewater VOC concentration of 89 ug/L, as found in the 1993 JEIP report. The total sludge throughput used in the calculation was 1.60 million gallons per day. Unit would operate 24 hr/day.

$$VOC \text{ emissions (conveyors)} = 1.70 \times 10^{-9} \frac{\text{lb VOC}}{\text{lb solids}} \times 167 \frac{\text{dry tons}}{\text{week}} \times \frac{\text{week}}{5 \text{ days}} \times 2,000 \frac{\text{lb}}{\text{ton}}$$

9. The VOC emissions from cake loading were calculated based on a VOC emission factor of 1.40 × 10<sup>9</sup> lb/lb dry biosolids, as found in the 1993 JEIP report, and assuming 62.5 dry tons/week sludge would be trucked in. The emissions from the Class A Pellet storage silos were calculated based on emission factor of 0.0063 lb PM<sub>10</sub>/ton, as found in Table 9.9 1-1 of AP-42. The amount of Class A pellets produced were estimated based on a total sludge throughput of 230 dry tons/week through the dryer and a pellet solids content of 92%.

10. The PM<sub>2.5</sub> emissions were estimated based on the following PM<sub>2.5</sub> fractions as indicated in Appendix A to the Final Methodology to Calculate PM<sub>2.5</sub> and PM<sub>2.5</sub> Significance Thresholds from SCAQMD's website:

- 100% of the PM<sub>10</sub> is PM<sub>2.5</sub> for the dryer, RTO, and boilers, based on the category labeled EXTERNAL COMBUSTION GASEOUS FUEL-EXCEPT PETROLEUM AND INDUSTRIAL PROCESS HEATERS
- 99.8% for the microturbines, based on the category labeled INTERNAL COMBUSTION GASEOUS FUEL
- 100% for the flare, based on the category labeled INCINERATOR, AFTERBURNER, FLARES GASEOUS FUEL
- 97.6% for the emergency generator, based on the category labeled INTERNAL COMBUSTION DISTILLATE AND DIESEL-ELECTRIC GENERATION
- 3.4% could possibly be used for the drying system polycyclone and the storage silos, based on the category labeled FOOD AND AGRICULTURE GRAIN ELEVATORS (a similar category to the one used to calculate PM<sub>10</sub> for these equipment).

**Summary of Combustion Emission Factors**

| Equipment     | Fuel Type   | NO <sub>x</sub><br>(lbs/MMscf) | CO<br>(lbs/MMscf) | SO <sub>x</sub><br>(lbs/MMscf) | PM <sub>10</sub><br>(lbs/MMscf) | PM <sub>2.5</sub><br>(lbs/MMscf) | VOC<br>(lbs/MMscf) | Notes   |
|---------------|-------------|--------------------------------|-------------------|--------------------------------|---------------------------------|----------------------------------|--------------------|---|
| Dryer         | Natural Gas | 97.18                          | 97.18             | 3.45                           | 38.60                           | 38.60                            | 22.74              | 1.41 lb/hr NO <sub>x</sub> , 1.41 lb/hr CO, 0.05 lb/hr SO <sub>x</sub> , 0.56 lb/hr PM <sub>10</sub> , 0.33 lb/hr VOC as provided by Andritz                    |
| RTO           | Natural Gas | 72.91                          | 35.00             | 0.60                           | 7.50                            | 7.50                             | 7.00               |   |
| Microturbines | Biogas      |                                |                   | 3.9                            | 7.2                             | 7.19                             | 3.48               |   |
|               | Natural Gas | 16.67                          | 5.83              | 3.47                           | 6.73                            | 6.72                             | 2.14               |   |
| Boilers       | Biogas      | See note                       | 84                | 0.6                            | 7.6                             | 7.6                              | 5.5                | The NO <sub>x</sub> emission factor would be weighted according to the proportion of natural gas and biogas combusted in the boiler, as indicated in Rule 1146. |
|               | Natural Gas |                                | 84                | 0.6                            | 7.6                             | 7.6                              | 5.5                |   |
| Burner        | Biogas      | 8.59                           | 3.49              | 3.33                           | 0.00                            | 0.00                             | 1.99               |   |
|               | Natural Gas | 130                            | 35                | 0.6                            | 7.5                             | 7.5                              | 7                  | For pilot burner only   |

**Table 2: Peak Day NO<sub>x</sub> Emissions - Class B Bio-Solids**  
Irvine Ranch Water District (IRWD)  
Irvine, California

| Equipment                         | 6 MT Operating<br>Producing Class B Bio-Solids<br>Excess Biogas to Burner |                      |                           |                              |                 |                              |                               |                                |                  |
|-----------------------------------|---|----------------------|---------------------------|------------------------------|-----------------|------------------------------|-------------------------------|--------------------------------|------------------|
|                                   | # Units   | Biogas<br>(Mscf/day) | Natural Gas<br>(Mscf/day) | NO <sub>x</sub><br>(lbs/day) | CO<br>(lbs/day) | SO <sub>x</sub><br>(lbs/day) | PM <sub>10</sub><br>(lbs/day) | PM <sub>2.5</sub><br>(lbs/day) | VOC<br>(lbs/day) |
| Dryer                             | 1   | 0                    | 0                         | 0.00                         | 0.00            | 0.00                         | 0.00                          | 0.00                           | 0.00             |
| RTO                               | 1   | 0                    | 0.00                      | 0.00                         | 0.00            | 0.00                         | 0.00                          | 0.00                           | 0.00             |
| Microturbines                     | 6   | 864.00               | 0                         | 14.40                        | 5.04            | 3.37                         | 6.22                          | 6.21                           | 3.01             |
| Boilers                           | 2   | 0                    | 0                         | 0.00                         | 0.00            | 0.00                         | 0.00                          | 0.00                           | 0.00             |
| Emergency Generator (Testing)     | 1   | 0                    | 0                         | 0.00                         | 0.00            | 0.00                         | 0.00                          | 0.00                           | 0.00             |
| Burner                            | 1   | 35.62                | 0                         | 0.31                         | 0.12            | 0.12                         | 0.00                          | 0.00                           | 0.07             |
| Sludge Thickening                 | --  | --                   | --                        | --                           | --              | --                           | --                            | --                             | 0.58             |
| Digested Sludge Dewatering        | --  | --                   | --                        | --                           | --              | --                           | --                            | --                             | 0.58             |
| Cake and Pellet Loading/Unloading | --  | --                   | --                        | --                           | --              | --                           | 0.00                          | 0.00                           | 0.00             |
| <b>Total:</b>                     |   | <b>899.62</b>        | <b>0.00</b>               | <b>14.71</b>                 | <b>5.16</b>     | <b>3.49</b>                  | <b>6.22</b>                   | <b>6.21</b>                    | <b>4.24</b>      |

**Class B Bio-Solids Production - Assumptions**

- The dryer would not operate when producing Class B Bio-Solids.
- The RTO will not be operating when the dryer is down.
- The microturbine emission factor is based on a 0.4 lb/MWh emission factor provided by the manufacturer's specifications. Unit would operate 24 hr/day. Each MT would operate on 144 Mscf/day of biogas. The microturbines are assumed to have a total 1.5 MW generating capacity.
- The boilers would not be operating when producing Class B Bio-Solids.
- Testing of the emergency generator would not be operating when producing Class B Bio-Solids.
- Excess Biogas that is not combusted in the MTs will be sent to the burner. Only a small amount of excess biogas is expected (13,000,000 scf/yr / 365 day/yr = 35,600 scf/day), which can be
- The sludge thickening emissions were calculated based on VOC emission factors (3.70 x 10<sup>6</sup> lb/gal for sludge dewatering centrifuges, 0.451 lb/lb in wastewater for flow equalization, primary effluent) and assuming a wastewater VOC concentration of 89 ug/L, as found in the 1993 JEIP report. The total sludge throughput used in the calculation was 1.60 million gallons per day. Unit would operate 24 hr/day.

$$VOC\ emissions\ (flow\ equalization) = 89 \frac{\mu g\ VOC\ in\ wastewater}{L\ wastewater} \times \frac{g}{1,000,000\ \mu g} \times \frac{lb}{454\ g} \times 3.785 \frac{L}{gal} \times 0.451 \frac{lb\ VOC}{lb\ VOC\ in\ wastewater} \times 1.60 \frac{million\ gal}{day} \times 1,000,000 \frac{gal}{million\ gal}$$

- The digested sludge dewatering emissions were calculated based on VOC emission factors (3.70 x 10<sup>6</sup> lb/gal for sludge dewatering centrifuges, 1.70 x 10<sup>-9</sup> lb/lb solids for sludge conveyors, 0.451 lb/lb in wastewater for flow equalization, primary effluent) and assuming a wastewater VOC concentration of 89 ug/L, as found in the 1993 JEIP report. The total sludge throughput used in the calculation was 1.60 million gallons per day. Unit would operate 24 hr/day.

$$VOC\ emissions\ (conveyors) = 1.70 \times 10^{-9} \frac{lb\ VOC}{lb\ solids} \times 167 \frac{dry\ tons}{week} \times \frac{week}{5\ days} \times 2,000 \frac{lb}{ton}$$

- The VOC emissions from cake unloading were calculated based on a VOC emission factor of 1.40 x 10<sup>9</sup> lb/lb dry biosolids, as found in the 1993 JEIP report, and assuming 167 dry tons/week sludge would be processed by IRWD to produce Class B bio-solids. Because the dryer would not operate when producing Class B bio-solids, no Class A pellets would be produced, and therefore, there would be no PM<sub>10</sub> emissions from the Class A pellet storage silos.

- The PM<sub>2.5</sub> emissions were estimated based on the following PM<sub>2.5</sub> fractions as indicated in Appendix A to the Final Methodology to Calculate PM<sub>2.5</sub> and PM<sub>2.5</sub> Significance Thresholds from SCAQMD's website:

- 100% of the PM<sub>10</sub> is PM<sub>2.5</sub> for the dryer, RTO, and boilers, based on the category labeled EXTERNAL COMBUSTION GASEOUS FUEL-EXCEPT PETROLEUM AND INDUSTRIAL PROCESS HEATERS
- 99.8% for the microturbines, based on the category labeled INTERNAL COMBUSTION GASEOUS FUEL
- 100% for the flare, based on the category labeled INCINERATOR, AFTERBURNER, FLARES GASEOUS FUEL
- 97.8% for the emergency generator, based on the category labeled INTERNAL COMBUSTION DISTILLATE AND DIESEL-ELECTRIC GENERATION
- 3.4% could possibly be used for the drying system polycyclone and the storage silos, based on the category labeled FOOD AND AGRICULTURE GRAIN ELEVATORS (a similar category to the one used to calculate PM<sub>10</sub> for these equipment).

**Summary of Combustion Emission Factors**

| Equipment     | Fuel Type   | NO <sub>x</sub><br>(lbs/MMscf) | CO<br>(lbs/MMscf) | SO <sub>x</sub><br>(lbs/MMscf) | PM <sub>10</sub><br>(lbs/MMscf) | PM <sub>2.5</sub><br>(lbs/MMscf) | VOC<br>(lbs/MMscf) | Notes   |
|---------------|-------------|--------------------------------|-------------------|--------------------------------|---------------------------------|----------------------------------|--------------------|---|
| Dryer         | Natural Gas | 97.18                          | 97.18             | 3.45                           | 38.60                           | 38.60                            | 22.74              | 0.05 lb/hr SO <sub>x</sub> , 0.56 lb/hr PM <sub>10</sub> , 0.33 lb/hr VOC as provided by  |
| RTO           | Natural Gas | 72.91                          | 35.00             | 0.60                           | 7.50                            | 7.50                             | 7.00               |   |
| Microturbines | Biogas      | 16.67                          | 5.83              | 3.9                            | 7.2                             | 7.19                             | 3.48               |   |
|               | Natural Gas |                                |                   | 3.47                           | 6.73                            | 6.72                             | 2.14               |   |
| Boilers       | Biogas      | See note                       | 84                | 0.6                            | 7.6                             | 7.6                              | 5.5                | The NO <sub>x</sub> emission factor would be weighted according to the proportion of natural gas and biogas combusted in the boiler, as indicated in Rule 1146. |
|               | Natural Gas |                                |                   |                                |                                 |                                  |                    |   |
| Burner        | Biogas      | 8.59                           | 3.49              | 3.33                           | 0.00                            | 0.00                             | 1.99               |   |
|               | Natural Gas |                                |                   |                                |                                 |                                  |                    |   |



## EXHIBIT "B"

### FINDINGS AND FACTS IN SUPPORT OF FINDINGS

IRVINE RANCH WATER DISTRICT  
Michelson Water Recycling Plant Phase 2 & 3 Capacity Expansion Project  
Biosolids Handling Component  
(State Clearinghouse No. 211031091)

#### I. Description of the Project

The Irvine Ranch Water District (IRWD) as the Lead Agency proposes the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion Project (proposed project). IRWD is proposing to modify the proposed project to include a Biosolids Handling Component that would integrate a new residuals-handling system at the MWRP, including biosolids processing, biogas management, and energy recovery systems. The proposed project would allow IRWD to make efficient and sustainable use of its own renewable resources, by allowing for beneficial use of biosolids and biogases produced during the wastewater treatment process. Under the proposed project, IRWD would discontinue sending residuals to Orange County Sanitation District (OCSD) for treatment and disposal.

The proposed project would process residuals produced at the MWRP and IRWD's Los Alisos Water Recycling Plant (LAWRP). The proposed project includes solids-handling facilities that would thicken, stabilize, dewater, and dry sludge to produce biosolids. Stabilization of sludge would be achieved using anaerobic digestion, which would generate biogas as a byproduct. The biogas would be put to beneficial reuse, including but not limited to providing an energy source for other processes at the MWRP. The proposed project would produce two classes of biosolids, as defined by Title 40 of the Code of Federal Regulations Part 503 (40 CFR Part 503), Standards for the Use or Disposal of Sewage Sludge: Class A pellets that could be reclaimed for beneficial use as a fertilizer or biofuel, and Class B cake that could be land applied as a fertilizer, composted, or otherwise disposed in a landfill.

#### II. Compliance with the California Environmental Quality Act

IRWD is the Lead Agency for the Project under the California Environmental Quality Act ("CEQA"). Pursuant to the requirements of the State CEQA Guidelines, IRWD prepared a Notice of Preparation that was publicly circulated for 30 days in March 2011. In addition, IRWD held a public scoping meeting on April 12, 2011 to provide the public and governmental agencies information on the CEQA process and to give further opportunities to identify environmental issues and alternatives for consideration in the EIR.

On July 2, 2012, IRWD filed a Notice of Completion of the Draft Supplemental EIR No. 1 (Draft SEIR) with the Governor's Office of Planning and Research. A 45-day public review period was established for the Draft SEIR (July 3, 2012 through August 16, 2012). A public meeting on the DEIR was held at IRWD on July 24, 2012. A Notice of Availability of the Draft SEIR with the date of the public meeting was published concurrently with distribution of the Draft SEIR. In response to requests by interested

parties, a Notice of Extension of Review Period extended the review period by an additional 15 days, bringing the total review period to 60 days. The extended comment period for the Draft SEIR ended on August 31, 2012. Written comments were received.

IRWD reviewed all of the written comments received from interested persons, organizations and agencies and prepared detailed responses to the comments directed to any significant environmental issues. The comments and responses, along with revisions to the Draft SEIR text, are included in separate chapters, which, together with the Draft SEIR, comprise the Final SEIR.

### **III. Findings Regarding Potentially Significant Environmental Impacts**

The SEIR addressed the environmental resources for which the proposed project could result in potentially significant effects: aesthetics; air quality; biological resources; cultural resources; geology, soils, and seismicity; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use, planning, and recreation; noise; utilities and energy; and transportation and traffic. Based on the results of the SEIR analysis, it was concluded that the implementation of environmental commitments incorporated into the proposed project along with proposed mitigation would insure that impacts to these environmental resources would be less than significant for the proposed project.

The SEIR reviewed combined cumulative impacts associated with the project's effects in conjunction with the effects of past, present and reasonably foreseeable future projects in the same geographic area. For this purpose, the SEIR included a list of past, present and reasonably-foreseeable future capital improvement, development and other construction projects located in the vicinity of the project, as well as identified past, present and reasonably-foreseeable projects in the area. The cumulative impact analysis was conducted for each of the same environmental resources listed above for the project impact analysis. The SEIR analysis concluded that, with the implementation of the proposed mitigation measures, the project would not have any cumulatively significant impacts.

CEQA provides that when an EIR identifies any significant environmental effects that would occur if the project is approved or carried out, the agency must make a finding or findings for each of the identified significant effects, accompanied by a brief explanation of the rationale for each finding. The possible types of findings are:

- Finding 1      Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.
  
- Finding 2      Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
  
- Finding 3      Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

CEQA provides that when making findings, a public agency must adopt a reporting and monitoring program for the changes to the project that it has adopted or made conditions of approval in order to mitigate or avoid significant project-related impacts on the environment. In accordance with CEQA, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the proposed project (See Appendix A). The MMRP is designed to ensure compliance during implementation of the approved project through ongoing monitoring and reporting of adopted mitigation measures. The primary goal of the MMRP is to ensure that during final design, construction, and operation, the proposed project will avoid or reduce potentially significant environmental impacts.

The facts listed herein in support of findings summarize the basis for the findings, as set forth more fully in the Draft SEIR, Final SEIR and appendices thereto. For convenience of reference, impacts and mitigation measures are referenced by designations given in the Draft SEIR (e.g., "3.1-1"). The full text of each mitigation measure is contained in the MMRP. By specific topic area, the findings and facts in support of the findings are as follows:

#### **A. Aesthetics**

POTENTIAL EFFECTS: Potential effects examined include: the potential to introduce new contrasting features into the visual landscape [3.1-1]; the potential to introduce new contrasting features visible from scenic roadways [3.1-2]; the potential to impact the visual character of the project site and its surroundings [3.1-3]; the potential to introduce new sources of light or glare that could affect day or nighttime views in the area [3.1-4].

FINDINGS: Adherence to mitigation measures listed in the Draft SEIR will reduce impacts 3.1-1 and 3.1-4 to less than significant levels. Impacts 3.1-2 and 3.1-3 will be less than significant, requiring no mitigation (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: The proposed project facilities and construction equipment would introduce new contrasting features into the visual landscape that would be visible from surrounding streets and public vantage points. Currently existing views of the project area are dominated by a backdrop of high-rise buildings and urban development screened by low-lying vegetation that would screen the proposed new facilities. As demonstrated by photographic simulations in the Draft SEIR and Final SEIR, the proposed project would introduce small contrasting features that would be barely visible between breaks in vegetation. When viewed from public vantage points at the Rancho San Joaquin Golf Course and Irvine Historical Society, the project site is located in a topographic depression. Photographic simulations in the Final SEIR illustrate that the proposed 70-foot structures would not alter the existing skyline and would blend into the visual landscape of urban development, proportionate to surrounding buildings. In order to further minimize the effects of the proposed project on scenic views in the area, Mitigation Measure AES-1 would be implemented that requires IRWD to select paint color schemes that blend in with surrounding landscape and built environment. As a result, impacts to visual landscapes would remain less than significant [3.1-1].

There are no officially-designated State scenic highways or eligible State scenic highways within the project area. The proposed project would not be visible from

University Drive, I-405, or Culver Drive, which are designated as a Rural or Natural Character roadway and Urban Character roadways. The proposed project would result in the removal of some ornamental trees at the perimeter of the project site, but the proposed project includes a Landscape Plan detailing replanting of new trees. The proposed project would not have other effects on scenic resources, such as rock outcroppings or historic buildings. Impacts to scenic resources would be less than significant, requiring no mitigation [3.1-2].

Construction activities would result in short-term impacts to aesthetic resources. The use of tall pieces of equipment, such as cranes, that would be visible from distant public vantage points in the project vicinity would constitute negative aesthetic elements in the existing visual landscape. However, these effects would be temporary and would not have a long-term effect on the existing visual character of the project site and surrounding area. In addition, the project site currently is occupied as construction staging for the Phase 2 Capacity Expansion. Consequently, construction of the proposed project would create similar temporary conditions as the existing construction activities at the MWRP property and would not result in substantial impacts to the visual character of the site [3.1-3]

The proposed project includes permanent aboveground facilities, the operation of which would alter the visual character of the project site as viewed from neighboring public vantage points. The existing visual character of the site is defined by vacant land, which is currently occupied as a construction staging area, and a floodwall. The project site is part of the MWRP facility, which is developed as a wastewater treatment and water recycling facility. The existing berm, floodwall, and landscaping currently partially screen views of the site, and the proposed project includes development and implementation of a Landscape Plan that would include screenings to soften the appearance of the proposed facilities. In addition, the proposed new buildings and structures would incorporate the colors and materials of the surrounding area where feasible. The proposed facilities would be wastewater treatment facilities similar to those already onsite at the MWRP and similar to those under construction as part of the Phase 2 Capacity Expansion. As a result, impacts to visual character of the project site would be considered less than significant, requiring no mitigation [3.1-3].

Nighttime construction activities would require temporary security lighting and construction lighting that could introduce new sources of light into the nighttime sky. Implementation of Mitigation Measure AES-2 would ensure that construction lighting is shielded and directed downward to avoid light spill to surrounding sensitive areas. New permanent indoor lighting and outdoor security lighting would be designed to minimize offsite impacts during operations. Impacts regarding light and glare would be less than significant with mitigation [3.1-4].

**MITIGATION MEASURES:** AES-1 and AES-2

## **B. Air Quality**

**POTENTIAL EFFECTS:** Potential effects examined include: the potential to conflict with or obstruct implementation of the applicable air quality plan [3.2-1]; the potential for construction and operational emissions to violate an air quality standard [3.2-2]; the potential to result in cumulatively considerable net increases of criteria pollutants [3.2-3];

the potential to expose sensitive receptors to pollutant concentrations [3.2-4]; and the potential to create objectionable odors [3.2-5].

**FINDINGS:** Impacts 3.2-1 through 3.2-5 will be less than significant, requiring no mitigation (Finding 1).

**FACTS IN SUPPORT OF THE FINDINGS:** The proposed project would be constructed entirely within the MWRP property and would be compatible with the existing land use designation and consistent with Air Quality Management Plan (AQMP) attainment forecasts. Therefore, the proposed project would not conflict with the AQMP and other applicable air quality plans. Impacts would be less than significant, requiring no mitigation [3.2-1].

Construction and operational impacts of the proposed project would not exceed the South Coast Air Quality Management District's (SCAQMD's) daily significance thresholds for reactive organic gases (ROG), NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>. Maximum daily operational emissions are based on design-level operating conditions, including permitted stationary source equipment and mobile sources. When the proposed project's mobile-source emissions are offset by elimination of certain existing OCSO truck trips that are part of the baseline emissions, there would be a net reduction in mobile-source emissions for all criteria pollutants. Impacts would be less than significant, requiring no mitigation [3.2-2].

According to the SCAQMD, if an individual project results in air emissions of criteria pollutants (VOC, CO, NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of the criteria pollutants for which the proposed project region is in non-attainment under an applicable federal or state ambient air quality standard. The South Coast Air Basin is in non-attainment for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, however, the construction and operational air emissions for the proposed project would not exceed the SCAQMD's thresholds of significance for any criteria pollutants. Therefore air emissions associated with the proposed project would not be cumulatively considerable. Cumulative impacts to air quality and air emissions would be less than significant, requiring no mitigation [3.2-3].

Construction and operational activities of the proposed project would not create substantial carbon monoxide (CO) hotspots and would only produce a maximum of 35.59 lbs/day, which would not exceed the SCAQMD threshold of 550 lbs/day. Construction activities would result in short-term emissions of PM<sub>2.5</sub> as a result of diesel engine exhaust, which is below the significance threshold and would not result in a long-term substantial source of Toxic Air Contaminants (TAC). Operation activities would result in the release of small amounts of TAC emissions but all project facilities would comply with all Rule 1401 requirements to ensure impacts are less than significant. Impacts would be less than significant, requiring no mitigation [3.2-4].

Emissions from construction activities would occur only within and immediately around the project site and would be temporary and would not result in objectionable odors. Operation of the proposed project would not result in nuisance odors from emissions of organic and inorganic compounds. The proposed project includes a highly-reliable, state-of-the-art odor control system with built-in redundancy and back-up power

generators to ensure the system would operate at full effectiveness. The odor control system design would remove odorous compounds associated with biosolids treatment beyond detectable levels, including removal of hydrogen sulfide (H<sub>2</sub>S) and ammonia, which are the compounds primarily associated with nuisance odor (rotten egg smell) at water reclamation facilities. The installation of the odor control system operated under a SCAQMD regulatory permit and implementation of the Odor Control Maintenance and Monitoring Plan would reduce odor to a non-detectable level at the MWRP property boundary. In addition, project operation would result in transporting sludge via truck to and from the MWRP. To contain any odor during transport, the trucks would have a sealed cover. The truck bed would only be opened when the truck is inside the solids receiving bays within the solids handling building as described in the Draft SEIR. After the truck pulls in, the roll-up doors to the receiving bay would be closed and the room would be put under a negative pressure by fans that direct all the room air to the odor control system. Impacts would be less than significant, requiring no mitigation [3.2-5].

MITIGATION MEASURES: None required.

### **C. Biological Resources**

POTENTIAL EFFECTS: Potential effects examined include: the potential to adversely impact candidate, sensitive, or special-status species [3.3-1]; the potential to adversely impact riparian habitat or other sensitive natural communities [3.3-2]; the potential to adversely impact wetlands, riparian habitats, and other jurisdictional features [3.3-3]; and the potential to interfere with native resident or migratory wildlife species [3.3-4].

FINDINGS: Adherence to mitigation measures listed in the Draft SEIR will reduce Impacts 3.3-1 through 3.3-4 to less than significant levels (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: The proposed project would be developed entirely within the existing footprint of the MWRP which is disturbed land and devoid of vegetation. No direct or permanent impacts to sensitive plant or animal species or sensitive plant communities would occur. However, sensitive species that utilize the adjacent natural habitats within the Sanctuary could be indirectly affected by lighting, noise, and other construction-related activities. Mitigation Measures BIO-1 and BIO-2 would ensure that construction activities avoid impacts to nesting birds and active nests, including least Bell's vireo and southwestern willow flycatcher, through surveys, avoidance, establishment of disturbance-free buffer zones, and/or noise barriers. Implementation of Mitigation Measures BIO-1 and BIO-2 would ensure impacts are less than significant. Impacts would be less than significant with mitigation [3.3-1].

No sensitive natural communities are identified within the project site boundaries and no direct impacts to riparian, wetland, or other sensitive communities would occur. Sensitive natural communities are located adjacent to the project site, although impacts to sensitive habitats along the project's access corridor adjacent to these communities are not anticipated to be impacted. However, implementation of Mitigation Measure BIO-3 would require revegetation and restoration to potentially impacted sensitive natural communities and would ensure impacts to riparian habitat or other sensitive natural communities are less than significant. Impacts would be less than significant with mitigation [3.3-2].

The proposed project would occur entirely on previously-disturbed lands that are considered urban/developed or disturbed habitat and would not directly impact adjacent natural communities, including riparian or wetland habitats as defined by Section 404 of the Clean Water Act. However, the proposed project could have indirect effects to wetland and riparian areas in the San Joaquin Wildlife Sanctuary that are adjacent to staging areas and associated access roads. Implementation of Mitigation Measure BIO-3 would ensure that impacts to riparian, wetlands, or other adjacent jurisdictional features would be less than significant. Impacts would be less than significant with mitigation [3.3-3].

Operational facility lighting systems would be designed to minimize offsite impacts, by directing light downwards and using low-intensity lighting along parking areas and walkways. Operational impacts to wildlife movements would be less than significant. Associated nighttime lighting and noise during nighttime construction activities would have the potential to impact wildlife in the adjacent Sanctuary, causing nocturnal wildlife to avoid moving through the area. Implementation of Mitigation Measure BIO-4 would reduce indirect construction-related impacts to wildlife activities and movement by requiring that lighting be shielded and directed away from the San Joaquin Wildlife Sanctuary and Marsh and San Diego Creek. Impacts would be less than significant with mitigation [3.3-4].

MITIGATION MEASURES: BIO-1 through BIO-4.

#### **D. Cultural Resources**

POTENTIAL EFFECTS: Potential effects examined include: the potential for construction activities to adversely affect archeological resources [3.4-1]; the potential for construction activities to adversely affect paleontological resources [3.4-2]; and the potential to disturb human remains [3.4-3].

FINDINGS: Adherence to mitigation measures listed in the Draft SEIR will reduce Impacts 3.4-1 through 3.4-3 to less than significant levels (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: The project area is considered highly sensitive for archeological resources; a total of eight archeological sites and seven isolates have been previously recorded within ½ mile of the project area. None of the resources identified are located within the project area. Excavation for the proposed project would extend up to 35 feet below ground surface (bgs) in which excavation would extend beneath the disturbed layer of artificial fill and into undisturbed native alluvium. It is possible that such actions could unearth, expose, or disturb subsurface archaeological resources that were not observable on the surface. Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce impacts to archeological resources to less than significant levels. Mitigation Measure CUL-1 requires that an archaeological monitor is retained to determine the areas where excavation would exceed the depth of artificial fill based on the project design and grading plans. The archeological monitor shall redirect ground-disturbing activities away in the event of an archeological find. Mitigation Measure CUL-2 requires that construction activities be redirected away from the immediate vicinity if a cultural resource is encountered and develop a treatment plan if required. Impacts would be less than significant with mitigation [3.4-1].

No fossil localities have been previously recorded within the project area; however, several fossil localities had been recorded nearby in the same type of sediments that underlie the project area. Excavation for the proposed project would extend up to 35 feet bgs, and fossils have been recovered from depths of 8 to 25 feet bgs immediately north of the project area. Implementation of Mitigation Measures CUL-3 and CUL-4 would reduce impacts to paleontological resources to less than significant levels. Mitigation Measure CUL-3 requires that a Qualified Orange County Paleontologist be retained and that construction activities be halted or redirected to other work areas in the event paleontological resources are found. Mitigation Measure CUL-4 requires the preparation of a Paleontological Resources Mitigation and Monitoring plan for areas in which construction excavations would exceed a depth of 8 feet or the depth of artificial fill. Impacts would be less than significant with mitigation [3.4-2].

There are no known human remains at the project area. However, since the nature of the proposed project would involve ground-disturbing activities, it is possible that such actions could unearth, expose, or disturb previously unknown human remains. Mitigation Measure CUL-5 requires that if human remains are uncovered, project construction shall be immediately halted, the Orange County coroner shall be contacted to evaluate the remains, and the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines shall be followed. Impacts would be less than significant with mitigation [3.4-3].

MITIGATION MEASURES: CUL-1 through CUL-5.

#### **E. Geology, Soils, and Seismicity**

POTENTIAL EFFECTS: Potential effects examined include: the potential for exposure of people or structures to strong seismic ground shaking [3.5-1]; the potential for soil erosion [3.5-2]; the potential to introduce new structures onto unstable soils that could lead to lateral spreading, subsidence, liquefaction, or collapse [3.5-3]; the potential to be located on expansive soils [3.5-4].

FINDINGS: Impact 3.5-1 through 3.5-4 will be less than significant, requiring no mitigation (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: The proposed project is located in a seismically active area that has the potential to experience strong ground shaking. The proposed project components would be designed to include all technical specifications required by the seismic safety codes according to the California Building Code (CBC). As a result, compliance with CCR Title 24 would minimize impacts due to seismic ground shaking. Impacts would be less than significant, requiring no mitigation [3.5-1].

The proposed project would require excavation and/or grading that may result in erosion during construction activities as bare soils are exposed to wind or rain. However, the proposed project would comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit and prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) including an Erosion Control Plan to minimize erosion. In addition, any eroded soils that may wash offsite with stormwater runoff would be captured and conveyed to the MWRP for treatment and would not flow into the

surrounding marsh or San Diego Creek. Therefore, impacts related to soil erosion would be less than significant, requiring no mitigation [3.5-2].

The proposed project is not located in an area susceptible to landslides, but is located in an area with a potential for ground failure in the form of liquefaction due to seismic activity. The geotechnical investigation concluded that liquefaction-caused surface manifestation would be low based on the minor thickness of the liquefiable layers and the significant thickness of the nonliquefiable surface cover. In addition, in accordance with the CBC, the proposed project design includes a mass pile foundation to mitigate for potential effects due to settlement and subsidence. Impacts would be less than significant, requiring no mitigation [3.5-3].

The proposed project is not located on expansive soils and the expansion and collapsible potential of the soil at the MWRP are low. The proposed project would incorporate design features identified in the geotechnical investigation, including a combination of presaturation of subgrade soils, reinforcement, moisture barriers/drains, and a sub layer of granular materials. This would reduce impacts to new structures associated with expansive soils properties. Impacts would be less than significant, requiring no mitigation. [3.5-4].

MITIGATION MEASURES: None required.

#### **F. Greenhouse Gas Emissions**

POTENTIAL EFFECTS: Potential effects examined include: the potential to generate GHG emissions that may have a significant impact on the environment; and the potential to conflict with the applicable GHG plan, policy, or regulation.

FINDINGS: Impact 3.6-1 and Impact 3.6-2 will be less than significant, requiring no mitigation (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: The proposed project would result in an increase in GHG emissions associated with natural gas consumption and a relative decrease in GHG emissions associated with mobile sources and electricity consumption. GHG emissions resulting from construction and operation activities would result in a total net increase of approximately 907 metric tons per year (MT/year) of CO<sub>2</sub>e and would not exceed the 10,000 MT/year CO<sub>2</sub>e benchmark. Impacts would be less than significant, requiring no mitigation [3.6-1].

The proposed project would be designed with biogas management and energy recovery systems and would not pose any apparent conflict with the California Air Resource Board (CARB) Scoping Plan Recommended Actions as identified in the Draft SEIR. In addition, the use of biosolids produced by the proposed project would have beneficial uses as a renewable fuel source, could result in a net decrease in GHG emissions relative to baseline conditions, and could further reduce GHG emissions. Therefore, the proposed project would be consistent with the Recommended Actions under the CARB Scoping Plan. Impacts would be less than significant, requiring no mitigation [3.6-2].

MITIGATION MEASURES: None required.

## **G. Hazards & Hazardous Materials**

**POTENTIAL EFFECTS:** Potential effects examined include: the potential for operation activities to create hazardous conditions through routine transport, use, or disposal of hazardous materials [3.7-1]; the potential to create hazardous conditions through reasonably foreseeable upset and accident conditions involving the release of hazardous materials [3.7-2]; and the potential to result in safety hazards or obstructions to navigable airspace [3.7-3].

**FINDINGS:** Adherence to the mitigation measures listed in the Draft SEIR will reduce Impact 3.7-2 to less than significant levels. Impacts 3.7-1 and 3.7-3 will be less than significant; requiring no mitigation (Finding 1).

**FACTS IN SUPPORT OF THE FINDINGS:** The proposed project would result in new increased quantities of hazardous materials, including the additional use and storage of chemicals and the storage of biogas in low-pressure biogas holding tank. Class A and B biosolids produced at the MWRP are considered non-hazardous and would not impact the public or environment through their routine transport, use, or disposal. The proposed project would comply with existing regulatory standards with respect to the storage and handling of hazardous materials including compliance with the existing Hazardous Materials Business Plan and PSM and RMP requirements as managed and overseen by the Orange County Fire Authority (OCFA). Biogas facilities would be designed in conformance with the NFPA Code 820: Standard for Fire Protection for Wastewater Treatment and Collection Systems and would minimize fire and explosion hazards through design criteria and built-in safety features. To further minimize potential hazards associated with generation and the use of biogas, IRWD would develop and implement a Biogas Handling System Maintenance and Monitoring Plan ensuring that biogas facilities, equipment, and safety devices are adequately maintained and monitored. In the event of fire or explosion, IRWD would implement procedures in its ERP and Site Safety Plan. Impacts would be less than significant, requiring no mitigation [3.7-1].

The accidental release and spills of hazardous materials may occur during construction and potentially cause soil or groundwater contamination or affect the health and safety of onsite construction workers. Implementation of Mitigation Measures HAZ-1 through HAZ-4 would reduce potentially significant impacts associated with hazardous substance spills during construction to less than significant levels. Mitigation Measure HAZ-1 requires that Best Management Practices (BMPs) included as part of the SWPPP prevent accidental release of hazardous materials into the environment that could affect soils or contaminate groundwater. Mitigation Measure HAZ-2 requires that hazardous materials are not disposed or released onto the ground, in the air, underlying groundwater, or any surface water. Mitigation Measure HAZ-3 requires that a hazardous substance management, handling, storage, disposal, and emergency response plan is prepared and implemented. Mitigation Measure HAZ-4 requires that hazardous materials spill kits are maintained onsite for small spills. Operational activities would increase the type and volume of hazardous materials to the site that would result in the increase of potentially accidental upset conditions. Implementation of Mitigation Measure HAZ-4 would provide a means of limiting adverse effects in the event of accidental release. Impacts would be less than significant with mitigation [3.7-2].

Construction of the proposed project would require the use of cranes and lights and other construction equipment that could pose hazards to aircraft operations for JWA. If the FAA determines that construction would result in a potential hazard or obstruction, the FAA may require IRWD to prepare and implement an airport construction safety plan identifying BMPs and appropriate notifications to aviators. If FAA determines that permanent structures or other operational features of the proposed project would result in a potential hazard or obstruction to protected airspace, IRWD would then consult with JWA staff and the FAA to identify appropriate steps to adjust project plans or include appropriate markings to identify hazards to aviators. Impacts would be less than significant, requiring no mitigation [3.7-3].

MITIGATION MEASURES: HAZ-1 through HAZ-4

#### **H. Hydrology and Water Quality**

POTENTIAL EFFECTS: Potential effects examined include: the potential for construction and operation of the new facilities to violate water quality standards or waste discharge requirements [3.8-1]; the potential for reuse of biosolids to violate water quality standards or waste discharge requirements [3.8-2]; the potential for adverse impacts to groundwater levels [3.8-3]; the potential to alter the existing drainage pattern of the project site and increase the amount of surface runoff [3.8-4]; and the potential for flooding due to a 100-year flood event [3.8-5].

FINDINGS: Adherence to the mitigation measures listed in the Draft SEIR will reduce Impact 3.8-1 to less than significant. Impacts 3.8-2 through 3.8-5 will be less than significant, requiring no mitigation (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: Construction activities would require the use of heavy equipment and construction-related chemicals that could result in accidental spills or disposal of potentially harmful materials. The proposed project would implement a SWPPP and BMPs for stormwater pollution control and adhere to a Hazardous Substance Control and Emergency Response Plan for quick and safe cleanup of accidental spills that may occur during construction. Operation activities may result in accidental spills that could drain into surface waters or infiltrate to groundwater resulting in the degradation of surface water or groundwater quality. In addition to the proposed stormwater runoff collection system that would capture all runoff from the project site to convey to the MWRP for treatment, the proposed project would also operate under a NPDES Permit (No. CA8000326) that includes WDRs, the M&RP, SWPPP Requirements and Stormwater M&RPs. Implementation of Mitigation Measure HYDRO-1 requires the SWPPP to be updated to include the proposed facilities as part of the project to reduce the potential for accidental releases to impact water quality. Impacts would be less than significant with mitigation [3.8-1].

The Class A pellets and Class B cake to be produced by the proposed project could contain pollutants that during land application could potentially either leach into storm water runoff or underlying groundwater aquifers. The type and concentration of pollutants in residual biosolids can vary substantially depending upon the feedstock, digestion processes, and application practices. In general, biosolids are expected to contain substantial amounts of organic matter, as well as salt, nutrients, and in some cases, heavy metals, pathogens, and toxic organic/inorganic pollutants. Part 503 permits are issued by the USEPA and are required for all biosolids generators and treatment

works treating domestic sewage, which would include IRWD once the proposed project is implemented. Part 503 requirements can be incorporated into the NPDES permits that also are issued to publicly-owned treatment works, such as the MWRP. The NPDES Permit for the MWRP currently includes USEPA Part 503 requirements in addition to Regional Board biosolids requirements. IRWD is required to report any change in the use or disposal practices of biosolids to the RWQCB at least 90 days in advance of the change. In addition, the Stormwater M&RP in the current NPDES permit stipulates that IRWD shall maintain a permanent log of all solids hauled away from the MWRP for use/disposal elsewhere and shall provide a monthly summary of the volume, type, use, and the destination. IRWD is renewing the NPDES permit for the MWRP; the new permit would include new Part 503 requirements that would reflect proposed changes in the processing, disposal and beneficial use of biosolids to be produced at the MWRP.

The disposal or beneficial use of the biosolids produced at the MWRP would be in accordance with the allowable uses as stipulated in Part 503. Part 503 classifies biosolids into Class A, Class B, and Sub-class B based on pathogen levels, pollutant concentrations, and vector attraction limits. Part 503 permits include sampling and analysis requirements for the treatment facility prior to release of the materials. Part 503 permits also require biosolids generators to conduct regular monitoring and reporting of the concentration of certain constituents, particularly metals, in order for biosolids to be land applied. IRWD would be required to adhere to all terms and conditions associated with Part 503 in their new NPDES permit, which would result in a less than significant impact to water quality due to subsequent disposal or beneficial use of biosolids produced at the MWRP.

Under the Clean Water Act, Section 405(d)(2)(C), the USEPA is required to conduct a review of the Part 503 standards not less than every two years for purposes of identifying and regulating new pollutants that may be present in biosolids at levels of concern for public health and the environment, where sufficient data exist. Currently, USEPA is evaluating and conducting exposure and hazard assessments for nine new pollutants, including barium, beryllium, manganese, silver, fluoranthene, pyrene, 4-chloroaniline, nitrate and nitrite (USEPA, 2009). In addition, the USEPA has recently sampled and tested sewage sludge from 74 randomly selected publically-owned treatment works in 35 states to test for various new compounds that may be present and identify concentrations. The compounds tested included phosphorus, metals, flame retardants, pharmaceuticals, steroids, and hormones. Survey results are still being analyzed. As scientific data is reviewed, the Part 503 numeric criteria will be revised to reflect any conclusive findings of the biennial review in order to maintain protection of human health, water quality, and the environment. IRWD would be required to comply with any new sampling, monitoring, and reporting criteria for new compounds in the future in accordance with Part 503. To date, there is no documented scientific evidence that sewage sludge regulations have failed to protect public health or the environment.

In addition to Part 503, IRWD would be required to comply with the SWRCB adopted Water Quality Order No. 2004-0012-DWQ (General Order) for general WDRs for the discharge of biosolids to land. The General Order primarily applies to appliers of biosolids but also applies to the generator of biosolids. SWRCB has evaluated the conditions of the General Order in accordance with CEQA and have determined that projects that meet the conditions for approval under the General Order would have no significant impacts to the environment. The General Order requires each applier to

prepare and submit a Notice of Intent (NOI) for the area in which the biosolids are to be applied. The NOI identifies the generator of the biosolids and the Part 503 monitoring report from the generator. The RWQCB issues a Notice of Applicability under the general WDRs along with discharge monitoring requirements. IRWD would be required to comply with any monitoring or reporting requirements of the WDRs. As a result, impacts to water quality would be less than significant, requiring no mitigation [3.8-2].

Temporary construction and operational dewatering activities at the MWRP would not affect the principal aquifer and would not deplete groundwater supplies. The proposed project would result in a net increase of impervious surfaces that would reduce the amount of precipitation that infiltrates and recharges the shallow groundwater aquifer. However, the amount of infiltration that would be reduced through the introduction of new impervious surfaces would not substantially affect groundwater levels beneath the site and would not affect the principal aquifer or deplete groundwater supplies. Impacts would be less than significant, requiring no mitigation measures [3.8-3].

The proposed project includes a new separate stormwater collection system that would collect and contain all runoff from the project site with a capacity to handle a 100-year storm event. In the event of exceeded capacity, runoff from the project site would overflow into the existing stormwater collection system for the rest of the MWRP and be stored for later treatment or overflow as emergency discharge into the San Diego Creek, as currently allowed by the existing NPDES permit for the MWRP. In addition, new sources of polluted runoff would not be significant as runoff from the project site would be captured and treated the majority of the time. IRWD will amend the NPDES permit for the MWRP to include the proposed project and allow additional discharge into the San Diego Creek. Impacts would be less than significant, requiring no mitigation [3.8-4].

The proposed project is located along the westerly bank of the San Diego Creek and is protected from flooding by the San Diego Creek Channel. IRWD has committed to the construction of flood protection measures to ensure protection against flooding at the MWRP, including construction of a permanent flood wall around the MWRP. With the implementation of the flood wall, the proposed project would not introduce new structures into an area subject to flooding due to a 100-year storm event and the MWRP would be removed from the FEMA 100-year flood zone. Impacts would be less than significant, requiring no mitigation [3.8-5].

#### MITIGATION MEASURES: HYDRO-1

##### **I. Land Use, Planning and Recreation**

POTENTIAL EFFECTS: Potential effects examined include: the potential to create an environmental effect due to conflict with the City of Irvine zoning ordinance [3.9-1].

FINDINGS: Impact 3.9-1 will be less than significant, requiring no mitigation (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: The proposed project would be consistent with the land use designation of Public Facilities and with the City's Land Use policies. The Institutional zoning allows a maximum building height of 50 feet; however, the Solids Handling Building would be up to 70 feet high and the methane digesters would have a maximum height of 68 feet. No significant environmental effects would result from the

zoning inconsistency. However, IRWD has applied for a CUP to address the proposed building height inconsistency. Upon approval of the CUP, IRWD would be required to conform to any associated conditions to maintain allowable use. Impacts would be less than significant, requiring no mitigation [3.9-1].

MITIGATION MEASURES: None required.

## **J. Noise**

POTENTIAL EFFECTS: Potential effects examined include: the potential for construction to result in temporary increases to ambient noise levels [3.10-1]; the potential for construction activities to expose persons to or generate ground-borne vibration and noise [3.10-2]; and the potential for operational activities to permanently increase noise levels in the project vicinity [3.10-3].

FINDINGS: Adherence to the mitigation measures listed in the Draft SEIR will reduce Impacts 3.10-1 and 3.10-3 to less than significant levels. Impact 3.10-2 will be less than significant, requiring no mitigation (Finding 1).

FACTS IN SUPPORT OF THE FINDINGS: Construction activities would generate high noise levels that could impact sensitive receptors located in proximity to the project site. Implementation of Mitigation Measure NOISE-1 requires the use of noise control techniques on construction equipment to lessen the potential temporary noise impacts. NOISE-1 also requires IRWD to establish a noise disturbance coordinator to address local noise complaints. Construction in the City would only occur during designated times addressed in the Noise Ordinance. For construction activities to occur outside restricted hours, a temporary waiver would be required. Mitigation Measure NOISE-2 would ensure that IRWD secures noise waivers from the City prior to construction activities that occur outside of the exempted construction hours in the Noise Ordinance. Implementation of Mitigation Measures NOISE-1 and NOISE-2 would minimize impacts related to temporary increases in ambient noise levels. Impacts would be less than significant with mitigation [3.10-1].

Pile driving construction activities would generate vibration levels up to 0.644 PPV at a distance of 25 feet. The nearest sensitive receptor would be 1,400 feet southwest and would be exposed to approximately 0.002 PV, which would not exceed FTA standards. Impacts would be less than significant, requiring no mitigation [3.10-2].

Operational activities would generate noise from vehicle trips and operation of mechanical equipment, which would be continuous over daytime and nighttime hours. The proposed project would adhere to the City's Noise Ordinance and would be designed to ensure operational noise from the MWRP facilities would not exceed the maximum A-weighted sound pressure level of 55 dBA at the MWRP property boundary. Operational activities would result in an increase in ambient noise that is less than 5dBA at surrounding sensitive receptors. Implementation of Mitigation Measure NOISE-3 would require IRWD to conduct a post-construction noise survey to ensure that cumulative operational noise does not exceed thresholds established in the City's Noise Ordinance. Impacts would be less than significant with mitigation [3.10-3].

MITIGATION MEASURES: NOISE-1 through NOISE-3

## **K. Utilities and Energy**

**POTENTIAL EFFECTS:** Potential effects examined include: the potential to require an agreement with OCSD to maintain an emergency connection between MWRP and Plant 1 [3.11-1]; the potential for a landfill servicing the project to have insufficient permitted capacity to accommodate the project's solid waste disposal needs [3.11-2]; and the potential for the proposed project to result in an increase in energy consumption such that additional electrical capacity is required [3.11-3].

**FINDINGS:** Impacts 3.11-1 through 3.11-3 will be less than significant, requiring no mitigation (Finding 1).

**FACTS IN SUPPORT OF THE FINDINGS:** Under the proposed project, primary sludge, primary scum, waste activated sludge, and biosolids generated at the MWRP would be treated onsite and would not be discharged to OCSD Plant 1. However, IRWD would maintain the pipeline connection to OCSD as an emergency treatment system backup in the event of an outage at the MWRP as permitted by an existing agreement with OCSD. The existing pipeline would have adequate capacity. Impacts would be less than significant, requiring no mitigation [3.11-1].

Construction of the proposed project would require excavation and grading for installation of the proposed facilities, which would generate solid waste and spoil soils. Frank K. Bowerman Landfill currently serves the project site and would have adequate landfill capacity to accommodate disposal of solid wastes generated during construction of the proposed project. Operation of the proposed project would generate Class A and Class B biosolids that may be disposed in a landfill in the event that other planned beneficial uses are not available. Otay Annex Landfill, Simi Valley Landfill, and Prima Deshecha Landfill would all have capacity for biosolids disposal. Prima Deshecha Landfill is scheduled to close in 2067 and would be available during the life of the project. Impacts would be less than significant, requiring no mitigation [3.11-2].

Construction activities would not result in a substantial increase in energy consumption or wasteful energy consumption or require the need for new energy infrastructure. Operation activities would result in a net increase in consumption of electricity and natural gas. However, energy consumption would be neither wasteful nor unnecessary and would not be considered a substantial increase on a regional basis as the proposed project would process biosolids that currently are treated at OCSD Plant 1, replacing the existing energy requirements for such processing. Impacts would be less than significant, requiring no mitigation [3.11-3].

**MITIGATION MEASURES:** None required.

## **L. Transportation and Traffic**

**POTENTIAL EFFECTS:** Potential effects examined include: the potential for operational activities to introduce potential onsite hazards due to vehicle movements [3.12-1]; the potential for construction and operational activities to affect the performance of the circulation system [3.12-2]; and the potential for operational activities to affect level of service standards due to additional vehicles on local roadways [3.12-3].

**FINDINGS:** Impacts 3.12-1 through 3.12-3 will be less than significant, requiring no mitigation (Finding 1).

**FACTS IN SUPPORT OF THE FINDINGS:** Operation activities would require trucks to deliver and haul away solids that could result in potential hazards to worker safety or the environment. The facilities would be designed to avoid hazards associated with truck deliveries and hauling while loading and unloading of solids would be segregated from chemical delivery and storage areas. In addition, onsite roadways would be designed to restrict trucks to only forward movement resulting in a safe working environment and eliminating any potential hazards associated with trucks backing up. Impacts would be less than significant, requiring no mitigation [3.12-1].

Construction vehicle movement and activities would result in short-term and intermittent impacts on roadway capacities. The addition of 310 total construction-related vehicle trips would not affect performance of the circulation system including Michelson Drive, Jamboree Road, Culver Drive, and the I-405. Operational trips would equal to 23 to 30 roundtrips per day during Class A pellets or Class B cake hauling and would not significantly impact the traffic volume of the local circulation system. When the dryer is not operating, the proposed project would result in no change in the baseline conditions of trucks on regional roadways. In addition, the proposed project would eliminate some trucks hauling solids from OCSD to end users in Arizona, which would reduce the number of trucks on the regional roadways. Impacts would be less than significant, requiring no mitigation [3.12-2].

Level of service (LOS) standards for roadways and intersections that are part of the Orange County CMP network are intended to regulate long-term traffic increases resulting from the operation of new development, and do not apply to temporary construction projects. Therefore, for the proposed project, temporary construction-generated traffic would not result in any long-term degradation in operating conditions or LOS on any nearby roadways. Given the typical daily number of vehicles traveling on I-405, Jamboree Road, Michelson, University, and Harvard, the proposed project would not introduce enough vehicles to affect LOS and would not substantially affect traffic volume. Impacts would be less than significant, requiring no mitigation [3.12-3].

**MITIGATION MEASURES:** None required.

### **M. Cumulative Impacts**

**POTENTIAL EFFECTS:** The cumulative impacts analysis focuses on the effects of concurrent construction and operation of the proposed project with other spatially and temporally proximate projects. Construction of the proposed project is expected to occur between 2013 and 2015. Thus, the cumulative analysis relies on a list of related projects that are presumed to be implemented concurrently within the 2013 to 2015 timeframe.

The proposed project, together with related projects, which include infrastructure, commercial, and residential development projects, may contribute to certain types of cumulative construction impacts to air quality, biological resources, hydrology and water quality, noise, utilities and energy, and traffic and transportation [4-1]. Operation of the proposed project and related projects could result in cumulative long-term impacts [4-2].

**FINDINGS:** In addition to regulatory programs designed to address certain cumulative impacts, adherence to the mitigation measures listed in Sections A through L for the respective environmental resources discussed in those sections, will also reduce potentially significant cumulative impacts to a level that is less than significant and not cumulatively considerable. Thus, impacts can be mitigated for individual projects and collectively do not compound to create cumulatively considerable impacts (Finding 1).

**FACTS IN SUPPORT OF THE FINDINGS:** According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants. Construction air emissions associated with the proposed project would not exceed the SCAQMD's thresholds of significance for any criteria pollutants. Therefore, construction emissions associated with the proposed project would not be cumulatively considerable [4-1].

Potential indirect impacts to special-status species and sensitive natural communities in the adjacent San Joaquin Wildlife Sanctuary may occur due to construction-related activities. These impacts would be mitigated to less than significant levels with implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4. With the implementation of mitigation impacts associated with the proposed project would not be cumulatively considerable. In addition, continued participation by IRWD and other project proponents within the study area in regional conservation planning such as the Orange County Central and Coastal NCCP/HCP will reduce cumulative impacts to sensitive biological resources to below a level of significance. Therefore, the proposed project would not be cumulatively considerable [4-1].

Pollutants generated from construction of the proposed project and related projects may wash into San Diego Creek and downstream into Upper Newport Bay resulting in a significant cumulative impact to surface water quality and groundwater quality. Adherence to the same federal CWA, State Porter Cologne Water Quality Control Act, Basin Plan regulations that protect water quality and water resources, and the Orange County Local Drainage Manual, Stormwater Program, and Drainage Area Management Plan (DAMP) would ensure cumulatively considerable impacts related to water quality does not occur. Therefore, in combination with related projects similarly bound by the same regulations, the proposed project's incremental contribution to water quality impacts would not be cumulatively considerable [4-1].

Implementation of Mitigation Measures NOISE-1 and NOISE-2 would ensure construction activities occurring during periods when construction noise is exempt from the City of Irvine noise standards are mitigated to less than significant levels. When considered together, the proposed project together with related projects would prolong construction activities at the MWRP. However, the contribution of the proposed project to noise impacts would not be cumulatively considerable with implementation of Mitigation Measures NOISE-1 and NOISE 2 [4-1].

The number of vehicles generated by the proposed project would not have a significant impact to performance of the circulation system on a local or regional basis. As such, the effect of the proposed project on traffic and circulation would not be cumulatively considerable during the construction phase [4.1].

Implementation of Mitigation Measures AES-1 and AES-2 would ensure the proposed project would have no individually significant impacts to aesthetics, including scenic vistas or visual character. The only additional project identified that is directly adjacent and potentially within the same line of sight as the proposed project would be the MWRP Warehouse Project. The Warehouse Project would not be as tall as the proposed Solids Handling Building and would not be visible from surrounding areas. Therefore, the proposed project, when considered together with other related geographically-proximate projects would not have a cumulatively considerable impact [4-2].

Operational emissions associated with the proposed project would not exceed the SCAQMD's thresholds of significance for any of the criteria pollutants. The daily operational emissions associated with the criteria pollutants generated by the proposed project would not be cumulatively considerable. Therefore, the cumulative impact of the proposed project for operational emissions would be less than significant [4-2].

As with the proposed project, all related projects are subject to the same federal CWA, State Porter Cologne Water Quality Control Act, Basin Plan regulations that protect water quality and water resources, the Orange County Local Drainage Manual, Stormwater Program, and Drainage Area Management Plan (DAMP). Therefore, despite the potential for related projects to alter drainage patterns, runoff conditions, and storm water quality, the required adherence such requirements would ensure that they do not result in cumulatively considerable impacts related to water quality. Therefore, when considered in combination with related projects similarly bound by the same regulations, the proposed project's incremental contribution to water quality impacts and flooding would not be cumulatively considerable [4-2].

Operation of the proposed project would not have a significant impact on traffic, circulation system performance, or level of service standards. On a regional basis, the proposed project would result in no change, or potentially a reduction in, the number of vehicles on regional roadways due to a reduction in the number of trucks required to haul away Class A pellets instead of Class B biosolids, which currently are produced at OCS D Plant 1. Therefore, when considering the proposed project together with related projects, the proposed project would not have a cumulatively considerable impact on traffic, circulation, or level of service [4-2].

**MITIGATION MEASURES:** Mitigation Measures listed for the proposed project's separate impacts in Sections A through L, above.

#### **N. Growth Inducement**

**POTENTIAL EFFECTS:** Potential effects examined included: direct and/or indirect growth inducement potential of the proposed project.

**FINDINGS:** The proposed project would not directly or indirectly induce growth nor result in any secondary effects of growth within the IRWD service area.

**FACTS IN SUPPORT OF THE FINDINGS:** Implementation of the proposed project would have no potential to directly foster population growth or result in the construction of additional housing. Project construction is not expected to create substantial employment opportunities beyond the level normally available to construction workers in

the area. The proposed project would not provide substantial new employment opportunities that would necessitate additional housing and services in the area. Therefore, the proposed project would have no direct impacts on growth. The proposed project would construct new biosolids processing, biogas management, and energy recovery facilities at the MWRP. The proposed facilities would process sludge produced onsite at the MWRP, along with sludge produced at the LAWRP, and potentially other treatment facilities, subject to the capacity constraints of the system. Biosolids processing at the MWRP would be in place of, rather than in addition to, new biosolids processing at OCSD Plant 1. The proposed project would be designed to process solids produced when the MWRP liquid treatment facilities are operating at full capacity once the MWRP Phase 2 and 3 Capacity Expansion Project is completed. The purpose of the MWRP Phase 2 and 3 Capacity Expansion Project, to supply the demands of IRWD customers for non-potable water while improving local water supply reliability, is in conformance with the growth projections for the service area. The proposed project would handle the byproducts (i.e. biosolids) of the recycled water treatment and production system at the MWRP. The proposed project simply would relocate the processing of biosolids associated with current and future MWRP operations. The treatment and beneficial reuse of biosolids would not remove an obstacle to growth and thus would not indirectly induce growth.

The electricity generated by biogas as a byproduct would be used as an energy source for other processes at the MWRP and would partially offset the energy requirements of the proposed new facilities. The energy recovery component of the proposed project would not remove any limitations on energy supplies that would be considered an obstacle to growth, and therefore would not indirectly induce growth. The proposed project would not directly or indirectly induce growth. Accordingly, the proposed project would not result in any secondary effects of growth.

MITIGATION MEASURES: None required.

#### **IV. Findings Regarding Alternatives to the Project**

CEQA requires an EIR to describe a reasonable range of alternatives to the project or to the location of the project, which could feasibly attain the project objectives, and to evaluate the comparative merits of the alternatives. Only alternatives that meet most of the project objectives, are feasible, and that would avoid or substantially reduce at least one of the significant impacts of the project need be considered. Alternatives to the proposed project evaluated in the SEIR included the No Project Alternative, the Private Partner for Class B Processing Alternative, and the Onsite Dryer/Combustion Alternative. Four other alternatives to the proposed project were also considered but rejected from further consideration because they would not accomplish the project objectives nor meet environmental criteria of reducing or avoiding a significant impact. The rejected alternatives included the following:

- an alternative that would provide thickening and digestion of all sludge at the MWRP and recover biogas for energy generation, with the digested solids being sent to OCSD Plant 1 for dewatering and further processing and reuse/disposal;
- an alternative that would provide thickening and digestion of only primary sludge at the MWRP and recover biogas for energy generation, with the WAS and

- digested solids being sent to OCSD Plant 1 for dewatering and further processing and reuse/disposal;
- an alternative that would provide onsite thickening, digestion, and dewatering of all MWRP sludge to produce a Class B biosolids product. Dewatered biosolids would then be hauled to an offsite incinerator that would be operated by a public partner; and
  - an alternative that would provide onsite thickening, digestion, and dewatering of all MWRP sludge to produce a Class B biosolids product. The dewatered biosolids would be transferred to a dryer jointly owned and operated by IRWD and a public partner.

#### **A. No Project Alternative**

**FINDINGS:** The No Project Alternative is not environmentally superior to the proposed project.

**FACTS IN SUPPORT OF THE FINDINGS:** The No Project Alternative would not meet most of the project objectives. Under the No Project Alternative, the identified impacts associated with construction and operation would be avoided. Stormwater from the biosolids site would continue to drain to the marsh but there would be no benefit to stormwater runoff quality because the stormwater capture and treatment associated with the proposed project would not be implemented. Under the No Project Alternative, any potential benefit to region roadway traffic and air quality due to a reduction in truck trips required to haul Class A pellets rather than Class B biosolids would not be realized. Overall, the No Project Alternative would avoid non-significant impacts associated with the proposed project while also preventing any benefits from the proposed project from being realized.

#### **B. Private Partner for Class B Processing**

**FINDINGS:** The Private Partner for Class B Processing Alternative is not environmentally superior to the proposed project.

**FACTS IN SUPPORT OF THE FINDINGS:** Under the Private Partner for Class B Processing Alternative, facilities would include onsite thickening, digestion, and dewatering of all MWRP sludge, similar to the proposed project with the exception of an onsite dryer at the MWRP and no production of Class A biosolids would occur. Class B biosolids would be transferred to private partners to further process the biosolids for beneficial reuse or disposal. This would require more haul trucks on local and regional roadways that could affect circulation system performance and increase impacts to local/regional air quality. Under this Alternative, the transfer of residual solids to OCSD would be discontinued, similar to the proposed project. Under the Private Partner for Class B Processing Alternative, all project objectives would be met. All impacts would be similar to the proposed project with fewer impacts to aesthetics and GHG emissions. However, this alternative would result in relatively greater impacts related to air quality and traffic.

#### **C. Onsite Dryer/Combustion**

**FINDINGS:** The Onsite Dryer/Combustion Alternative is not environmentally superior to the proposed project.

**FACTS IN SUPPORT OF THE FINDINGS:** Under the Onsite Dryer/Combustion Alternative, IRWD would build onsite facilities for thickening and dewatering of all MWRP sludge. In addition, a third-party contract vendor would independently build and operate an onsite system to combust and dry the dewatered cake, and the transfer of sludge to OCSD would be eliminated. The end product would be processed into ash that would be hauled to a landfill for disposal and dried sludge that would be hauled offsite for beneficial use as fertilizer or as e-fuel. Although the combustion process for the dried sludge would be an energy efficient process, this alternative would not include an energy recovery system to convert biogas to energy like the proposed project. In addition, the Onsite Dryer/Combustion Alternative would be required to provide electrical supply to the contract vendor. Under this Alternative, not all objectives of the proposed project would be met. No biogas would be produced as part of this Alternative because digestion facilities are not part of the process. Therefore, this Alternative would not allow for beneficial use of biogases, which is one of the project objectives. The Onsite Dryer/Combustion Alternative would result in lesser impacts related to aesthetics, GHGs, hydrology (drainage/runoff), land use planning, and utilities and energy. However, this alternative would result in greater impacts to the environment related to air quality and hazardous materials due to the implementation of the onsite combustion facilities.

## **V. General Findings**

A. The written Responses to Comments contained in the Final SEIR have adequately responded to the comments received on the Draft SEIR in the public review process.

B. Recirculation of the Draft SEIR following the preparation of the Responses to Comments is not required. The Responses to Comments and resulting revisions to the Draft SEIR do not add significant new information to the SEIR, including information showing any new significant impact from the proposed project, any increase in the severity of any impact, or any considerably different, feasible alternative.

### **FACTS IN SUPPORT OF THE FINDINGS:**

The Responses to Comments merely clarify and amplify the Draft SEIR's discussion of the analyses. Mitigation Measure BIO-2 was revised in response to comments from the U.S. Fish and Wildlife Service, to include a fourth option for avoiding indirect impacts to special-status bird species during project construction by erecting noise barriers prior the first nesting season. Mitigation Measures CUL-4 and CUL-5 were edited in response to comments by the City of Irvine, to require that the Director of Community Development of the City of Irvine be notified of discoveries related to paleontological resources or human remains. Mitigation Measure NOISE-3 was also edited in response to comments by the City of Irvine, to ensure a copy of the noise survey is provided to the Director of Community Development of the City of Irvine.

No new impacts were identified in the comments to the Draft SEIR. Other clarifying text revisions were made. Revisions made merely clarify information presented in the Draft SEIR.



EXHIBIT "C"

**Appendix A**  
Mitigation Monitoring and  
Reporting Program



# MITIGATION MONITORING AND REPORTING PROGRAM

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## MWRP Phase 2 & 3 Capacity Expansion Project, Biosolids Handling Component

### Introduction

In accordance with Section 15091(d) and Section 15097 of the *CEQA Guidelines*, which require a public agency to adopt a program for reporting on or monitoring required changes or conditions of approval to substantially lessen significant environmental effects, the Mitigation Monitoring and Reporting Program is hereby adopted for this project.

This Mitigation Monitoring and Reporting Program (MMRP) summarizes the mitigation commitments identified in the MWRP Phase 2 & 3 Capacity Expansion Project Final Supplemental EIR No. 1 (State Clearinghouse No. 2011031091). Mitigation measures are presented in the same order as they occur in the Final EIR. The columns in the MMRP table provide the following information:

- **Mitigation Measure(s):** The action(s) that will be taken to reduce the impact to a less-than-significant level.
- **Implementation, Monitoring, and Reporting Action:** The appropriate steps to implement and document compliance with the mitigation measures.
- **Responsibility:** The agency or private entity responsible for ensuring implementation of the mitigation measure. However, until the mitigation measures are completed, the Irvine Ranch Water District, as the CEQA Lead Agency, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the MMRP (*CEQA Guidelines*, Section 15097(a)).
- **Monitoring Schedule:** The general schedule for conducting each monitoring task, either prior to construction, during construction and/or after construction

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**MWRP PHASE 2 & 3 CAPACITY EXPANSION PROJECT, BIOSOLIDS HANDLING COMPONENT**

| Mitigation Measures   | Implementation, Monitoring, and Reporting Action  | Responsibility                | Monitoring Schedule   |
|---|---|-------------------------------|-----------------------|
| <b>Aesthetics</b>   |   |                               |                       |
| <b>AES-1:</b> The Irvine Ranch Water District shall select paint color schemes that blend in with the color palette of the surrounding landscape and built environment.   | <ul style="list-style-type: none"> <li>• Include mitigation measure in project design specifications.</li> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Maintain records of specifications in project file.</li> </ul>  | IRWD                          | Prior to construction |
| <b>AES-2:</b> Temporary construction lighting shall be shielded and directed downward to minimize offsite light spill and minimize effects to nighttime views while maintaining requirements for worker safety.   | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• IRWD shall appoint a construction monitor to verify contractor compliance.</li> <li>• Maintain records of construction monitoring in project file.</li> </ul>   | IRWD; Construction Contractor | During Construction   |
| <b>Air Quality</b>  |   |                               |                       |
| None Required.  |   |                               |                       |
| <b>Biological Resources</b>   |   |                               |                       |
| <b>BIO-1:</b> Construction activities shall be managed to avoid impacts to nesting birds and active nests. Initiation of ground-disturbing activities shall be avoided between February 1 and August 15, the general nesting bird season, to avoid significant impacts to nesting birds adjacent to the project site. If ground disturbance is initiated during this time period, then alternatively, impacts may also be avoided by: <ol style="list-style-type: none"> <li>1. conducting a survey during the breeding season to determine presence or absence of nests within a radius of the construction site specified by a qualified biologist;</li> <li>2. avoiding impact to trees with occupied nests until juveniles have fledged and nests are no longer active or the nest has failed; and</li> <li>3. establishing a disturbance-free buffer zone around nest</li> </ol> | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• If ground-disturbing activities are initiated during February 1 and August 15, IRWD shall approve or appoint a qualified biologist to conduct the survey and implement BIO-1.</li> <li>• Retain survey records and implementation records in the project file.</li> </ul>   | IRWD; Construction Contractor | During Construction   |
| <b>BIO-2:</b> If initiation of ground-disturbing construction activities must occur during the specific nesting season of least Bell's vireo and southwestern willow flycatcher (March 15 through September 15), impacts to these species would be avoided through implementation of one of the four of the following measures. Implementation of one of the measures below would reduce impacts to less than significant levels: <ol style="list-style-type: none"> <li>1. Conduct surveys to determine the presence or absence of least Bell's vireo or southwestern willow flycatcher in suitable habitat within the project area in accordance with USFWS protocols (USFWS 1999, 2000). If neither species is detected by these surveys, construction may proceed without additional</li> </ol>   | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• If ground-disturbing activities are initiated during February 1 and August 15, IRWD shall approve or appoint a qualified biologist to conduct the surveys and implement BIO-2.</li> <li>• Retain survey records and implementation records in the project files.</li> </ul> | IRWD; Construction Contractor | During Construction   |

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**MWRP PHASE 2 & 3 CAPACITY EXPANSION PROJECT, BIOSOLIDS HANDLING COMPONENT**

| Mitigation Measures   | Implementation, Monitoring, and Reporting Action  | Responsibility                | Monitoring Schedule |
|---|---|-------------------------------|---------------------|
| <p>mitigation.</p> <p>2. If protocol surveys detect the presence of either species, delay construction within a distance determined by a qualified biologist to be appropriate of occupied territory until after the least Bell's vireo and/or southwestern willow flycatcher have migrated from the site. If nesting is detected, delay construction within a distance determined by a qualified biologist until the biologist determines that the young have fledged the nests and/or the nests are no longer active.</p> <p>3. If protocol surveys detect the active nests of either species, noise barriers may be erected to reduce sound levels at nest sites to reduce the "no construction" buffer distance around the nest as determined by a qualified biologist. If noise barriers are utilized, a qualified biologist shall conduct monitoring of noise levels at the nest sites to determine if construction noise has the potential to affect nesting behavior. If construction activities are determined to affect nesting behavior of least Bell's vireo and/or southwestern willow flycatcher, the biological monitor shall halt construction-related activities that may impact the nests until the juveniles have fledged and/or the nests are no longer active.</p> <p>4. Erect noise barriers prior to the first nesting season (starting March 15th) following the initiation of construction. The noise barrier shall be of adequate height, length and materials to maintain ambient noise levels in the adjacent riparian woodland for the duration of the construction period. The effectiveness of the barriers to reduce noise levels to ambient conditions shall be tested with noise monitoring equipment prior to the first nesting season. Barriers shall be maintained in working condition until completion of the project.</p> |   |                               |                     |
| <p><b>BIO-3:</b> Temporary impacts to sensitive natural communities resulting from project construction or use of access road and staging areas shall be revegetated and restored to preconstruction conditions. Additionally, the boundaries of sensitive habitats along access roads, staging areas, and work areas shall be protected with Best Management Practices (BMPs) such as orange safety fencing, silt fencing, sandbags or similar where necessary. The site shall be inspected by a project biologist when necessary to ensure BMPs are implemented to protect sensitive natural communities where appropriate.</p>   | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• IRWD shall appoint a qualified biologist to verify contractor compliance.</li> <li>• Retain records of BMP implementation in the project file.</li> </ul>         | IRWD; Construction Contractor | During Construction |
| <p><b>BIO-4:</b> If construction occurs during nighttime hours and lighting is required, then lighting shall be shielded and directed away from San Joaquin Wildlife Sanctuary and Marsh and San Diego Creek, while maintaining sufficient lighting to ensure worker safety.</p>  | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• IRWD shall appoint a construction monitor to verify contractor compliance.</li> <li>• Maintain records of construction monitoring in the project file.</li> </ul> | IRWD; Construction Contractor | During Construction |

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**MWRP PHASE 2 & 3 CAPACITY EXPANSION PROJECT, BIOSOLIDS HANDLING COMPONENT**

| Mitigation Measures   | Implementation, Monitoring, and Reporting Action  | Responsibility                | Monitoring Schedule              |
|---|---|-------------------------------|----------------------------------|
| <b>Cultural Resources</b>   |   |                               |                                  |
| <p><b>CUL-1:</b> Prior to the start of any earth-moving activity, an archaeological monitor shall be retained. The archaeological monitor shall be, or shall work under the supervision of, a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (Department of the Interior, 2010). The qualified archaeologist shall determine the areas where excavation would exceed the depth of artificial fill based on the project design and grading plans. The qualified archaeologist shall consult with IRWD to determine the initial duration and timing of monitoring in these areas. Based on observations of soil stratigraphy or other factors, the level of monitoring may be reduced as warranted. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated.</p> <p>Due to the sensitivity of the project area for Native American resources, at least one Native American monitor may, if requested, also monitor ground-disturbing activities in the project area.</p> | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain a qualified archaeological monitor to implement CUL-1.</li> <li>• If requested, allow at least one Native American monitor to be present during ground-disturbing activities.</li> <li>• Retain copies of monitoring reports in the project file.</li> </ul> | IRWD; Construction Contractor | Prior to and During Construction |
| <p><b>CUL-2:</b> During construction of all project components, if a cultural resource is encountered, construction activities shall be redirected away from the immediate vicinity of the find until it can be evaluated by a qualified archaeologist. If the find is determined to be potentially significant, the archaeologist, in consultation with IRWD and appropriate Native American group(s) (if the find is a prehistoric or Native American resource), shall develop a treatment plan. Construction activities shall be redirected to other work areas until the treatment plan has been implemented or the qualified archaeologist determines work can resume in the vicinity of the find.</p>   | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain a qualified archaeologist to implement CUL-2 in the event that cultural resources are encountered.</li> <li>• Retain copies of the Treatment Plan and records of implementation in the project file.</li> </ul>  | IRWD; Construction Contractor | Prior to and During Construction |
| <p><b>CUL-3:</b> Prior to the start of any earth moving activities, an Orange County Certified (OCC) Paleontologist shall be retained. Based on geotechnical findings and the construction design plans, the OCC Paleontologist shall determine areas where excavation would exceed eight (8) feet bgs or the depth of artificial fill. The OCC Paleontologist shall consult with IRWD to determine the duration and timing of monitoring in these areas. All required paleontological resources monitoring shall be performed by qualified paleontological monitors. In the event fossils are exposed during earth moving, the monitor shall have the authority to halt or redirect construction activities to other work areas so the find can be evaluated.</p>  | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain a qualified OCC Paleontologist to implement CUL-3 and determine monitoring areas and timing in consultation with IRWD.</li> <li>• Retain copies of monitoring reports in the project file.</li> </ul>  | IRWD; Construction Contractor | Prior to and During Construction |
| <p><b>CUL-4:</b> In the event that paleontological resources are encountered, the OCC Paleontologist shall develop a Paleontological Resources Mitigation and Monitoring Plan. The Plan shall address procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils, and the preparation of a final mitigation report. Once the find has been evaluated in accordance with the Plan, the OCC Paleontologist shall determine when work can resume in the vicinity of the find. The</p>   | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain a qualified OCC Paleontologist to implement CUL-4 in the event that paleontological resources are encountered.</li> <li>• Retain copy of Paleontological Resources Mitigation and Monitoring Plan and records of</li> </ul>                                  | IRWD; Construction Contractor | Prior to and During Construction |

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**MWRP PHASE 2 & 3 CAPACITY EXPANSION PROJECT, BIOSOLIDS HANDLING COMPONENT**

| Mitigation Measures  | Implementation, Monitoring, and Reporting Action   | Responsibility                | Monitoring Schedule |
|--|--|-------------------------------|---------------------|
| <p>Director of Community Development of the City of Irvine shall also be notified of the discovery and the determination of the OCC Paleontologist related to recovery, handling, and disposition of identified resources.</p> <p><b>CUL-5:</b> If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Orange County coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County coroner determines that the remains are Native American, the project proponent shall contact the Native American Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC shall designate a Most Likely Descendent (MLD) for the remains. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The Director of Community Development of the City of Irvine shall also be notified of the discovery and the determination of the NAHC related to recovery, handling, and disposition of remains and associated artifacts.</p> | <p>implementation in the project file.</p> <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain records of all inadvertent discovery evaluations in the project file.</li> </ul>   | IRWD; Construction Contractor | During Construction |
| <b>Geology, Soils, and Mineral Resources</b>   |  |                               |                     |
| None Required  |  |                               |                     |
| <b>Greenhouse Gas Emission</b>   |  |                               |                     |
| None Required.   |  |                               |                     |
| <b>Hazards and Hazardous Materials</b>   |  |                               |                     |
| <p><b>HAZ-1:</b> IRWD shall require the construction contractor to include the following BMPs in the SWPPP that would prevent the accidental release of hazardous materials. The plan shall include, but not be limited to, the following BMPs:</p> <ul style="list-style-type: none"> <li>• Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction.</li> <li>• During routine maintenance of construction equipment, properly contain and remove grease and oils.</li> <li>• Properly dispose of discarded containers of fuels and other chemicals.</li> <li>• In the event of a petroleum product spill, the contractor shall contain the spill and clean up the contaminated area in compliance with regulations with DTSC and RWQCB approval. Contaminated soils shall be removed and disposed of in</li> </ul>  | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain a qualified construction monitor to conduct routine inspections of mitigation implementation during project construction.</li> <li>• Retain construction monitoring reports in project file.</li> <li>• Maintenance and operation records shall be retained in the project file.</li> </ul> | IRWD; Construction Contractor | During Construction |

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**MWRP PHASE 2 & 3 CAPACITY EXPANSION PROJECT, BIOSOLIDS HANDLING COMPONENT**

| Mitigation Measures  | Implementation, Monitoring, and Reporting Action   | Responsibility                | Monitoring Schedule              |
|--|--|-------------------------------|----------------------------------|
| accordance with applicable regulations.  |  |                               |                                  |
| <p><b>HAZ-2:</b> During project construction, hazardous materials shall not be disposed of or released onto the ground, into the air, into the underlying groundwater, or any surface water. Totally enclosed containment shall be provided for all trash. All construction waste, including trash and litter, garbage, other solid waste, petroleum products and other potentially hazardous materials, shall be removed to a hazardous waste facility permitted or otherwise authorized to treat, store, or dispose of such materials.</p>   | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain inspection records in the project files</li> <li>• Retain a qualified construction monitor to conduct routine inspections of mitigation implementation during project construction.</li> <li>• Retain construction monitoring reports in project file.</li> </ul>                         | IRWD; Construction Contractor | During Construction              |
| <p><b>HAZ-3:</b> A hazardous substance management, handling, storage, disposal, and emergency response plan shall be prepared and implemented by the construction contractor.</p>  | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Prepare a Hazardous Substance Management, Handling, Storage, Disposal, and Emergency Response Plan</li> <li>• Retain records of the Plan and its implementation in the project file.</li> </ul>  | IRWD; Construction Contractor | During and After Construction    |
| <p><b>HAZ-4:</b> During construction and operation of the proposed project, hazardous materials spill kits shall be maintained onsite for small spills.</p>  | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Retain a qualified construction monitor to conduct routine inspections of mitigation implementation during project construction.</li> <li>• Retain construction monitoring reports in project file.</li> <li>• Retain records of implementation or use of spill kits in project file.</li> </ul> | IRWD; Construction Contractor | During and After Construction    |
| <b>Hydrology and Water Quality</b>   |  |                               |                                  |
| <p><b>HYDRO-1:</b> IRWD shall update the Storm Water Pollution Prevention Plan for the MWRP to include the proposed Biosolids Handling Component. The revised SWPPP shall include BMPs that would reduce potential impacts to water quality due to accidental releases of pollutants from the proposed facilities. BMPs would include both non-structural measures (e.g., preventative maintenance and inspection schedules, spill response and clean-up procedures, material handling and storage procedures, employee training, etc.) and structural measures (e.g., sediment control and erosion control devices, runoff and run-on control devices, retention ponds, secondary containment structures, treatment, etc.).</p> | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• Prepare a SWPPP for the MWRP to include the proposed Biosolids Handling Component.</li> <li>• Retain records of and implementation of the SWPPP in project file.</li> </ul>  | IRWD; Construction Contractor | Prior to and During Construction |

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**MWRP PHASE 2 & 3 CAPACITY EXPANSION PROJECT, BIOSOLIDS HANDLING COMPONENT**

| Mitigation Measures  | Implementation, Monitoring, and Reporting Action  | Responsibility                | Monitoring Schedule              |
|--|---|-------------------------------|----------------------------------|
| <b>Land Use, Planning, and Recreation</b>  |   |                               |                                  |
| None Required.   |   |                               |                                  |
| <b>Noise</b>   |   |                               |                                  |
| <p><b>NOISE-1:</b> To reduce daytime noise impacts due to construction activities, IRWD shall require construction contractors to implement the following measures:</p> <ul style="list-style-type: none"> <li>• Construction activities shall be in compliance with the applicable City of Irvine Noise Ordinances, or as otherwise permitted by the City.</li> <li>• Equipment and trucks used for project construction shall use noise control techniques.</li> <li>• A noise disturbance coordinator shall be established. The noise disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The noise disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad mufflers, etc.) and would be required to respond to the noise complaints. All signs posted at the construction site shall list the telephone number and email address for the noise disturbance coordinator.</li> </ul> | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> <li>• During construction, IRWD or the construction contractor shall appoint a noise disturbance coordinator to respond to any local complaints about construction noise</li> <li>• Posted signs at the construction site shall include the telephone number and email address for the noise disturbance coordinator.</li> <li>• Retain implementation records in the project file, including any complaints and resolution of complaints.</li> </ul> | IRWD; Construction Contractor | During Construction              |
| <p><b>NOISE-2:</b> IRWD shall secure a temporary waiver from the City of Irvine for construction activities that occur outside of the exempted construction hours stipulated in the City of Irvine Noise Ordinance.</p>  | <ul style="list-style-type: none"> <li>• Include mitigation measure in construction contractor specifications.</li> </ul>   | IRWD; Construction Contractor | Prior to and During Construction |
| <p><b>NOISE-3:</b> IRWD shall conduct a post-construction noise survey to ensure that operation of the MWRP is in compliance with the City of Irvine Noise Ordinance (Title 6, Division 8, Chapter 2) at the IRWD property boundary. If survey results indicate non-compliance with the Noise Ordinance, IRWD shall implement additional sound-dampening architectural and equipment improvements at the MWRP and conduct a follow-up survey to demonstrate compliance with noises thresholds. A copy of the noise survey shall be provided to the Director of Community Development of the City of Irvine, as well as information on site improvements necessary to correct excess noise levels as well as a schedule for completion of the improvements.</p>   | <ul style="list-style-type: none"> <li>• After construction, IRWD shall appoint a qualified acoustical consultant to perform a post-construction noise survey to determine compliance with applicable regulations.</li> <li>• Retain records of the post-construction noise survey in project files.</li> </ul>   | IRWD                          | After Construction               |
| <b>Utilities and Energy</b>  |   |                               |                                  |
| None Required.   |   |                               |                                  |
| <b>Transportation and Traffic</b>  |   |                               |                                  |
| None Required.   |   |                               |                                  |
| <b>Cumulative Impacts</b>  |   |                               |                                  |
| None Required.   |   |                               |                                  |



## EXHIBIT "D"

RESOLUTION NO. 2012 - \_\_\_\_

RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT CERTIFYING THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR MICHELSON WATER RECYCLING PLANT (MWRP) PHASE 2 AND 3 CAPACITY EXPANSION PROJECT (ADDING BIOSOLIDS HANDLING COMPONENT); ADOPTING WRITTEN FINDINGS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT; ADOPTING A MITIGATION, MONITORING AND REPORTING PROGRAM; APPROVING THE PROJECT; AND AUTHORIZING THE FILING OF A NOTICE OF DETERMINATION TO PROCEED WITH THE PROJECT

WHEREAS, the Irvine Ranch Water District ("IRWD") proposes to add to the Michelson Water Recycling Plant (MWRP) Phase 2 and 3 Capacity Expansion (the "Phase 2 and 3 Expansion") a Biosolids Handling and Energy Recovery Component (the "Project"), a project to provide a residuals management system at the MWRP consisting of new biosolids processing, biogas management, and energy recovery systems with capacity to handle all solids produced, based on projected future demand in the IRWD service area; and

WHEREAS, from March 28, 2011 to April 26, 2011, IRWD, as the lead agency for the Project, circulated a notice of preparation of an environmental impact report for the Project as required by the California Environmental Quality Act ("CEQA"), and in addition, held a public scoping meeting on April 12, 2011, at the offices of IRWD; and

WHEREAS, at the conclusion of the comment period for the notice of preparation, IRWD determined to prepare a Supplemental Environmental Impact Report as the environmental document to add the Project to the Phase 2 and 3 Expansion, and, taking into consideration the comments received during the public scoping process and other CEQA requirements relating to the contents of an EIR, a Draft Supplemental Environmental Impact Report ("DSEIR") was prepared; and

WHEREAS, IRWD circulated the DSEIR during the period from July 3, 2012 to August 16, 2012 and extended the period to August 31, 2012 at the request of interested parties, and, on July 24, 2012, IRWD held a public informational meeting on the DSEIR; and

WHEREAS, IRWD reviewed the comments on the DSEIR received from interested persons, organizations and agencies and prepared detailed responses to the comments directed to any significant environmental issues, which were set forth in the Final EIR ("FSEIR"), along with the DSEIR, revisions to the DSEIR text and other information required by CEQA to be included in the FSEIR; and

WHEREAS, CEQA provides that when an EIR identifies any significant environmental effects that would occur if the project is approved or carried out, the lead agency must make a specified finding or findings with respect to each of the identified significant effects, and must also adopt a mitigation monitoring program for the changes to the project which it has adopted or made a condition of approval in order to mitigate or avoid significant project-related impacts on the environment; and

WHEREAS, in accordance with the CEQA requirements described in the foregoing recital, IRWD has prepared a Mitigation, Monitoring and Reporting Program ("MM&RP") and proposed findings; and

WHEREAS, the Board of Directors has reviewed and considered the information contained in the FSEIR, the MM&RP and the proposed findings presented to this meeting, and all oral and written evidence constituting the administrative record presented to this Board, which is on file with the Secretary of IRWD as the custodian thereof in the office of the District; and

WHEREAS, as contained herein, the Board of Directors has endeavored in good faith to set forth the basis for its decision on the Project;

NOW, THEREFORE, the Board of Directors of the Irvine Ranch Water District DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. All of the foregoing recitals are true and correct.

Section 2. The FSEIR, the MM&RP and the findings set forth in Attachment "A" to this Resolution (the "Findings") for the Project are adequate, complete and have been prepared in compliance with CEQA.

Section 3. The FSEIR, the MM&RP and the Findings reflect IRWD's independent judgment and analysis.

Section 4. The FSEIR is hereby certified as complete.

Section 5. The MM&RP and the Findings are hereby adopted.

Section 6. The Board of Directors of IRWD has reviewed and considered the environmental effects of the Project as shown in the FSEIR and the other information contained in the FSEIR prior to approving the Project.

Section 7. The Project is hereby approved.

Section 8. District Staff is hereby authorized and directed to cause a Notice of Determination reflecting the foregoing actions to be executed and filed with the Orange County Clerk and the State Clearinghouse, and to take any actions necessary or desirable in connection therewith, including but not limited to, payment of fees imposed by the California Department of Fish and Game.

ADOPTED, SIGNED AND APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2012.

\_\_\_\_\_  
President/Vice President  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors  
thereof

\_\_\_\_\_  
Secretary/Assistant Secretary  
IRVINE RANCH WATER DISTRICT  
and of the Board of Directors  
thereof

APPROVED AS TO FORM:

BOWIE, ARNESON,  
WILES & GIANNONE  
Legal Counsel - IRWD

By \_\_\_\_\_