

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

September 26, 2011

PLEDGE OF ALLEGIANCE

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

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

NOTICE

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

COMMUNICATIONS TO THE BOARD

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.

PRESENTATION

3. PARTNER COMMENDATION

In celebration of the District's 50th anniversary, the IRWD Board of Directors will recognize key "Partners in Service". This evening the Board will present Certificates of Commendation to representatives of the Discovery Science Center and the Sea & Sage Audubon.

CONSENT CALENDAR

Next Resolution No. 2011-41

Items 4-18

4. RESOLUTION OF COMMENDATION FOR JOSEPH BREITER

Recommendation: That the Board adopt a resolution commending Joseph Breiter for his dedicated and loyal service to the District.

Reso. No. 2011-

CONSENT CALENDAR – Continued Next Resolution No. 2011-41

Items 4-18

5. RESOLUTION OF COMMENDATION FOR MARY KAY HASSETT

Recommendation: That the Board adopt a resolution commending Mary Kay Hassett for her dedicated and loyal service to the District.

Reso. No. 2011-

6. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the September 12, 2011 Regular Board Meeting be approved as presented.

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

Recommendation: That the Board approve the meetings and events for Steve LaMar, Peer Swan and John Withers.

8. STRATEGIC MEASURES DASHBOARD

Recommendation: That the Board receive and file the Strategic Measures Dashboard and information items.

9. AUGUST 2011 FINANCIAL REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report and the Monthly Interest Rate Swap Summary for August 2011; approve the August 2011 Disbursement Summary of Warrants Nos. 322230 through 323091 Workers' Compensation distributions, wire transfers, payroll direct deposit ACH payments, payroll withholding distributions and voided checks in the total amount of \$27,334,132.01.

10. ACWA COMMITTEE APPOINTMENT NOMINEES FOR THE 2012/2013 TERM

Recommendation: That the Board direct staff to submit the list of ACWA Committee Appointment Nominees for the 2012/13 term to the Association of California Water Agencies prior to September 30, 2011.

11. ACWA REGION 10 ELECTION FOR THE 2012/13 TERM

Recommendation: That the Board support the candidates as selected by the ACWA Region 10 Nominating Committee.

12. 2011 STATE LEGISLATIVE UPATE

Recommendation: Receive and file.

CONSENT CALENDAR – Continued Next Resolution No. 2011-41

Items 4-18

13. FREE SPRINKLER NOZZLE PROGRAM EXPANSION

Recommendation: That the Board approve an increase of \$113,750 to the Fiscal Year 2011-12 operating budget from unallocated conservation revenues for the Free Sprinkler Nozzle Program, and authorize the General Manager to amend the existing agreement with Western Municipal Water District to reflect the program budget increase.

14. STOCKDALE WEST PILOT PROJECT FACILITIES – FINAL ACCEPTANCE

Recommendation: That the Board accept the Stockdale West Recharge Facilities Pilot Project; authorize the General Manager to file a Notice of Completion for the work; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

15. BUREAU OF RECLAMATION GRANT FOR JOINT ENERGY AND WATER COMMERCIAL AUDIT PILOT PROGRAM

Recommendation: That the Board authorize an increase of \$136,000 to the Fiscal Year 2011-12 Operating Budget and authorize the General Manager to execute an agreement with the Bureau of Reclamation for the implementation of the Joint Energy and Water Commercial Audit Pilot Program.

16. WELLS 21 AND 22 DESALTER CONTRACT CHANGE ORDER

Recommendation: That the Board approve an Expenditure Authorization in the amount of \$577,500 for project 10286 and approve Contract Change Order No. 7 in the amount of \$316,182 to Pascal & Ludwig Constructors for the Wells 21 and 22 Desalter, project 10286 (1081).

17. CATHODIC PROTECTION OF SIX STEEL RESERVOIRS IN SANTIAGO CANYON – EXPENDITURE AUTHORIZATION

Recommendation: That the Board approve an Expenditure Authorization in the amount of \$37,400 for the Cathodic Protection of Six Steel Reservoirs in Santiago Canyon project 11484 (1637).

18. LAKE FOREST WOODS SEWER REHABILITATION PROJECT CHANGE ORDER AND FINAL ACCEPTANCE

Recommendation: That the Board authorize the General Manager to execute Contract Change Order No. 3 with Insituform Technologies, Inc. in the credit amount of <\$95,117.93>; accept construction of the Lake Forest Woods Sewer Rehabilitation, project 20747 (1111); authorize the General Manager to file a Notice of Completion; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

ACTION CALENDAR

19. **LANDSCAPE AND IRRIGATION MAINTENANCE CONTRACT AWARD**

Recommendation: That the Board authorize the General Manager to execute three-year landscape and irrigation maintenance contracts with Tropical Plaza Nursery, Inc. for \$631,440, Pinnacle Landscape for \$240,923 and Merchants Landscape Services for \$262,080.

20. **CONSTRUCTION MANAGEMENT CONSULTANT SERVICES**

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with CH2M Hill in the amount of \$300,000 for construction management consultant services.

21. **ENTERPRISE ASSET MANAGEMENT SOFTWARE NEEDS ASSESSMENT AND EVALUATION – CONSULTANT SELECTION**

Recommendation: That the Board authorize the addition of projects 11619 and 21619 to the FY 2011-12 Capital Budget and accompanying Expenditure Authorizations in the amount of \$125,000 each, and authorize the General Manager to execute a Professional Services Agreement with EMA, Inc. in the amount of \$196,880 for the Enterprise Asset Management Software Review project.

22. **ORANGE PARK ACRES DOMESTIC WATER PRESSURE REGULATING STATIONS AND FIRE FLOW IMPROVEMENTS BUDGET ADDITION AND CONSTRUCTION AWARD**

Recommendation: That the Board approve a budget increase of \$312,000 for the Orange Park Acres Domestic Water Fire Flow Improvements, project 11410 (1297); approve an Expenditure Authorization in the amount of \$599,600 for the Orange Park Acres Domestic Water Pressure Regulating Stations, project 11409 (1287); and approve an Expenditure Authorization in the amount of \$852,700 for the Orange Park Acres Domestic Water Fire Flow Improvements, project 11410 (1297); and authorize the General Manager to execute a construction contract with Paulus Engineering, Inc. in the amount of \$1,143,821 for the Orange Park Acres Domestic Water Pressure Regulating Stations and Fire Flow Improvement, projects 11409 (1287) and 11410 (1297).

ACTION CALENDAR - Continued

23. **ORANGE PARK ACRES CHAPMAN AVENUE ON-SITE PIPING
RELOCATION CONSTRUCTION AWARD**

Recommendation: That the Board approve a budget increase of \$275,000, from \$10,713,900 to \$10,988,900 for the Orange Park Acres Chapman Avenue on-site piping relocation construction award, project 11408 (1279); approve an Expenditure Authorization in the amount of \$275,000 for the Orange Park Acres Chapman Avenue on-site piping relocation construction award project 11408 (1279); and authorize the General Manager to execute a construction contract with L & S Construction, Inc. in the amount of \$154,751 for the Orange Park Acres Chapman Avenue on-site piping relocation, project 11408 (1279).

24. **MWRP PHASE 2 EXPANSION AND FLOOD PROTECTION IMPROVEMENTS
- BUDGET INCREASE, EXPENDITURE AUTHORIZATION, CONTRACT
CHANGE ORDER, AND VARIANCE**

Recommendation: That the Board authorize an increase to the FY 2011-12 Capital Budget in the amount of \$112,200, from \$733,200 to \$845,400, for the Michelson Water Recycling Plant (MWRP) Sand Canyon Zone A Strainer Replacement, project 30038 (1643); approve an Expenditure Authorization in the amount of \$377,900 for the MWRP Sand Canyon Zone A Strainer Replacement, project 30038 (1643); approve Contract Change Order (CCO) No. 46 in the amount of \$476,789 with J. R. Filanc Construction Co. for the construction of the Sand Canyon Zone A Strainer Replacement; and authorize the General Manager to execute Variance No. 1 in the amount of \$121,595 with Ninyo and Moore for supplemental construction phase pile foundation services for the MWRP Flood Protection Improvements, projects 20542 (1150) and 30542 (1118).

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.

25. A. General Manager's Report

OTHER BUSINESS - Continued

25. B. Directors' Comments

1)

2)

3)

4)

5)

C. Adjourn meeting to Tuesday, September 27, 2011 at 12:30 p.m., to Payne & Fears Law Office
Jamboree Center, 4 Park Plaza, Suite 1100, Irvine, CA

* * * * *

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.

September 26, 2011
Prepared by: M.B. Gingras
Submitted by: W.D. Posey
Approved by: Paul Cook *[Signature]*

CONSENT CALENDAR

RESOLUTION COMMENDING JOSEPH BREITER
FOR HIS SERVICE TO THE DISTRICT

SUMMARY:

As Mr. Joseph Breiter has retired from the District following 30 years of dedicated and outstanding service, staff has prepared a resolution, which is provided as Exhibit "A", to honor him.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2011 –

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT COMMENDING
JOSEPH BREITER FOR HIS DEDICATED AND
LOYAL SERVICE TO THE DISTRICT.

LIST OF EXHIBITS:

Exhibit "A" – Resolution

EXHIBIT "A"

RESOLUTION NO. 2011 -

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT COMMENDING JOSEPH BREITER FOR HIS DEDICATED AND LOYAL SERVICE TO THE DISTRICT

WHEREAS, Joseph Breiter began his career at the Irvine Ranch Water District on May 11, 1981 as a MWRP Operator I; and

WHEREAS, Joseph was promoted to a MWRP Operator II in November 1982; and

WHEREAS Joseph was awarded a District "Incentive Award" equivalent to an AA Degree in February 1984 for completing 71 Utility Science college level units; and

WHEREAS Joseph served as "Process Owner" of the MWRP Primary Sedimentation Process since 1994 and created Standard Operational Procedures (SOP's) for Primary Skimming and Odor Scrubber Operation and Acid Washing, and operational and equipment checklists; and

WHEREAS Joseph was promoted to a MWRP Operator III in November 1996; and

WHEREAS Joseph honorably served as the MWRP Operations representative on the District's General Safety Committee (GSC) for 15 consecutive years since 1996; and

WHEREAS Joseph was awarded a District "Certificate of Appreciation" for his award winning 1999 Nikon International Calendar wildlife photo that is on permanent display at the District's Headquarters; and

NOW, THEREFORE, BE IT RESOLVED, the Board of Directors of the Irvine Ranch Water District commends Joseph Breiter for his long and loyal service. His dedication and outstanding service to the District stands as an example to all employees. On this occasion, the Board extends its best wishes to Joseph Breiter in his retirement.

SIGNED and APPROVED this 26th day of September 2011.

President, IRVINE RANCH WATER
DISTRICT and of the Board of
Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

September 26, 2011
Prepared by: Alex Aguilar
Submitted by: Tony Mossbarger
Approved by: Paul Cook *[Signature]*

CONSENT CALENDAR

RESOLUTION COMMENDING MARY KAY HASSETT
FOR HER SERVICE TO THE DISTRICT

SUMMARY:

As Ms. Mary Kay Hassett has retired from the District following 30 years of dedicated and outstanding service, staff has prepared a resolution, which is provided as Exhibit "A", to honor her.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2011 –

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT COMMENDING
MARY KAY HASSETT FOR HER DEDICATED AND
LOYAL SERVICE TO THE DISTRICT.

LIST OF EXHIBITS:

Exhibit "A" – Resolution

EXHIBIT "A"

RESOLUTION NO. 2011-

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT COMMENDING MARY KAY HASSETT FOR HER DEDICATED AND LOYAL SERVICE TO THE DISTRICT

WHEREAS, Mary Kay Hassett began her career as a Clerk Typist 1 at the Irvine Ranch Water District on October 20, 1981; and

WHEREAS Mary Kay was promoted to Purchasing Coordinator in June 1982, then promoted to Buyer I in March 1984, then promoted to Buyer II in July 1996, followed by a promotion to Senior Buyer in July 2002; and

WHEREAS, Mary Kay is a respected purchasing professional; and was a source of Purchasing knowledge who provided guidance to her many internal customers over the course of her career; and

WHEREAS, Mary Kay was an active member of IRWD-sponsored Toastmasters International, holding the position of President during the course of her 20 years of active participation; and

WHEREAS, Mary Kay was Chairperson of the IRWD Recycling Committee and hosted the annual IRWD Earth Day event for Sand Canyon Headquarters and Michelson Operations Center; and

WHEREAS, all Board members, employees and other colleagues who have come to know Mary Kay will genuinely miss her; and

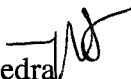

NOW, THEREFORE, BE IT RESOLVED, the Board of Directors of the Irvine Ranch Water District commends Mary Kay Hassett for her long and loyal service. Her dedication and outstanding service to the District stands as an example to all employees. On this occasion, the Board extends its best wishes to Mary Kay Hassett in her retirement.

SIGNED and APPROVED this 26th day of September 2011.

President, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

Secretary, IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM:
Bowie, Arneson, Wiles & Giannone
Legal Counsel – IRWD

September 26, 2011
Prepared and
Submitted by: N. Savedra 
Approved by: P. Cook 

CONSENT CALENDAR

MINUTES OF REGULAR BOARD MEETING

SUMMARY:

Provided are the minutes of the September 12, 2011 Regular Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE SEPTEMBER 12, 2011 REGULAR BOARD MEETING
APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – September 12, 2011 Regular Board Meeting

EXHIBIT "A"

MINUTES OF REGULAR MEETING – SEPTEMBER 12, 2011

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President LaMar on September 12, 2011 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

Directors Present: LaMar, Matheis, Reinhart, Swan and Withers

Directors Absent: None.

Also Present: Interim General Manager Cook, Senior Director of Finance Cherney, Senior Director of Operations Pedersen, Director of Engineering Burton, Assistant Secretary Savedra, Treasurer Jacobson, Legal Counsel Arneson, Director of Water Resources Heiertz, Director of Wastewater Operations Posey, Director of Water Quality Hills, Director of Human Resources Wells, Ms. Kirsten McLaughlin, Mr. Paul Weghorst, Mr. Jim Reed, Mr. Bruce Newell, Mr. Yannick Gagne and Mr. Yves McGale of Aon Hewitt, 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 C-8 and C-9 will operate in accordance with the District's annual pumping plan. Wells, 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15, 16, 17 and 18 will be off. This was confirmed by Mr. Cook, Interim General Manager of the District.

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

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.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED – None.

CONSENT CALENDAR

Director Reinhart made a correction on the agenda for Consent Calendar item No. 4. On MOTION by Reinhart, seconded and unanimously carried, CONSENT CALENDAR ITEMS 3 THROUGH 9 WERE APPROVED AS AMENDED:

3. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the August 22, 2011 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. REVISED PERSONNEL POLICIES AND PROCEDURES

Recommendation: That the Board adopt the following resolution by title:

RESOLUTION NO. 2011-40

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH
WATER DISTRICT, RESCINDING RESOLUTION NO. 2011-28
AND ESTABLISHING REVISED PERSONNEL POLICIES
(FOR POLICY NOS. 38 AND 39)

6. RECYCLED WATER DECHLORINATION STATIONS FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Recycled Water Dechlorination Stations, project 30206 (1701); authorize the General Manager to file a Notice of Completion; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

7. LAKE FOREST WELL NO. 2 DESTRUCTION AND DRILLING CONTRACT CHANGE ORDER AND FINAL ACCEPTANCE

Recommendation: That the Board authorize the General Manager to execute Contract Change Order No. 3 with Layne Christensen Company in the credit amount of <\$89,343.75>; accept construction of Lake Forest Well No. 2, project 11461 (1498); authorize the General Manager to file a Notice of Completion; and authorize the release of retention 35 days after filing of the Notice of Completion.

8. LOS ALISOS WATER RECYCLING PLANT LANDSCAPE AND IRRIGATION PROJECT – FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Los Alisos Water Recycling Plant Landscape and Irrigation Project, projects 20243 (2940) and 30134 (2915); authorize filing of a Notice of Completion; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

9. STRAND RANCH WELL DRILLING AND CONSTRUCTION PROJECT – FINAL ACCEPTANCE

Recommendation: That the Board approve Final Change Order No. 4 in the amount of (\$768,440.80) for project 11289 (2812); accept the Strand Ranch Recovery Facilities Project - Drilling and Construction of Extraction Wells; authorize the General Manager to file a Notice of Completion for the work; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

ACTION CALENDAR

2012 MEDICAL INSURANCE COVERAGE RENEWAL

Interim General Manager Cook reported that the District currently utilizes the CalPERS medical insurance program and receives premium rates each year in advance of open enrollment in October. For the 2012 calendar year, CalPERS notified the District of premium increases for each of the specific plans from which IRWD employees can choose, with an overall annual premium increase of 4.1 percent. He said IRWD will be retaining 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. The results of that study will not be developed in time to make adjustments to the 2012 medical

insurance benefits. As a result, staff recommends the District make adjustments to the employee contribution rates for the CalPERS medical plans in line with the increases announced for each individual plan. With the recommended adjustments to employee contributions and assuming similar plan enrollments as for 2011, the District's overall medical insurance costs will increase by 3.6% over FY 2010-11.

Mr. Cook said that given the scope and timing of the benefits study which is expected to get underway as open enrollment is beginning for the 2012 calendar year health benefits, staff recommends that only minor modifications be made to employee contributions at this time in percentages consistent with the increases announced for each plan.

Director of Human Resources Wells reported that there are a few notable plan design changes which have been made by CalPERS effective January 1, 2012. Under the PERS Care, PERS Choice and PERS Select Basic plans, a new value-based program will be introduced for three frequently used outpatient hospital procedures: colonoscopy, cataract surgery, and arthroscopy. She said that a maximum thresholds has been set for each whether the procedure is conducted at the site of care or at an ambulatory surgical center.

Director Swan reported that this item was reviewed and approved by the Finance and Personnel Committee on September 7, 2011. On MOTION by Reinhart, seconded and unanimously carried, **THE BOARD AUTHORIZED THE CONTINUANCE OF THE DISTRICT'S HEALTH CARE COVERAGE WITH CALPERS FOR THE CALENDAR YEAR 2012 AND APPROVED CHANGES IN EMPLOYEE CONTRIBUTION LEVELS AS RECOMMENDED.**

CONSULTANT SELECTION FOR EVALUATING POTENTIAL CHANGES TO RETIREMENT AND HEALTH BENEFITS

Interim General Manager Cook reported that on June 17, 2011, the Board approved a process for selecting consultants to develop and evaluate potential changes to IRWD's retirement and health benefits. As part of that process, the proposals from consultants interested in providing the requested services were evaluated; multiple rounds of interviews were conducted by both staff and the Finance and Personnel Committee.

Senior Director of Finance Cherney reported that the District received seven proposals in response to its Request for Proposal (RFP) for Evaluating Changes to IRWD's Retirement and Health Benefits Package. A Working Group was established to review the proposals and make recommendations for consultant selection to the Finance and Personnel Committee and to the Board. The Working Group consisted of the Interim General Manager, the Senior Director of Finance and Administrative Services, and the Director of Human Resources as well as two outside resources: the District's outside labor counsel from Payne & Fears and the Assistant City Manager from the City of Newport Beach.

Ms. Cherney said the list of consultants that submitted a proposal and summarized their scope of work included: Buck Consultants, Aon Hewitt, PFM, Bartel & Associates, Chang, Ruethenberg, Hanson Bridgett and Liebert Cassidy. She said that staff reviewed the list of consultants and

reviewed a preliminary list of interview questions with the Committee members, and the Committee provided input regarding additional questions to be asked during the interview.

Ms. Cherney said the Working Group interviewed the teams from Buck, Aon Hewitt, PFM, Chang Ruthenberg, and Hanson Bridgett. Based on the Working Group's evaluation of the proposals and the information obtained during the interviews, recommendations were presented to the Finance and Personnel Committee at its meeting on August 19, 2011. At that time, the Committee directed staff to set up interviews with the recommended team of Aon Hewitt and Hanson Bridgett. She said that on August 31, 2011, the Finance and Personnel Committee and staff met with representatives of Aon Hewitt and Hanson Bridgett. Both teams provided an overview of their respective proposed scopes of work and approaches, and how the teams would work together to provide the comprehensive study services that the District requires.

Ms. Cherney introduced the representatives from Aon Hewitt, Yves McGale and Yannick Gagne who then made a PowerPoint presentation to reveal some of their modeling tools that would be used for the actuarial analysis, financial impact modeling, and tools for identifying where changes would most impact the District's employees.

Mr. Yves McGale said he would act as the engagement manager and Mr. Yannick Gagne will oversee and manage the entire project, and the interaction between the consultants and Hanson Bridgett. He said, the project will be to review the district's existing retirement and health benefit package currently offered to employees through CALPers. He said that Aon Hewitt will look at the current program in detail with a particular focus on adequacy, what benefits are provided to the retirees and employees; sustainability from a financial point of view; and efficiency of delivery of benefits.

Mr. Yannick Gagne reported that Aon Hewitt has had public and private sector experience providing holistic view of retirement and health benefits trends and landscape; access to a large pool of consultants for broad spectrum of innovative ideas and validation; and lastly resources in the industry supporting plan design such as benchmarking database and interactive modeling tools.

Ms. Cherney reported that Aon Hewitt and Hanson Bridgett will continue to have several meetings with staff and has a scheduled preliminary project timeline in place beginning with a Board workshop meeting on October 7, 2011 to establish the board's objective setting for the project.

Director Swan reported that this item was reviewed and approved by the Finance and Personnel Committee on August 9, August 19, August 31 and September 7, 2011. Discussion followed and it was proposed by Director Swan that the recommendation be amended to increase the Operating Budget to \$335,000. On MOTION by Swan, seconded and unanimously carried, THE BOARD APPROVED THE RETENTION OF AON HEWITT AND HANSON BRIDGETT TO EVALUATE POTENTIAL CHANGES TO THE DISTRICT'S RETIREMENT AND HEALTH PROGRAMS; APPROVED AN ADDITION OF \$335,000 TO THE DISTRICT'S FY 2011-12 OPERATING BUDGET, SUBJECT TO VARIANCES IN ACCORDANCE WITH PROCUREMENT POLICY; AUTHORIZED THE GENERAL MANAGER TO EXECUTE A

PROFESSIONAL SERVICES AGREEMENT WITH AON HEWITT FOR AN AMOUNT NOT-TO-EXCEED \$150,000; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH HANSON BRIDGETT FOR AN AMOUNT NOT-TO-EXCEED \$50,000.

INTEREST RATE SWAP NOVATION FROM CITIBANK TO WELLS FARGO

Interim General Manager Paul Cook reported that during the recent letter of credit substitution process, Citibank, N.A. (Citi) requested the District consider novating (substituting) the three interest rate swaps with Citi as counterparty, and replace them with Wells Fargo Bank, N.A. as counterparty.

Senior Director of Finance Cherney reported that the District currently has three interest rate swaps with Citi as counterparty. During the recent letter of credit substitution, Citi requested that the District consider novating Citi with Wells Fargo on the three swap transactions. Citi is interested in novating its swap positions as part of a corporate initiative to strategically sell assets that reside in the Citi Holdings unit of Citibank. This novation would result in the District entering into a new International Swaps and Derivatives Association (ISDA) agreement with Wells Fargo with terms that are consistent with the existing Citi ISDA agreement. Wells Fargo is a higher rated counterparty than Citibank (Aa2/AA/AA- vs. A1/A+/A+), and Wells Fargo has agreed to increase the current collateral threshold requirement from \$15 million to \$50 million. The District will not be responsible for any legal expense or Financial Advisor expense (should one be required by Citi or Wells Fargo), as Citi and/or Wells Fargo will pay and expenses. She said Citibank is currently holding District collateral in the amount of \$8,416,629, which will be returned to the District when the agreement with Wells Fargo is executed.

Director Swan reported that this item was reviewed and approved by the Finance and Personnel Committee on September 7, 2011. On MOTION by Swan, seconded and unanimously carried THE BOARD APPROVED NOVATING THE CURRENT CITIBANK, N.A. INTEREST RATE SWAPS TO WELLS FARGO BANK, N.A.

STRAND RANCH GROUNDWATER RECOVERY PROJECT PIPELINE FACILITIES AND WELL EQUIPPING CONSTRUCTION AWARD

Interim General Manager Paul Cook reported that that IRWD is nearing completion of facilities at the Strand Ranch Integrated Banking Project in Kern County. Seven wells remain to be equipped and pipeline and Cross Valley Canal (CVC) turn-in facilities need to be constructed in order to extract and convey banked water.

Principal Water Research Manager Weghorst reported that IRWD and Rosedale-Rio Bravo Water Storage District (Rosedale) are partners in the Strand Ranch Integrated Banking Project (Project) with Rosedale operating the Project on behalf of IRWD. The purpose of the Project is to provide water supply reliability to IRWD, as well as to augment the recharge and recovery capacity of Rosedale's Conjunctive Use Program. Project facilities that have been constructed to date include 502 acres of recharge basins, two CVC turn-outs, two water supply channels, a

siphon under the Pioneer Canal and six new groundwater recovery wells. One well that existed at the time the District purchased the Strand Ranch has been rehabilitated and will also be incorporated into the Project. A total of seven wells need to be equipped. In addition, conveyance pipelines and three turn-ins to deliver recovered water to the CVC are required to be constructed. In July 2010, the Board approved a Professional Services Agreement with Kennedy/Jenks Consultants (KJC) to design these facilities.

Mr. Weghorst said on July 13, 2011, IRWD invited contractors to submit bids for equipping the seven wells and for the construction of conveyance pipelines and CVC turn-ins. The invited bidders were Pascal & Ludwig Constructors, SS Mechanical Corp., Gateway Pacific Contractors Inc., W.M. Lyles Co., Bakersfield Well & Pump Co., Wood Brothers Inc., Nicholas Construction, HPS Mechanical Inc., Specialty Construction, Inc. and Schuler Engineering Corp. Bids were received from Pascal & Ludwig Constructors, W.M. Lyles Co., Wood Brothers Inc., Nicholas Construction, HPS Mechanical Inc., and Specialty Construction, Inc. He said the low bidder was W.M. Lyles Co. in the amount of \$3,281,860, versus the engineers estimate for the project at \$4,700,000. He said that W.M. Lyles Co. recently worked as a subcontractor to Wood Brothers on IRWD's Stockdale West Recharge Facilities Project and staff has been satisfied with W. M. Lyles Co.'s past performance on this and other IRWD projects.

Mr. Weghorst said the project construction is to be completed within 325 days of the notice of award. Construction of the CVC turn-ins will not begin until February 2012. Early occupancy of the facilities on the north side of the CVC will occur in late April 2012. The entire project is expected to be completed in December 2012. He said staff is coordinating with Rosedale and the Kern County Water Agency (KCWA) in developing an agreement to construct the CVC turn-ins in the CVC right of way and to discharge water from the Project into the CVC. The terms of the agreement call for the turn-in facilities within the CVC right of way to become CVC facilities. IRWD's ownership of facilities will occur immediately beyond the CVC right of way on the Strand Ranch. The agreement also requires KCWA's review and approval of the designs for the CVC turn-ins. The design of the turn-ins has been closely coordinated with the KCWA and they have provided comments in several reviews. All comments and requirements provided by the KCWA have been incorporated into the designs for the Project.

Mr. Weghorst said the agreement will require that the quality of water from the Project to be discharged into the CVC must not alter the CVC's ability to meet the Department of Water Resources' (DWR) water quality criteria for acceptance of non-State Water Project water into the State Water Project. The Project wells have been designed and constructed taking these criteria into consideration and adequate blending capabilities have been incorporated into the designs for the pipelines and CVC turn-ins to ensure that water from the Project will not result in CVC violations to the DWR criteria.

On MOTION by Reinhart, seconded and unanimously carried, THE BOARD APPROVED AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$3,681,700 FOR PROJECT 11289 (2812); AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH W.M. LYLES CO. IN THE AMOUNT OF \$3,281,860 FOR WELL EQUIPPING AND CONSTRUCTION OF PIPELINE FACILITIES AND CVC TURN-INS.

GENERAL MANAGER'S REPORT

Interim General Manager Cook reported that this Saturday, September 17th the district will hold its 50th Anniversary Customer Appreciation event at the Michelson Operations Plant. A tree dedication will be made at the site and planted at a later date.

DIRECTORS' COMMENTS

Director Reinhart reported that he attended UWI annual conference. He suggested that UWI and SCWC join these agencies to lessen repeated information. He said he attended WACO and the WaterReuse board meeting and symposium held in Arizona. He ask the board to save the date November 20 for the scheduled SCWC meeting with speaker Judge Wanger, who recently retired.

Director Swan reported that he attended the ACWA Finance Committee and Budge Committee Meetings. He stated that the ACWA staff is proposing to increase their dues, however the Financial committee is strongly against the increase and will recommend no increase be assessed. He reported he attended WACO and UWI conference. He also reported that a committee is currently planning ACWA's Regions 8-10 annual conference for October 19th and 20th.

Director Matheis reported that she attended the Irvine Valley College 9/11 Commemoration event. She said it was a brief ceremony presented by Chief Dave Maggert. She reported he gave a meaningful and uplifting address that was well attended by Orange County Fire Authority, Police and the Orange County sheriffs.

President LaMar reported that he attended ACWA's Federal Government Affairs meeting and the last day of legislation session in Sacramento. He also said ACWA is doing a good job with their federal efforts on the Clean Water Act guidelines that were proposed.

MEETING RECESS at 6:25 p.m.

Meeting was recessed to allow a meeting of the Commission of the Irvine Ranch Water District Joint Powers Agency to be held. Following such meeting of the Joint Powers Agency, the meeting of the Irvine Ranch Water District Board of Directors was reconvened.

CLOSED SESSION

President LaMar said that a Closed Session will be held with legal counsel relative to existing litigation - Government Code Section 54956.9(a) – SEMA Construction vs. the City of Tustin and City of Tustin vs. IRWD; and Public Employee Appointment/Employment - Government Code Section 54957. Title: General Manager.

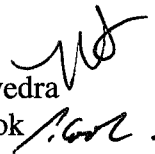
APPROVED and SIGNED this 12th day of September, 2011.

President, IRVINE RANCH WATER DISTRICT

Assistant Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

Legal Counsel - Bowie, Arneson, Wiles & Giannone

September 26, 2011
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

9/15/11 Transportation Corridor Agencies Briefing
9/20/11 Monthly meeting w/Interim General Manager Paul Cook regarding District activities

Peer Swan

9/15/11 Transportation Corridor Agencies Briefing
9/20/11 ACWA Delta Task Force Finance Planning Meeting
9/23/11 Southern California Water Committee Urban Water Planning Workshop
9/28/11 Southern California Water Dialogue Meeting

John Withers


9/21/11 OCWA September Meeting

RECOMMENDATION:

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

LIST OF EXHIBITS:

None

September 26, 2011
Prepared and Submitted by: Various
Approved by: Paul Cook 

CONSENT CALENDAR

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

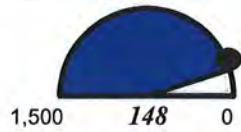
IRVINE RANCH WATER DISTRICT
STRATEGIC MEASURES DASHBOARD

August 2011

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

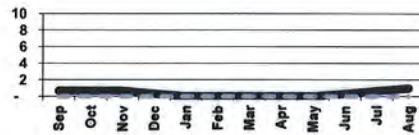
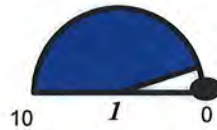
Reliability-Potable/Nonpotable

Target = 200 customer hours out of service this month



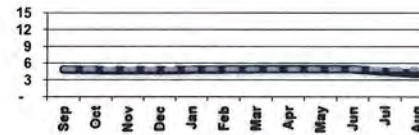
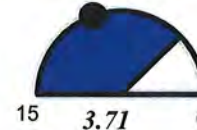
Sewer Spills

Target = 0 Spills this month



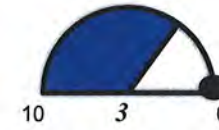
OCSD CORF Flows

Target = 8.80 MGD CORF flow to OCSD this month



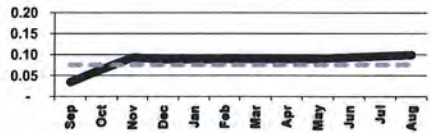
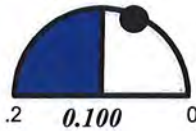
OSHA Recordables

Target = 0 reportable accidents this month



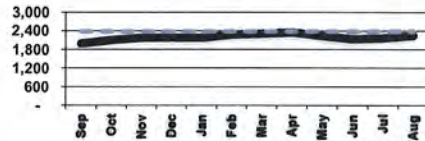
MWRP Energy Cost per kwh

Target = .0792 cost per kWh this month



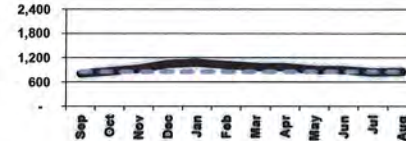
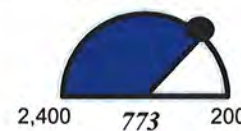
Wastewater Cost

Target = \$2,386/MG processed this month



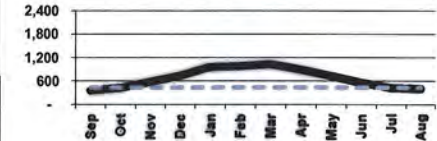
Water System Cost--Potable

Target = \$789/ac-ft delivered this month



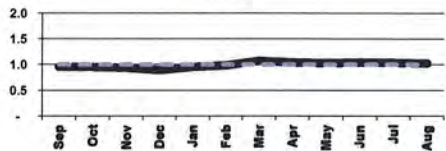
Water System Cost--Nonpotable

Target = \$408/ac-ft delivered this month



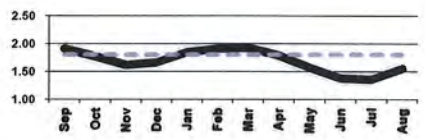
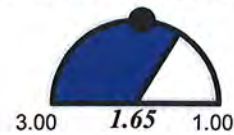
Enterprise Return

Target = 1.0 (net income/goal) last month



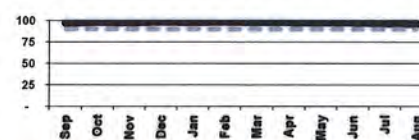
Overhead Ratio

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



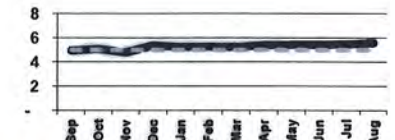
Customer Satisfaction

Target = 90% satisfaction this month



Employee Satisfaction

Target = 5.0 score this month



● Target shown on gauge
00.00 Figure for Current Month

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

IRVINE RANCH WATER DISTRICT
STRATEGIC MEASURES

Reliability-Potable/Nonpotable

MONTHLY STATUS REPORT

Metric Owner: Water Ops

Definition of Measure:

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

Method:

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

Data Collection

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

Current Issues

1. None

MONTHLY DATA

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> September 2010
September 2010	95.80		<i>Thru:</i> August 2011
October 2010	57.80		<i>Goal:</i> 200.00
November 2010	65.83		
December 2010	69.17		
January 2011	103.20		
February 2011	20.33		
March 2011	59.22		
April 2011	120.60		
May 2011	45.68		
June 2011	283.80		
July 2011	62.33		
August 2011	148.10		

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. September, 2010 - Irvine, 8" VCP. 100 gals SSO with 100% gals of wastewater contained and recovered. Caused by root intrusion.
2. October, 2010 - Irvine, 8" VCP. 200 gals SSO with 100% of wastewater contained and recovered. Caused by root intrusion.
3. June, 2011 - MWRP MPS-3 Forcemain Pigging Operation, blockage occurred at the termination point of the 18" MPS-3 forcemain due to debris accumulation. 250 gals SSO with 250 gals of wastewater contained and recovered.
4. July, 2011-MWRP MPS-3 Forcemain Pigging Operation (2nd Phase), blockage occurred due to same cause. 25 gals SSO with 25 gals of wastewater contained and recovered.
5. August, 2011 - Irvine, 8" VCP. 165 gals SSO with 100% of wastewater contained and recovered. Caused by root intrusion.

MONTHLY DATA

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

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> September 2010
September 2010	4.69		<i>Thru:</i> August 2011
October 2010	4.68		<i>Goal:</i> 4.95
November 2010	4.70		
December 2010	4.78		
January 2011	4.91		
February 2011	4.92		
March 2011	4.92		
April 2011	4.92		
May 2011	4.93		
June 2011	4.95		
July 2011	3.71		

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. Scientist - infection of both eyes from sewage splash in face while collecting sample of secondary sewage
2. Accounting Clerk - working at computer workstation, pain to upper right back, thoracic myospasm
3. Collection Systems Technician incurred multiple bee stings to (L) hand, middle fingers, (L) bicep and top of head when opened man hole

MONTHLY DATA

<u>Month</u>	<u>Value</u>	<u>Goal</u>	From: September 2010
September 2010	2.00		Thru: August 2011
October 2010	2.00		Goal: 0
November 2010	0		
December 2010	1.00		
January 2011	1.00		
February 2011	1.00		
March 2011	2.00		
April 2011	1.00		
May 2011	1.00		
June 2011	2.00		
July 2011	2.00		
August 2011	3.00		

IRVINE RANCH WATER DISTRICT
STRATEGIC MEASURES

MWRP Energy Cost per kWh

MONTHLY STATUS REPORT

Metric Owner: Wayne Posey

Director of Wastewater Operations

Definition of Measure:

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

Method:

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

Data Collection

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

Current Issues

1. Information not available.

MONTHLY DATA

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

IRVINE RANCH WATER DISTRICT
STRATEGIC MEASURES

Wastewater Cost

MONTHLY STATUS REPORT

Metric Owner: Wayne Posey

Director of Wastewater Operations

Definition of Measure:

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

Method:

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

Data Collection

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

Current Issues

1. None

MONTHLY DATA

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> September 2010
September 2010	2,169.00	2,362.00	<i>Thru:</i> August 2011
October 2010	2,167.00	2,356.00	<i>Goal:</i> 2,378.00
November 2010	2,206.00	2,363.00	
December 2010	2,183.00	2,358.00	
January 2011	2,155.00	2,355.00	
February 2011	2,492.00	2,380.00	
March 2011	2,277.00	2,375.00	
April 2011	2,297.00	2,378.00	
May 2011	2,143.23	2,375.00	
June 2011	1,973.19	2,378.00	
July 2011	2,393.00	2,380.00	
August 2011	2,390.00	2,386.00	

IRVINE RANCH WATER DISTRICT
STRATEGIC MEASURES

Water System Cost--Potable

MONTHLY STATUS REPORT

Metric Owner: Denise To-Nguyen

Accountant

Definition of Measure:

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

Method:

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

Data Collection

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

Current Issues

1. None

MONTHLY DATA

<u>Month</u>	<u>Value</u>	<u>Goal</u>	From: September 2010
September 2010	834.75	837.90	Thru: August 2011
October 2010	857.34	868.51	Goal: 855.00
November 2010	1,109.19	862.36	
December 2010	1,172.08	878.12	
January 2011	957.53	902.95	
February 2011	937.62	903.89	
March 2011	1,031.46	897.43	
April 2011	951.24	873.74	
May 2011	728.69	920.18	
June 2011	1,005.05	943.89	
July 2011	798.49	854.55	
August 2011	773.00	789.00	

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> September 2010
September 2010	393.78	405.18	<i>Thru:</i> August 2011
October 2010	508.51	473.71	<i>Goal:</i> 432.00
November 2010	840.22	547.10	
December 2010	854.69	597.27	
January 2011	1,186.35	722.95	
February 2011	905.02	607.02	
March 2011	1,000.90	707.32	
April 2011	777.61	563.92	
May 2011	424.12	452.90	
June 2011	471.96	413.85	
July 2011	394.00	432.00	
August 2011	338.00	408.00	

IRVINE RANCH WATER DISTRICT
STRATEGIC MEASURES

Enterprise Return

MONTHLY STATUS REPORT

Metric Owner: Jayne George

Debt and Investment Analyst

Definition of Measure:

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

Method:

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

Data Collection

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

Current Issues

1. The August measure is below budget at 0.98. The two apartment complexes posted above budget returns. Waterworks Way continues to operate under budget; however 230 Commerce was well below budget at this time due to lost income caused by Mortgage Direct being evicted for defaulting on their lease.

MONTHLY DATA

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> September 2010
September 2010	.89		<i>Thru:</i> August 2011
October 2010	.98		<i>Goal:</i> 1.00
November 2010	.94		
December 2010	.76		
January 2011	1.17		
February 2011	1.04		
March 2011	1.02		
April 2011	1.06		
May 2011	1.02		
June 2011	1.05		
July 2011	1.04		
August 2011	.98		

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> September 2010
September 2010	1.73		<i>Thru:</i> August 2011
October 2010	1.58		<i>Goal:</i> 1.80
November 2010	1.54		
December 2010	1.87		
January 2011	2.13		
February 2011	1.72		
March 2011	1.92		
April 2011	1.72		
May 2011	1.06		
June 2011	1.36		
July 2011	Not available		
August 2011	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: 96%
Satisfaction: 89%
Timely: 95%
Phone: 98%
Field Contact: 100%

MONTHLY DATA

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

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

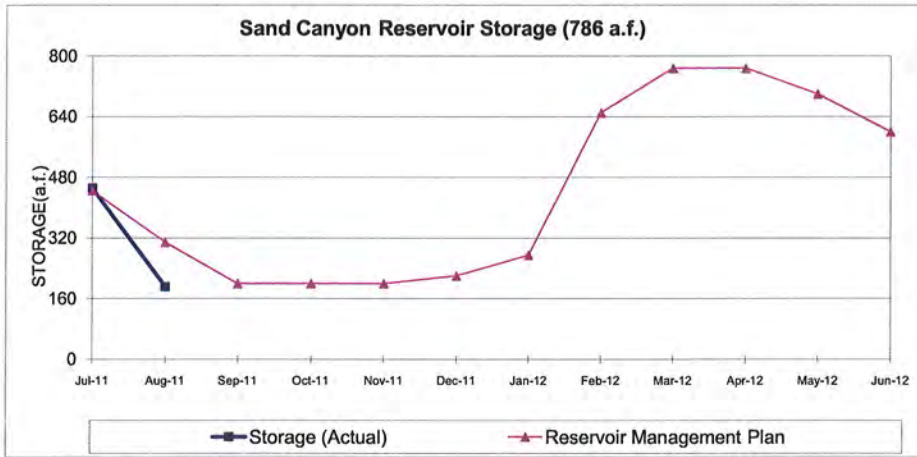
MONTHLY DATA

<u>Month</u>	<u>Value</u>	<u>Goal</u>	<i>From:</i> September 2010
September 2010	3.86		<i>Thru:</i> August 2011
October 2010	5.38		<i>Goal:</i> 5.00
November 2010	5.13		
December 2010	5.56		
January 2011	5.00		
February 2011	5.20		
March 2011	5.50		
April 2011	5.46		
May 2011	5.33		
June 2011	5.50		
July 2011	5.63		
August 2011	Not available		

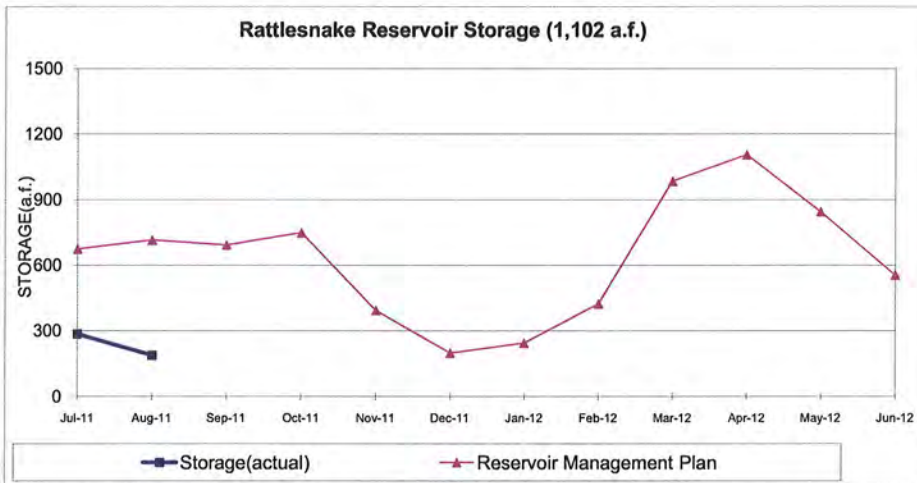
EXHIBIT "B"

DYER ROAD WELL FIELD STATUS							Aug-2011
Well Number	Production Mo./YTD	Ref. Point Elevation	Depth to Water 8/29/2011	Water Level-MSL	Depth of Bowls	Bowl Setting-MSL	Feet of Water Above Intake
1	0.0 AF 0.0 AF	34	N/A	N/A	270	-236	N/A
2	1.0 AF 1.8 AF	37	55	-19	270	-234	215
			Static				
3	0.0 AF 0.0 AF	55	65	-10	215	-160	150
			Static				
4	0.0 AF 0.0 AF	38	57	-19	216	-178	159
			Static				
5	0.0 AF 0.0 AF	48	61	-13	290	-242	229
			Static				
6	0.0 AF 7.5 AF	43	57	-14	250	-207	193
			Static				
7	0.0 AF 0.0 AF	40	59	-19	290	-250	231
			Static				
C-8 DATS	431.8 AF 850.4 AF	37	107	-70	305	-268	198
			Pumping				
C-9 DATS	324.6 AF 640.0 AF	23	109	-86	305	-282	196
			Pumping				
10	0.0 AF 6.3 AF	47	60	-13	250	-203	190
			Static				
11	0.0 AF 0.0 AF	40	58	-18	300	-260	242
			Static				
12	0.0 AF 0.0 AF	51	65	-14	300	-249	235
			Static				
13	0.1 AF 0.2 AF	40	56	-16	300	-260	244
			Static				
14	0.0 AF 0.0 AF	47	60	-13	311	-264	251
			Static				
15	0.0 AF 0.0 AF	44	57	-13	300	-256	243
			Static				
16	0.0 AF 0.2 AF	47	63	-16	280	-233	217
			Static				
17	0.0 AF 1.6 AF	52	65	-14	250	-199	185
			Static				
18	0.0 AF 0.0 AF	45	57	-12	300	-255	243
			Static				
Clear production:		1.0 AF for the month					
FYTD:		17.5 AF					
DATS production:		756.4 AF for the month					
FYTD:		1,490.4 AF					

RESERVOIR DATA FY 11-12

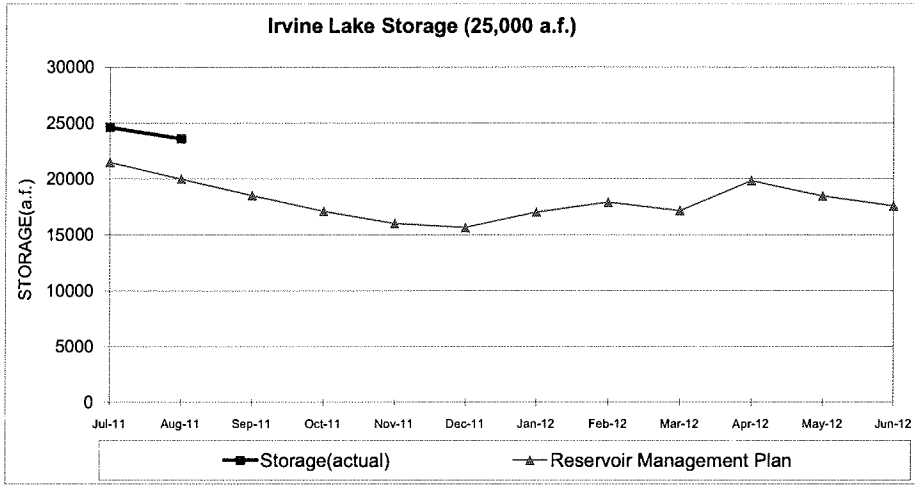


Storage was under 200 AF by October 1 as required by Regional Board permit. Sand Canyon will draft down over the next few months.

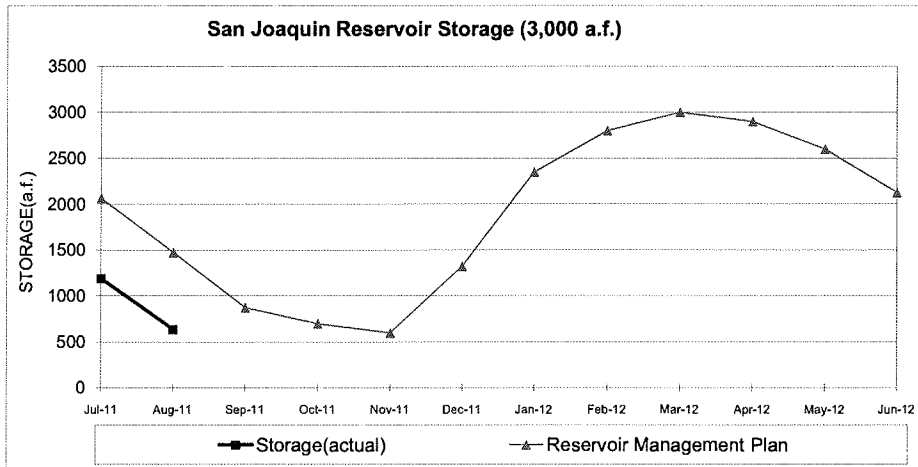


Rattlesnake storage is on track after responding to storms in December and January.

RESERVOIR DATA FY 11-12



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



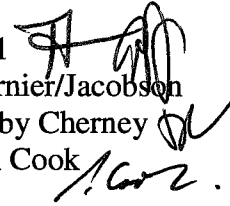
All Lake Forest reclaimed demand is being supplied from the East Irvine Zone B system.

September 26, 2011

Prepared by: Fournier/Jacobson

Submitted by: Debby Cherney

Approved by: Paul Cook



CONSENT CALENDAR

AUGUST 2011 FINANCIAL REPORTS

SUMMARY:

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

- A. The Investment Summary Report for August 2011. This Investment Summary Report is in conformity with the 2011 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Monthly Interest Rate Swap Summary as of August 31, 2011, as outlined in Exhibit "B".
- C. The August 31, 2011 Disbursement Summary of the tabulation of Warrant Nos. 322230 through 323091, Workers' Compensation distributions, payroll withholding distributions, payroll direct deposit ACH payments and voided checks in the total amount of \$27,334,132.01.

FISCAL IMPACTS:

As of August 31, 2011, the book value of the investment portfolio was \$394,998,829 with a 0.46% rate of return and a market value of \$395,551,107. Based on the District's June 30, 2011 quarterly real estate investment rate of return of 10.66%, the District's weighted average return for the fixed income and real estate investments was 1.86%.

As of August 31, 2011, the total notional amount of the interest rate swap portfolio was \$130 million of fixed payer swaps. Cash accrual in August from all swaps was negative \$663,900 and negative \$1,267,401 fiscal year to date.

Wire transfers, ACH payments, and checks issued for debt service, accounts payable, payroll and water purchases for August totaled \$27,334,132.01.

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 AUGUST 2011; APPROVE THE AUGUST 2011 DISBURSEMENT SUMMARY OF WARRANTS NOS. 322230 THROUGH 323091 WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL DIRECT DEPOSIT ACH PAYMENTS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$27,334,132.01.

LIST OF EXHIBITS:

Exhibit "A" - Investment Summary Report

Exhibit "B" - Monthly Interest Rate Swap Summary

Exhibit "C" - Monthly Summary of District Disbursements

Exhibit "A"

08/31/11

Date	Instrument	Face Value	Yield	Market Value	Weighted Avg. Return
08/31/11	08/01/11 08/31/11	\$38,800,000	0.380%	\$38,800,000.00	38,861,167.04
06/28/11	08/01/11 08/31/11	50,000,000	0.380%	\$50,000,000.00	50,078,823.50
08/07/11	08/01/11 08/31/11	683,279	0.380%	\$683,278.64	684,355.81
08/07/11	08/01/11 08/31/11	683,279	0.380%	\$683,278.64	1,077.17
08/19/11	08/01/11 08/31/11	132,084,787	0.380%	\$132,084,787.16	208,227.70
08/31/11	08/01/11 08/31/11	1,401,260.92	0.009%	1,401,260.92	1,401,260.92
04/21/10	11/23/11	5,000,000	1.000%	5,012,550.00	5,010,000.00
11/04/10	10/26/12	5,000,000	0.490%	4,997,500.00	5,000,250.00
01/11/11	01/11/13	5,000,000	0.750%	4,992,500.00	5,008,150.00
02/10/11	02/08/13	5,000,000	0.850%	4,985,500.00	5,010,400.00
04/04/11	03/14/13	5,000,000	1.013%	5,000,000.00	5,004,100.00
05/23/11	04/11/13	5,000,000	1.720%	5,112,550.00	5,100,000.00
04/25/11	04/25/13	5,000,000	0.750%	5,000,000.00	5,015,450.00
03/29/11	11/23/11 05/23/13	5,000,000	0.625%	4,955,985.00	5,004,300.00
06/27/11	06/27/13	5,000,000	0.700%	5,000,000.00	5,011,800.00
06/29/11	04/29/14	5,000,000	1.110%	4,998,250.00	5,006,400.00
05/23/11	11/23/11 05/23/14	5,000,000	1.250%	4,999,500.00	5,009,800.00
05/27/11	11/28/11 05/28/14	5,000,000	1.250%	5,000,000.00	5,009,050.00
06/27/11	06/27/14	10,000,000	1.050%	10,000,000.00	10,032,100.00
07/14/11	07/11/14	5,000,000	1.125%	5,000,000.00	5,024,700.00
08/22/11	08/22/12 08/22/14	5,000,000	0.650%	4,998,500.00	4,993,550.00
08/29/11	08/28/12 08/28/14	5,000,000	0.650%	5,000,000.00	4,998,900.00
09/26/08	08/24/11 08/31/11	11,280,000	0.160%	11,280,000.00	11,280,000.00
10/09/08	08/25/11 08/31/11	2,000,000	2.100%	2,000,000.00	2,000,000.00
08/01/09	08/24/11 08/30/11	6,700,000	0.240%	6,700,000.00	6,700,000.00
07/20/10	08/25/11 08/31/11	7,500,000	0.170%	7,500,000.00	7,500,000.00
08/16/10	08/24/11 08/30/11	10,000,000	0.160%	10,000,000.00	10,000,000.00
06/01/11	08/24/11 08/30/11	5,000,000	0.170%	5,000,000.00	5,000,000.00
11/18/10	08/25/11 08/31/11	4,900,000	0.160%	4,900,000.00	4,900,000.00
12/22/10	08/24/11 08/30/11	7,900,000	0.170%	7,900,000.00	7,900,000.00
05/06/11	08/24/11 08/30/11	9,200,000	0.170%	9,200,000.00	9,200,000.00
04/27/11	08/24/11 08/30/11	9,600,000	0.190%	9,600,000.00	9,600,000.00
SUB-TOTAL					\$552,271.69
RESTRICTED CASH (Swap Collateral Deposits)					\$382,732,605
08/01/11	08/01/11 09/01/11	\$8,416,629	0.096%	\$8,416,628.96	8,416,628.96
08/29/11	08/08/11 09/01/11	\$3,800,000	0.096%	\$3,800,000.00	3,800,000.00
SUB-TOTAL					\$12,216,628.96
TOTAL INVESTMENTS					\$395,022,069.32
TOTAL INVESTMENTS					\$394,998,829.20
TOTAL INVESTMENTS					\$395,551,106.90
TOTAL INVESTMENTS					\$393,932,942.22

Investment Portfolio	Real Estate Portfolio (3)	Weighted Avg. Return
Investment Portfolio	Real Estate Portfolio (3)	Weighted Avg. Return
0.46%	10.66%	1.86%
0.49%	10.66%	1.85%
-0.03%		
August		
July		
Change		
\$386,115,000	\$386,115,000	\$386,115,000
\$256,115,000	\$256,115,000	\$256,115,000
\$393,932,942	\$393,932,942	\$393,932,942
154%	154%	154%
183	183	183

(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
 (4) No call Notice
 This Investment Summary Report is in conformity with the 2011 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES
08/31/11

PORTFOLIO \$394,949,234

DATE	TOTAL	%	LAIF	AGENCIES	MUNI	MONEY MARKET SAVINGS & SWEEP	Collateral * Deposit
9/11	\$309,949,234	78.48%	\$222,251,344		74,080,000	1,401,261	\$12,216,629
10/11							
11/11	\$5,000,000	1.27%		5,000,000			
12/11							
1/12							
2/12							
3/12							
4/12							
5/12							
6/12							
7/12							
8/12							
SUB-TOTAL	\$314,949,234	79.74%	\$222,251,344	5,000,000	74,080,000	1,401,261	\$12,216,629
3 Months - 3 YEARS							
9/1/2012 - 9/30/2012							
10/1/2012 - 12/31/2012	\$5,000,000	1.27%		5,000,000			
1/1/2013 - 3/31/2013	\$15,000,000	3.80%		15,000,000			
4/1/2013 - 6/30/2013	\$15,000,000	3.80%		15,000,000			
7/1/2013 - 9/30/2013	\$5,000,000	1.27%		5,000,000			
10/1/2013 - 12/31/2013							
4/1/2014 - 6/30/2014	\$25,000,000	6.33%		25,000,000			
7/1/2014 - 9/30/2014	\$15,000,000	3.80%		15,000,000			
TOTALS	\$394,949,234	100.00%	\$222,251,344	85,000,000	74,080,000	1,401,261	\$12,216,629

% OF PORTFOLIO

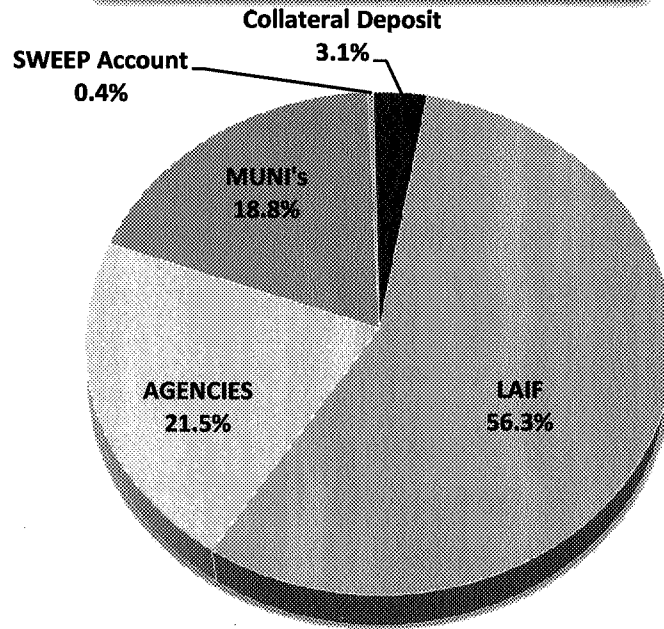
56.27% 21.52% 18.76% 0.35% 3.09%

* Return of posted collateral is dependant on interest rates.

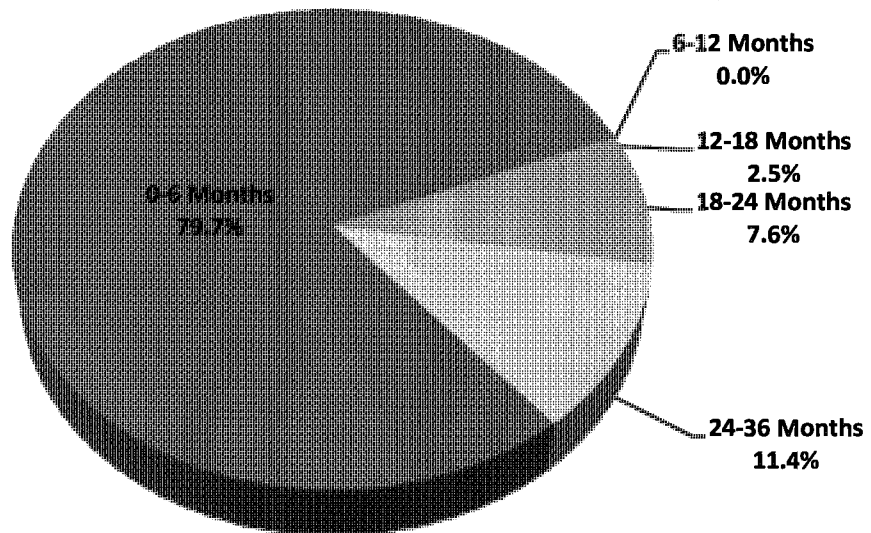
AUGUST 2011 INVESTMENT PORTFOLIO

As of August 31, 2011

Portfolio by Investment Type



Portfolio by Maturities



IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
August 31, 2011

Prior Mo.	Current Mo.	12-Mo Avg
0.19%	0.21%	0.24%

LIBOR Avg %

Current Fiscal Year Active Swaps										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
Fixed Payer Swaps - By Effective Date													
6/4/2006	6/4/2019	7.8	ML	\$ 20,000,000	FXP	LIBOR	6.200%	\$ (96,889)	\$ (106,591)	\$ (203,480)	\$ (4,055,070)	\$ 13,469,949	\$ (6,530,051)
6/4/2006	6/4/2019	7.8	CG	\$ 20,000,000	FXP	LIBOR	6.200%	\$ (96,889)	\$ (106,591)	\$ (203,480)	\$ (4,055,070)	\$ 13,491,751	\$ (6,508,249)
6/17/2006	6/17/2019	7.8	CG	\$ 30,000,000	FXP	LIBOR	6.140%	\$ (143,893)	\$ (158,328)	\$ (302,221)	\$ (6,000,407)	\$ 20,415,700	\$ (9,584,300)
3/10/2007	3/10/2029	17.5	ML	\$ 30,000,000	FXP	LIBOR	5.687%	\$ (132,915)	\$ (146,195)	\$ (279,110)	\$ (5,199,644)	\$ 17,653,071	\$ (12,346,929)
3/10/2007	3/10/2029	17.5	CG	\$ 30,000,000	FXP	LIBOR	5.687%	\$ (132,915)	\$ (146,195)	\$ (279,110)	\$ (5,199,644)	\$ 17,695,507	\$ (12,304,493)
Totals/Weighted Aves		12.3		\$ 130,000,000			5.949%	\$ (603,501)	\$ (663,900)	\$ (1,267,401)	\$ (24,509,836)	\$ 82,725,977	\$ (47,274,023)
Total Current Year Active Swaps				\$ 130,000,000				\$ (603,501)	\$ (663,900)	\$ (1,267,401)	\$ (24,509,836)	\$ 82,725,977	\$ (47,274,023)

Current Fiscal Year Terminated Swaps										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	
Total Current Year Terminated Swaps													
			\$ -				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Current Fiscal Year - Total Swaps										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
Total Current Year Active & Terminated Swaps			\$ 130,000,000				\$ (603,501)	\$ (663,900)	\$ (1,267,401)	\$ (24,509,836)	\$ 82,725,977	\$ (47,274,023)

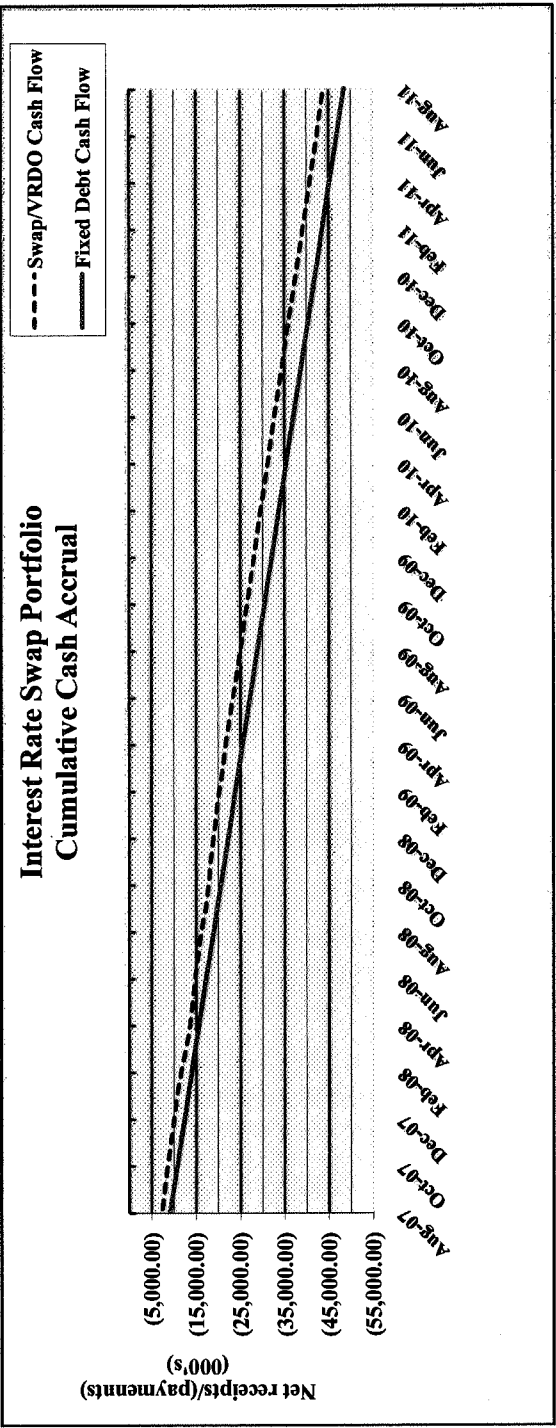


Exhibit "C"

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Account: Checking AP and PR Page: 1
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Amount	Status
322230	01-AUG-11	CSAC EXCESS INSURANCE AUTHORITY	PAY	271,561.00		Negotiable	
322231	03-AUG-11	PRINCIPAL LIFE INSURANCE	DES MOINES	12,498.64		Negotiable	
322232	04-AUG-11	AARP HEALTH CARE OPTIONS		210.92		Negotiable	
322233	04-AUG-11	ADVANCED INDUSTRIAL SERVICES INC		44,334.00		Negotiable	
322234	04-AUG-11	AIRGAS-WEST, INC.		58.81		Negotiable	
322235	04-AUG-11	ALEXANDER CONTRACT SERVICES INC		97,687.79		Negotiable	
322236	04-AUG-11	ANTHEM BLUE CROSS		1,445.60		Negotiable	
322237	04-AUG-11	APPLIED INDUSTRIAL TECHNOLOGIES - CA LLC		3,486.70		Negotiable	
322238	04-AUG-11	ARCADIS U.S., INC.		7,742.31		Negotiable	
322239	04-AUG-11	ASSETPOINT LLC		15,043.00		Negotiable	
322240	04-AUG-11	ASSOCIATED POWER INC		1,817.07		Negotiable	
322241	04-AUG-11	AST CORPORATION		26,777.04		Negotiable	
322242	04-AUG-11	AT&T		1,582.66		Negotiable	
322243	04-AUG-11	AT&T		50.32		Negotiable	
322244	04-AUG-11	AT&T		4,484.16		Negotiable	
322245	04-AUG-11	BANK OF AMERICA MERRILL LYNCH BATTERY		15,223.56		Negotiable	
322246	04-AUG-11	BATTERY SPECIALTIES		635.90		Negotiable	
322247	04-AUG-11	BIOMAGIC INC		15,130.59		Negotiable	
322248	04-AUG-11	BLACK & VEATCH CORPORATION		1,234,092.46		Negotiable	
322249	04-AUG-11	C WELLS PIPELINE MATERIALS INC		15,491.54		Negotiable	
322250	04-AUG-11	CALIFORNIA BARRICADE INC		756.25		Negotiable	
322251	04-AUG-11	COASTAL TRAFFIC SYSTEMS, INC		685.00		Negotiable	
322252	04-AUG-11	COMMERCIAL COATING RESOURCE INC		5,300.00		Negotiable	
322253	04-AUG-11	COMMERCIAL DOOR OF ORANGE COUNTY, INC.		1,151.22		Negotiable	
322254	04-AUG-11	COMFUCOM SYSTEMS, INC.		4,573.11		Negotiable	
322255	04-AUG-11	CONEYBEARE INC		2,666.60		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-AUG-11 To 31-AUG-11
 Account: Checking AP and FR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: NO

Report Date: 01-SEP-2011 15:40
 Page: 2

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
322256	04-AUG-11	CPI-INTERNATIONAL, INC			315.00			Negotiable
322257	04-AUG-11	CSAC EXCESS INSURANCE AUTHORITY			304,543.00			Negotiable
322258	04-AUG-11	CUSTOM LASER WORKS INC			503.11			Negotiable
322259	04-AUG-11	D & H WATER SYSTEMS INC.			656.42			Negotiable
322260	04-AUG-11	DANERU WIRE & CABLE, INC			564.22			Negotiable
322261	04-AUG-11	DJ NELSON & SON POOL SERVICE			2,245.39			Negotiable
322262	04-AUG-11	DRAKE, KENNETH W			1,570.75			Negotiable
322263	04-AUG-11	DUDEK			20,494.18			Negotiable
322264	04-AUG-11	DWYER INSTRUMENTS INC			1,382.69			Negotiable
322265	04-AUG-11	ELECTRABOND			3,701.00			Negotiable
322266	04-AUG-11	EMEDCO			223.80			Negotiable
322267	04-AUG-11	FARRELL & ASSOCIATES			259.15			Negotiable
322268	04-AUG-11	FEDEX			1,235.55			Negotiable
322269	04-AUG-11	FIRST CHOICE SERVICES			1,732.96			Negotiable
322270	04-AUG-11	FIRST HEALTH LIFE AND HEALTH INSURANCE COMPANY			42.60			Negotiable
322271	04-AUG-11	FLSHER SCIENTIFIC COMPANY LLC			1,460.45			Negotiable
322272	04-AUG-11	FUSIONSTORM			21,774.01			Negotiable
322273	04-AUG-11	GODWIN PUMPS OF AMERICA, INC.			2,366.19			Negotiable
322274	04-AUG-11	GOLDEN STATE LABOR COMPLIANCE LLC			8,687.25			Negotiable
322275	04-AUG-11	GRAINGER			497.81			Negotiable
322276	04-AUG-11	HACH COMPANY			3,643.47			Negotiable
322277	04-AUG-11	HALCYON ELECTRIC INC			4,610.00			Negotiable
322278	04-AUG-11	HILL BROTHERS CHEMICAL COMPANY			1,062.48			Negotiable
322279	04-AUG-11	HOME DEPOT USA INC			145.19			Negotiable
322280	04-AUG-11	HUMANA INSURANCE COMPANY			25.20			Negotiable
322281	04-AUG-11	INDUSTRIAL VIDEO AND CONTROL			8,895.00			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-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Account: Checking AP and PR Page: 3
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322282	04-AUG-11	IRVINE PIPE & SUPPLY INC			1,310.44			Negotiable
322283	04-AUG-11	JOHN MICHAEL COVAS			96.50			Negotiable
322284	04-AUG-11	KILL-N-BUGS			650.00			Negotiable
322285	04-AUG-11	TERMITE AND PEST CONTROL SERVICES			4,950.00			Negotiable
322286	04-AUG-11	KIM, SOON TAE			18,300.00			Negotiable
322287	04-AUG-11	KERS CONSTRUCTION SERVICES, INC			38,049.21			Negotiable
322288	04-AUG-11	LAGUNA BEACH COUNTY WATER DISTRICT			12,629.93			Negotiable
322289	04-AUG-11	LEWIS OPERATING CORP			45,374.48			Negotiable
322290	04-AUG-11	MALCOLM PIRNIE INC			13,823.00			Negotiable
322291	04-AUG-11	MARSH RISK & INSURANCE SVCS			2,000.00			Negotiable
322292	04-AUG-11	MBC APPLIED ENVIRONMENTAL SCIENCES			599.19			Negotiable
322293	04-AUG-11	MC MASTER CARR SUPPLY CO			600.00			Negotiable
322294	04-AUG-11	MWH LABORATORIES NATIONAL READY			570.14			Negotiable
322295	04-AUG-11	MIXED CONCRETE CO			60,487.83			Negotiable
322296	04-AUG-11	NEPTUNE TECHNOLOGY NEWPORT BEACH, CITY OF			557.33			Negotiable
322297	04-AUG-11	NORTHWOOD PLACE			50.00			Negotiable
322298	04-AUG-11	OLIN CORPORATION			7,721.70			Negotiable
322299	04-AUG-11	ON ASSIGNMENT LAB SUPPORT			2,240.54			Negotiable
322300	04-AUG-11	ONESOURCE DISTRIBUTORS LLC			3,750.00			Negotiable
322301	04-AUG-11	ORANGE COUNTY SANITATION DISTRICT			1,500.00			Negotiable
322302	04-AUG-11	PACIFIC COAST BOLT CORP			137.57			Negotiable
322303	04-AUG-11	PACIFIC PARTY RENTAL			1,314.49			Negotiable
322304	04-AUG-11	PAUL E BRADLEY INC			4,837.50			Negotiable
322305	04-AUG-11	PAULUS ENGINEERING INC			54,456.72			Negotiable
322306	04-AUG-11	PLUMBERS DEPOT INC.			2,202.79			Negotiable

Payment Document : IRWD CHECK

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All
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 Account: Checking AP and PR Page: 4
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322307	04-AUG-11	PRAXAIR			979.84			Negotiable
		DISTRIBUTION INC						Negotiable
322308	04-AUG-11	PROBOLSKY RESEARCH LLC			24,200.00			Negotiable
322309	04-AUG-11	PRUDENTIAL OVERALL SUPPLY			803.54			Negotiable
322310	04-AUG-11	PURE EFFECT INC			5,340.00			Negotiable
322311	04-AUG-11	RAINBOW NUT & BOLT INC			3,925.33			Negotiable
322312	04-AUG-11	REF CONSULTING			11,957.66			Negotiable
322313	04-AUG-11	REACH EMPLOYEE ASSISTANCE INC			808.60			Negotiable
322314	04-AUG-11	REED, JAMES D			1,956.09			Negotiable
322315	04-AUG-11	RHODIA INC			4,343.06			Negotiable
322316	04-AUG-11	RINCON TRUCK CENTER INC.			12,000.65			Negotiable
322317	04-AUG-11	RJS SOFTWARE SYSTEMS INC			2,945.00			Negotiable
322318	04-AUG-11	ROCKHURST UNIV CONT EDU CTR			979.00			Negotiable
322319	04-AUG-11	RRM DESIGN GROUP			6,222.80			Negotiable
322320	04-AUG-11	SAN DIEGO FLUID SYSTEM TECH			66.75			Negotiable
322321	04-AUG-11	SANDERS PAVING INC			13,850.00			Negotiable
322322	04-AUG-11	SHAMROCK SUPPLY CO INC			178.76			Negotiable
322323	04-AUG-11	SOUTH COAST WATER			151.66			Negotiable
322324	04-AUG-11	SOUTHERN CALIFORNIA EDISON COMPANY			380,315.24			Negotiable
322325	04-AUG-11	SUPERMEDIA LLC			69.75			Negotiable
322326	04-AUG-11	TESTAMERICA LABORATORIES, INC			1,388.40			Negotiable
322327	04-AUG-11	TETRA TECH, INC			16,387.50			Negotiable
322328	04-AUG-11	THE GAS COMPANY			2,346.58			Negotiable
322329	04-AUG-11	ULTRA SCIENTIFIC			1,244.78			Negotiable
322330	04-AUG-11	UNIVERSAL FILTRATION & PUMPING SOLUTIONS INC			1,046.88			Negotiable
322331	04-AUG-11	US BANK NAT'L ASSOC N.DAKOTA			1,250.00			Negotiable
322332	04-AUG-11	VERIZON CALIFORNIA INC			209.75			Negotiable
322333	04-AUG-11	VILLA PARK LANDSCAPE			1,952.50			Negotiable

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

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 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								
322334	04-AUG-11	04-AUG-11	VPSI INC		8,388.00			Negotiable
322335	04-AUG-11	04-AUG-11	WALTERS WHOLESALE ELECTRIC		89.32			Negotiable
322336	04-AUG-11	04-AUG-11	WASTE MANAGEMENT OF ORANGE COUNTY		1,947.38			Negotiable
322337	04-AUG-11	04-AUG-11	MAXIE'S ENTERPRISES, INC		844.10			Negotiable
322338	04-AUG-11	04-AUG-11	WECK LABORATORIES INC		120.00			Negotiable
322339	04-AUG-11	04-AUG-11	WEST COAST SAFETY SUPPLY INC		877.47			Negotiable
322340	04-AUG-11	04-AUG-11	ZEE MEDICAL SERVICE CO		669.69			Negotiable
322341	04-AUG-11	04-AUG-11	AMERICAN MESSAGING SERVICES LLC		286.70			Negotiable
322342	04-AUG-11	04-AUG-11	APPLIED SPECIATION AND CONSULTING, LLC		2,000.00			Negotiable
322343	04-AUG-11	04-AUG-11	BLACK & VEATCH CORPORATION		291,049.06			Negotiable
322344	04-AUG-11	04-AUG-11	C WELLS PIPELINE MATERIALS INC		20,224.68			Negotiable
322345	04-AUG-11	04-AUG-11	CLEARINGHOUSE ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		574.16			Negotiable
322346	04-AUG-11	04-AUG-11	ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		8,971.00			Negotiable
322347	04-AUG-11	04-AUG-11	FIDELITY INVESTMENTS		440.00			Negotiable
322348	04-AUG-11	04-AUG-11	FRANCHISE TAX BOARD		1,467.44			Negotiable
322349	04-AUG-11	04-AUG-11	GLOBALSTAR INC		185.05			Negotiable
322350	04-AUG-11	04-AUG-11	HDR ENGINEERING INC		25,749.34			Negotiable
322351	04-AUG-11	04-AUG-11	HILL BROTHERS CHEMICAL COMPANY		7,492.35			Negotiable
322352	04-AUG-11	04-AUG-11	HOME DEPOT USA INC		760.72			Negotiable
322353	04-AUG-11	04-AUG-11	INTERNAL REVENUE SERVICE		25.00			Negotiable
322354	04-AUG-11	04-AUG-11	LEDBETTER, JAY		655.33			Negotiable
322355	04-AUG-11	04-AUG-11	MARKET-THINK LLC		3,700.00			Negotiable
322356	04-AUG-11	04-AUG-11	MARSH RISK & INSURANCE SVCS		164,876.75			Negotiable
322357	04-AUG-11	04-AUG-11	MARVIN GARDENS LLC		2,593.70			Negotiable
322358	04-AUG-11	04-AUG-11	MBC APPLIED ENVIRONMENTAL SCIENCES		1,000.00			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-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
322359	04-AUG-11	04-AUG-11	NMG GEOTECHNICAL INC		2,012.00			Negotiable
322360	04-AUG-11	04-AUG-11	MORITSU AMERICA CORPORATION		150.00			Negotiable
322361	04-AUG-11	04-AUG-11	OLSON HAGEL FISHBURN, LLP		24.00			Negotiable
322362	04-AUG-11	04-AUG-11	ORDONEZ, CYNTHIA MARIE		638.50			Negotiable
322363	04-AUG-11	04-AUG-11	PACIFIC BUILDING CARE INC		240.00			Negotiable
322364	04-AUG-11	04-AUG-11	PERS LONG TERM CARE		1,885.48			Negotiable
322365	04-AUG-11	04-AUG-11	PTI SAND & GRAVEL INC		3,342.87			Negotiable
322366	04-AUG-11	04-AUG-11	RAINEOW DISPOSAL CO INC		459.27			Negotiable
322367	04-AUG-11	04-AUG-11	SEAL ANALYTICAL INC		9,800.00			Negotiable
322368	04-AUG-11	04-AUG-11	THE FENCE GUY		648.00			Negotiable
322369	04-AUG-11	04-AUG-11	TOXGUARD FLUID TECHNOLOGIES		478.11			Negotiable
322370	04-AUG-11	04-AUG-11	US PEROXIDE LLC		6,877.40			Negotiable
322371	04-AUG-11	04-AUG-11	WILLIAMS, TWILA		788.50			Negotiable
322372	11-AUG-11	11-AUG-11	ACTION ELECTRIC CORP		319.03			Negotiable
322373	11-AUG-11	11-AUG-11	ACWA HEALTH BENEFITS AUTHORITY		30,698.72			Negotiable
322374	11-AUG-11	11-AUG-11	AFFORDABLE PIPELINE SERVICES		5,800.00			Negotiable
322375	11-AUG-11	11-AUG-11	AGILENT TECHNOLOGIES, INC.		2,177.63			Negotiable
322376	11-AUG-11	11-AUG-11	AMERICAN CONSTRUCTION AND SUPPLY INC		109,594.13			Negotiable
322377	11-AUG-11	11-AUG-11	AMPE, JEREMY B		42.85			Negotiable
322378	11-AUG-11	11-AUG-11	APPLIED INDUSTRIAL TECHNOLOGIES - CA LLC		258.18			Negotiable
322379	11-AUG-11	11-AUG-11	AT&T		1,852.23			Negotiable
322380	11-AUG-11	11-AUG-11	AYRES HOTEL AND SUITES (DBA)		6,326.40			Negotiable
322381	11-AUG-11	11-AUG-11	BANK OF NEW YORK MELLON TRUST COMPANY NA		1,466.00			Negotiable
322382	11-AUG-11	11-AUG-11	BAY SECURITY		1,494.00			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-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322383		11-AUG-11	BECKMAN COULTER INC		1,341.00			Negotiable
322384		11-AUG-11	BESST INC		33,210.00			Negotiable
322385		11-AUG-11	BILL'S SWEEPING SERVICE INC		1,230.00			Negotiable
322386		11-AUG-11	BIOMAGIC INC		3,025.62			Negotiable
322387		11-AUG-11	BORCHARD SURVEYING & MAPPING, INC.		24,030.00			Negotiable
322388		11-AUG-11	C WELLS PIPELINE MATERIALS INC		2,650.65			Negotiable
322389		11-AUG-11	CAL WATER PURIFICATION		80.00			Negotiable
322390		11-AUG-11	CALIFORNIA BARRICADE INC		650.00			Negotiable
322391		11-AUG-11	CANON FINANCIAL SERVICES INC		7,385.03			Negotiable
322392		11-AUG-11	CAPTIVE AUDIENCE MARKETING INC.		85.12			Negotiable
322393		11-AUG-11	CARTER, FAYE		0.43			Negotiable
322394		11-AUG-11	CDW GOVERNMENT LLC		1,144.19			Negotiable
322395		11-AUG-11	CESPEDES, CLAUDIA		28.45			Negotiable
322396		11-AUG-11	COASTAL IGNITION & CONTROLS, INC		2,710.08			Negotiable
322397		11-AUG-11	CONDITION MONITORING SERVICES INC		8,335.00			Negotiable
322398		11-AUG-11	CONEYBEARE INC		1,895.04			Negotiable
322399		11-AUG-11	CONSOLIDATED CONTRACTING SERV		1,506.95			Negotiable
322400		11-AUG-11	CORRPRO COMPANIES INC		1,830.00			Negotiable
322401		11-AUG-11	CPS ELECTRONICS AND CONSULTING		1,519.51			Negotiable
322402		11-AUG-11	CR & R INCORPORATED		11.98			Negotiable
322403		11-AUG-11	D & G SIGNS		589.98			Negotiable
322404		11-AUG-11	DCSE INC		4,425.00			Negotiable
322405		11-AUG-11	DLTAV SYSTEMS ENGINEERING INC		68,318.03			Negotiable
322406		11-AUG-11	DRAEGER SAFETY INC		5,817.66			Negotiable
322407		11-AUG-11	ECOLGY CONTROL INDUSTRIES		3,569.56			Negotiable
322408		11-AUG-11	ELECTRABOND		402.00			Negotiable
322409		11-AUG-11	ELECTRICAL SYSTEMS ENGINEERING		4,200.00			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Amount	Status
322410		11-AUG-11	ENVIRON INTERNATIONAL CORP.		2,116.82		Negotiable
322411		11-AUG-11	ENVIRONMENTAL EXPRESS INC		4,529.01		Negotiable
322412		11-AUG-11	ESA PWA		18,839.95		Negotiable
322413		11-AUG-11	EXPRESSAIR		70.00		Negotiable
322414		11-AUG-11	FEDEX		23.59		Negotiable
322415		11-AUG-11	FERGUSON WATERWORKS		3,228.08		Negotiable
322416		11-AUG-11	FIDELITY SECURITY LIFE INSURANCE COMPANY		5,728.84		Negotiable
322417		11-AUG-11	FIRST CHOICE SERVICES		298.02		Negotiable
322418		11-AUG-11	FIRST DENTAL		27.07		Negotiable
322419		11-AUG-11	FISERV		10,579.88		Negotiable
322420		11-AUG-11	FISHER SCIENTIFIC COMPANY LLC		1,115.28		Negotiable
322421		11-AUG-11	Flatiron West, Inc.		395,077.81		Negotiable
322422		11-AUG-11	GANAHL LUMBER CO.		3,584.84		Negotiable
322423		11-AUG-11	GODWIN PUMPS OF AMERICA, INC.		4,988.83		Negotiable
322424		11-AUG-11	GOLDEN STATE LABOR COMPLIANCE LLC		6,996.00		Negotiable
322425		11-AUG-11	GRAINGER		6,378.86		Negotiable
322426		11-AUG-11	HACH COMPANY		1,834.04		Negotiable
322427		11-AUG-11	HALL, PRENTISS		44.45		Negotiable
322428		11-AUG-11	HARDY & HARPER INC		858.75		Negotiable
322429		11-AUG-11	HARMSWORTH ASSOCIATES		2,200.00		Negotiable
322430		11-AUG-11	HDR ENGINEERING INC		4,029.87		Negotiable
322431		11-AUG-11	HILL BROTHERS CHEMICAL COMPANY		944.82		Negotiable
322432		11-AUG-11	HOME DEPOT USA INC		222.75		Negotiable
322433		11-AUG-11	IDEXX DISTRIBUTION, INC		727.31		Negotiable
322434		11-AUG-11	II FUELS INC		28,459.35		Negotiable
322435		11-AUG-11	INDUSTRIAL NETWORKING		4,713.77		Negotiable
322436		11-AUG-11	INDUSTRIAL VALVE & AUTOMATION		2,426.98		Negotiable
322437		11-AUG-11	INVITROGEN CORPORATION		285.44		Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322438		11-AUG-11	IRVINE PIPE & SUPPLY INC		9,116.36			Negotiable
322439		11-AUG-11	IRVINE UNIFIED SCHOOL DISTRICT		100.00			Negotiable
322440		11-AUG-11	IRVINE UNIFIED SCHOOL DISTRICT		100.00			Negotiable
322441		11-AUG-11	IRVINE UNIFIED SCHOOL DISTRICT		200.00			Negotiable
322442		11-AUG-11	IRVINE UNIFIED SCHOOL DISTRICT		100.00			Negotiable
322443		11-AUG-11	IRWD-PETTY CASH CUSTODIAN		1,405.28			Negotiable
322444		11-AUG-11	JCI JONES CHEMICALS INC		2,807.75			Negotiable
322445		11-AUG-11	JOHN DEERE LANDSCAPES INC		414.84			Negotiable
322446		11-AUG-11	JOHN G. ALEVIOS D.O. INC.		135.00			Negotiable
322447		11-AUG-11	JONES & STOKES ASSOCIATES, INC		5,067.87			Negotiable
322448		11-AUG-11	KENNEDY/JENKS CONSULTANTS INC		111,385.98			Negotiable
322449		11-AUG-11	KILL-N-BUGS TERMITES AND PEST CONTROL SERVICES		875.00			Negotiable
322450		11-AUG-11	KIM, GKEE		55.22			Negotiable
322451		11-AUG-11	LEE, KYUNG		39.86			Negotiable
322452		11-AUG-11	LESKO, CHRIS		56.00			Negotiable
322453		11-AUG-11	LUBRICATION ENGINEERS, INC.		3,641.73			Negotiable
322454		11-AUG-11	MALCOLM FIRNIE INC		113,322.65			Negotiable
322455		11-AUG-11	MALCOLM FIRNIE INC		2,023.23			Negotiable
322456		11-AUG-11	MASUDA, YOSHIKO		69.39			Negotiable
322457		11-AUG-11	MC MASTER CARR SUPPLY CO		1,269.80			Negotiable
322458		11-AUG-11	METTLER-TOLEDO INC		872.50			Negotiable
322459		11-AUG-11	MID-WEST ASSOCIATES INC		2,828.84			Negotiable
322460		11-AUG-11	MOODY'S INVESTORS SERVICE INC		9,500.00			Negotiable
322461		11-AUG-11	MWH LABORATORIES		2,000.00			Negotiable
322462		11-AUG-11	NATIONAL READY MIXED CONCRETE CO		1,942.23			Negotiable
322463		11-AUG-11	NCL OF WISCONSIN INC		57.89			Negotiable

Payment Document : IRWD CHECK

IRWD Ledger
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 Account: Checking AP and PR Page: 10
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322464	11-AUG-11	NEWPORT BEACH, CITY OF			698.19			Negotiable
322465	11-AUG-11	NINYO & MOORE			18,349.25			Negotiable
322466	11-AUG-11	NWG GEOTECHNICAL INC			8,718.80			Negotiable
322467	11-AUG-11	OLIN CORPORATION			23,607.90			Negotiable
322468	11-AUG-11	ONESOURCE DISTRIBUTORS LLC			6,600.89			Negotiable
322469	11-AUG-11	ORANGE COUNTY TREASURER			27,743.11			Negotiable
322470	11-AUG-11	PACIFIC BUILDING CARE INC			10,605.99			Negotiable
322471	11-AUG-11	PERKINELMER HEALTH SCIENCES INC			28,260.65			Negotiable
322472	11-AUG-11	PHILCO CONSTRUCTION INC			226,920.60			Negotiable
322473	11-AUG-11	PRIME CONTROLS COMPANY INC			2,538.32			Negotiable
322474	11-AUG-11	PRINCIPAL LIFE INSURANCE			12,696.04			Negotiable
322475	11-AUG-11	PROCESS PUMP SALES INC			5,447.86			Negotiable
322476	11-AUG-11	PROTECTION ONE ALARM MONITORING INC			235.64			Negotiable
322477	11-AUG-11	PRUDENTIAL OVERALL SUPPLY			372.34			Negotiable
322478	11-AUG-11	QUICKEL PAVING INC			350.00			Negotiable
322479	11-AUG-11	REACH EMPLOYEE ASSISTANCE INC			787.80			Negotiable
322480	11-AUG-11	RESPONSE ENVELOPE, INC			3,541.21			Negotiable
322481	11-AUG-11	RINGCLEAR LLC			129.56			Negotiable
322482	11-AUG-11	RIZOS, NICK			56.00			Negotiable
322483	11-AUG-11	RJS SOFTWARE SYSTEMS INC			1,235.00			Negotiable
322484	11-AUG-11	ROBERTS CONSULTING GROUP, INC.			9,000.00			Negotiable
322485	11-AUG-11	SANDERS PAVING INC			35,560.00			Negotiable
322486	11-AUG-11	SANTA ANA BLUE PRINT			2,648.76			Negotiable
322487	11-AUG-11	SANTA ANA CITY OF			26.57			Negotiable
322488	11-AUG-11	SEAL ANALYTICAL INC			761.25			Negotiable
322489	11-AUG-11	SEQUEL CONTRACTORS, INC.			8,526.23			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Payment Register For 01-AUG-11 To 31-AUG-11 Account: Checking AP and PR Page: 11
 Payment Type: All Display Supplier Address: No Payment Currency: USD (US Dollar)

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
322490		11-AUG-11	SIRIUS COMPUTER SOLUTIONS INC		450.00			Negotiable
322491		11-AUG-11	SMITH, VINCENT		9.36			Negotiable
322492		11-AUG-11	SOUTH COAST WATER		216.66			Negotiable
322493		11-AUG-11	SOUTHERN CALIFORNIA EDISON COMPANY		12,490.75			Negotiable
322494		11-AUG-11	SOUTHERN CALIFORNIA SECURITY CENTER, INC.		45.26			Negotiable
322495		11-AUG-11	SPARKLETT'S		362.29			Negotiable
322496		11-AUG-11	STANTEC CONSULTING SERVICES INC.		3,008.00			Negotiable
322497		11-AUG-11	SUPPERT PRODUCTS SERVICES		425.74			Negotiable
322498		11-AUG-11	SY NIELSON SERVICE INC		770.00			Negotiable
322499		11-AUG-11	TESTAMERICA LABORATORIES, INC		6,393.35			Negotiable
322500		11-AUG-11	TETRA TECH, INC		11,747.19			Negotiable
322501		11-AUG-11	THAO DINH		25.08			Negotiable
322502		11-AUG-11	THE GAS COMPANY		20.07			Negotiable
322503		11-AUG-11	THE IRVINE COMPANY LLC		1,633.28			Negotiable
322504		11-AUG-11	TOWNSEND, RON		4.10			Negotiable
322505		11-AUG-11	TRIPAC MARKETING INC		209.92			Negotiable
322506		11-AUG-11	TRUGREEN LANDCARE LLC		22,722.31			Negotiable
322507		11-AUG-11	ULTRA SCIENTIFIC UNDERGROUND		619.06			Negotiable
322508		11-AUG-11	SERVICE ALERT OF SOUTHERN CALIFORNIA					Negotiable
322509		11-AUG-11	UNITED PARCEL SERVICE INC		217.69			Negotiable
322510		11-AUG-11	UNITED STATES POSTAL SERVICE		97.36			Negotiable
322511		11-AUG-11	US PEROXIDE LLC		1,225.00			Negotiable
322512		11-AUG-11	USA MOBILITY WIRELESS INC		70.72			Negotiable
322513		11-AUG-11	VA CONSULTING, INC		1,922.25			Negotiable
322514		11-AUG-11	WALTERS WHOLESale ELECTRIC		506.55			Negotiable
322515		11-AUG-11	WANG, STEPHEN		24.37			Negotiable

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

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322516		11-AUG-11	WASTE MANAGEMENT OF ORANGE COUNTY		4,834.97			Negotiable
322517		11-AUG-11	WAXIE'S ENTERPRISES, INC		1,448.08			Negotiable
322518		11-AUG-11	WECK LABORATORIES INC		4,100.00			Negotiable
322519		11-AUG-11	WESTERN EXTERMINATOR COMPANY		300.00			Negotiable
322520		11-AUG-11	WOODBRIIDGE LAURELS		355.92			Negotiable
322521		11-AUG-11	Abdel Kilani		116.37			Negotiable
322522		11-AUG-11	Aurelio Fajardo		70.00			Negotiable
322523		11-AUG-11	Bonnie Steward		45.30			Negotiable
322524		11-AUG-11	Carolyn Gerwan		250.00			Negotiable
322525		11-AUG-11	Chris Kinner		81.00			Negotiable
322526		11-AUG-11	Darrin Hall		39.00			Negotiable
322527		11-AUG-11	Didene Martin		60.00			Negotiable
322528		11-AUG-11	Gina Jackson		23.12			Negotiable
322529		11-AUG-11	Jeffrey Dugan		409.00			Negotiable
322530		11-AUG-11	Jeffrey Smyth		10.00			Negotiable
322531		11-AUG-11	Jose Martinez		132.00			Negotiable
322532		11-AUG-11	Jose Martinez		335.00			Negotiable
322533		11-AUG-11	Lance Ginezt		123.90			Negotiable
322534		11-AUG-11	Martin Perez		87.39			Negotiable
322535		11-AUG-11	Peter Gonzalez		750.00			Negotiable
322536		11-AUG-11	Soha Vazirnia		13.75			Negotiable
322537		15-AUG-11	ADAMS CO INC, R P		7,240.55			Negotiable
322538		15-AUG-11	ALBERT, ERIC		658.06			Negotiable
322539		15-AUG-11	ALLEN, CATHY		10.42			Negotiable
322540		15-AUG-11	ANTHEM BLUE CROSS		4,037.20			Negotiable
322541		15-AUG-11	Applied Technology Group, Inc.		11,100.15			Negotiable
322542		15-AUG-11	AQUA-METRIC SALES COMPANY		3,401.67			Negotiable
322543		15-AUG-11	AT&T INTERNET SERVICES		825.00			Negotiable
322544		15-AUG-11	CALIFORNIA BARRICADE INC		694.09			Negotiable
322545		15-AUG-11	CALIFORNIA PACIFIC HOMES		494.70			Negotiable
322546		15-AUG-11	CALLAHAN, BENTLEY		42.60			Negotiable
322547		15-AUG-11	CAMPELL, THOMAS J		30.00			Negotiable
322548		15-AUG-11	CHASSAGNE, LAURA		31.80			Negotiable
322549		15-AUG-11	CITY OF TUSTIN		201.11			Negotiable
322550		15-AUG-11	ONEYBEARE INC		1,906.83			Negotiable

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
322551	15-AUG-11	CORRPRO COMPANIES INC			11,530.00			Negotiable
322552	15-AUG-11	COULEND, JEANYVES			24.18			Negotiable
322553	15-AUG-11	D & G SIGNS			167.01			Negotiable
322554	15-AUG-11	DANBRU WIRE & CABLE, INC			824.36			Negotiable
322555	15-AUG-11	DEPARTMENT OF CONSUMER AFFAIRS			125.00			Negotiable
322556	15-AUG-11	ENVIRON INTERNATIONAL CORP.			6,543.26			Negotiable
322557	15-AUG-11	ESA PWA			516.47			Negotiable
322558	15-AUG-11	EXPRESSAIR			193.00			Negotiable
322559	15-AUG-11	FEDEX			556.92			Negotiable
322560	15-AUG-11	FLOREZ, TONY			25.81			Negotiable
322561	15-AUG-11	GANAHL LUMBER CO.			393.07			Negotiable
322562	15-AUG-11	GENTERRA CONSULTANTS INC			2,338.25			Negotiable
322563	15-AUG-11	GRAJNGER			291.93			Negotiable
322564	15-AUG-11	GRAYBAR ELECTRIC COMPANY			2,420.95			Negotiable
322565	15-AUG-11	HAMILTON, KURT			1,332.15			Negotiable
322566	15-AUG-11	HILL BROTHERS CHEMICAL COMPANY			8,337.76			Negotiable
322567	15-AUG-11	HOME DEPOT USA INC			62.34			Negotiable
322568	15-AUG-11	IRVINE PIPE & SUPPLY INC			61.49			Negotiable
322569	15-AUG-11	KANEKO, ROBB			28.69			Negotiable
322570	15-AUG-11	KANG, KRIS			29.12			Negotiable
322571	15-AUG-11	KIANI, MOHAMMAD			213.08			Negotiable
322572	15-AUG-11	KOMAGAI, JUNPEI			22.16			Negotiable
322573	15-AUG-11	LAB SAFETY SUPPLY INC			17.02			Negotiable
322574	15-AUG-11	LCS Technologies, Inc.			5,211.96			Negotiable
322575	15-AUG-11	LEE, SIRGOO			45.81			Negotiable
322576	15-AUG-11	LIN, WEI HUNG			56.26			Negotiable
322577	15-AUG-11	LODOVICO, TINA			122.38			Negotiable
322578	15-AUG-11	LUBRICATION ENGINEERS, INC.			817.10			Negotiable
322579	15-AUG-11	MC MASTER CARR SUPPLY CO			14.76			Negotiable
322580	15-AUG-11	NANGIA, SANJAY			35.90			Negotiable
322581	15-AUG-11	NATIONAL READY MIXED CONCRETE CO			591.14			Negotiable
322582	15-AUG-11	OLIN CORPORATION			15,638.65			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Payment Register For 01-AUG-11 To 31-AUG-11 Account: Checking AP and PR Page: 14
 Payment Type: All Display Supplier Address: No Payment Currency: USD (US Dollar)

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322583		15-AUG-11	PAREKH, KATEN		100.47			Negotiable
322584		15-AUG-11	PERKINELMER HEALTH SCIENCES INC		415.99			Negotiable
322585		15-AUG-11	PRIME CONTROLS COMPANY INC		1,236.03			Negotiable
322586		15-AUG-11	PRUDENTIAL OVERALL SUPPLY		455.86			Negotiable
322587		15-AUG-11	RAM AIR ENGINEERING INC		1,467.38			Negotiable
322588		15-AUG-11	RBF CONSULTING		12,806.50			Negotiable
322589		15-AUG-11	SHAMROCK SUPPLY CO INC		516.39			Negotiable
322590		15-AUG-11	SOUTH COAST WATER DISTRICT		2,335.00			Negotiable
322591		15-AUG-11	SOUTHERN CALIFORNIA EDISON COMPANY		31,459.36			Negotiable
322592		15-AUG-11	SOUTHERN COUNTIES LUBRICANTS LLC		769.39			Negotiable
322593		15-AUG-11	STORK MATERIALS TESTING AND INSPECTION		500.00			Negotiable
322594		15-AUG-11	STRATEGIC DIAGNOSTICS INC		953.98			Negotiable
322595		15-AUG-11	TALLEY INC		1,738.28			Negotiable
322596		15-AUG-11	TESTAMERICA LABORATORIES, INC		105.00			Negotiable
322597		15-AUG-11	THE GAS COMPANY		145.23			Negotiable
322598		15-AUG-11	TIC-RETAIL PROPERTIES		774.24			Negotiable
322599		15-AUG-11	TRAILS4ALL		750.00			Negotiable
322600		15-AUG-11	TRUCPARCO		1,215.55			Negotiable
322601		15-AUG-11	TRUGREEN LANDCARE LLC		144.00			Negotiable
322602		15-AUG-11	US BANK NAT'L ASSOCIATION NORTH DAKOTA		67,703.10			Negotiable
322603		15-AUG-11	VOUTKO, ELICIA		38.08			Negotiable
322604		15-AUG-11	VWR INTERNATIONAL, LLC		1,141.06			Negotiable
322605		15-AUG-11	WOOD BROS., INC.		877,491.45			Negotiable
322606		17-AUG-11	Carl Spangenberg		10.00			Negotiable
322607		17-AUG-11	David Mazzarella		15.40			Negotiable
322608		17-AUG-11	Erika Blaska		11.52			Negotiable
322609		17-AUG-11	Fiona Sanchez		247.78			Negotiable
322610		17-AUG-11	Gustavo Orozco		150.00			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322611		17-AUG-11	Hector Sanchez		66.00			Negotiable
322612		17-AUG-11	Henry Solis		215.00			Negotiable
322613		17-AUG-11	James Hamer		132.00			Negotiable
322614		17-AUG-11	Jose Martinez		99.26			Negotiable
322615		17-AUG-11	Karen Bonecki		405.03			Negotiable
322616		17-AUG-11	Marco Cano		130.49			Negotiable
322617		17-AUG-11	Rex Rajewski		140.05			Negotiable
322618		17-AUG-11	Steve Habiger		190.00			Negotiable
322619		17-AUG-11	Steven Malloy		2,354.92			Negotiable
322620		17-AUG-11	ACCURATE AIR ENGINEERING INC		3,154.09			Negotiable
322621		17-AUG-11	AIRGAS-WEST, INC.		61.38			Negotiable
322622		17-AUG-11	APPLIED SPECIFICATION AND CONSULTING, LLC		750.00			Negotiable
322623		17-AUG-11	AT&T		133.74			Negotiable
322624		17-AUG-11	AT&T		4,617.29			Negotiable
322625		17-AUG-11	BELL PIPE & SUPPLY CO		506.88			Negotiable
322626		17-AUG-11	RIOMAGIC INC		6,591.07			Negotiable
322627		17-AUG-11	BOWIE, ARNISON, WILES & GIANNONE		63,784.63			Negotiable
322628		17-AUG-11	BRENNTAG PACIFIC INC		14,029.05			Negotiable
322629		17-AUG-11	BUSSELL, SANDRA		37.79			Negotiable
322630		17-AUG-11	CALIFORNIA BARRICADE INC		455.00			Negotiable
322631		17-AUG-11	CALIFORNIA COMPLIANCE SCHOOL		508.50			Negotiable
322632		17-AUG-11	CDM GOVERNMENT LLC		1,650.00			Negotiable
322633		17-AUG-11	CH2M HILL, INC		40,227.16			Negotiable
322634		17-AUG-11	CITY OF TUSTIN		174.80			Negotiable
322635		17-AUG-11	CLARK, JOHN COMMERCIAL		42.73			Negotiable
322636		17-AUG-11	CLEANING SYSTEMS INC		10,845.99			Negotiable
322637		17-AUG-11	CONYBEARE INC		102.00			Negotiable
322638		17-AUG-11	CR & R INCORPORATED		11.98			Negotiable
322639		17-AUG-11	CRAIG DAVIS		872.66			Negotiable
322640		17-AUG-11	CS-AMSCO		3,580.84			Negotiable
322641		17-AUG-11	DELL MARKETING LP		9,296.00			Negotiable
322642		17-AUG-11	DIA, LIN		56.13			Negotiable
322643		17-AUG-11	DIONEX CORPORATION		11,092.96			Negotiable
322644		17-AUG-11	DLT&V SYSTEMS ENGINEERING INC		94,374.07			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322645	17-AUG-11	DOYLE, MARY			26.56			Negotiable
322646	17-AUG-11	DRARGER SAFETY INC			205.38			Negotiable
322647	17-AUG-11	DUDEK			13,844.69			Negotiable
322648	17-AUG-11	DWYER INSTRUMENTS INC			2,750.19			Negotiable
322649	17-AUG-11	EAST ORANGE COUNTY WATER DISTRICT			50,011.15			Negotiable
322650	17-AUG-11	EMERY, SARAH			35.39			Negotiable
322651	17-AUG-11	FARRELL & ASSOCIATES			86.25			Negotiable
322652	17-AUG-11	FARWEST CORROSION CONTROL CO			853.27			Negotiable
322653	17-AUG-11	FERGUSON			2,964.63			Negotiable
322654	17-AUG-11	FISHER SCIENTIFIC COMPANY LLC			662.55			Negotiable
322655	17-AUG-11	FRANK, ROBERT			134.68			Negotiable
322656	17-AUG-11	GOVERNMENT FINANCE OFFICERS ASSOCIATION			430.00			Negotiable
322657	17-AUG-11	GRAINGER			398.32			Negotiable
322658	17-AUG-11	HOME DEPOT USA INC			26.91			Negotiable
322659	17-AUG-11	INDUSTRIAL VALVE & AUTOMATION			26,460.87			Negotiable
322660	17-AUG-11	IRON MOUNTAIN INFORMATION MANAGEMENT INC			1,617.02			Negotiable
322661	17-AUG-11	IRVINE PIPE & SUPPLY INC			9,128.63			Negotiable
322662	17-AUG-11	JANG, EUN YOUNG			129.56			Negotiable
322663	17-AUG-11	KIANNASKR, MOHAMMAD			165.41			Negotiable
322664	17-AUG-11	LEWIS OPERATING CORP			1,900.00			Negotiable
322665	17-AUG-11	LOB, TROY			50.93			Negotiable
322666	17-AUG-11	MAK, CHI FAI			33.22			Negotiable
322667	17-AUG-11	MELCHERT, GUSTAVO			39.28			Negotiable
322668	17-AUG-11	MERCHANTS LANDSCAPE SERVICES INC			2,386.54			Negotiable
322669	17-AUG-11	MOMOT, MARK			38.34			Negotiable
322670	17-AUG-11	MORRILL, DIANNA			332.31			Negotiable
322671	17-AUG-11	NATIONAL READY MIXED CONCRETE CO			968.67			Negotiable
322672	17-AUG-11	OLIN CORPORATION			11,805.54			Negotiable
322673	17-AUG-11	ON ASSIGNMENT LAB SUPPORT			1,244.90			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles
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 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
322674		17-AUG-11	ONESOURCE		113.89			Negotiable
322675		17-AUG-11	DISTRIBUTORS LLC					Negotiable
322676		17-AUG-11	ORANGE COUNTY AUTO PARTS CO		117.06			Negotiable
322677		17-AUG-11	ORANGE COUNTY SANITATION DISTRICT		110.00			Voided
322678		17-AUG-11	ORANGE COUNTY TREASURER		167.00			Negotiable
322679		17-AUG-11	PACIFIC GAS AND ELECTRIC COMPANY		37.21			Negotiable
322680		17-AUG-11	PAUL, PENNY PRUDENTIAL OVERALL SUPPLY		1.21			Negotiable
322681		17-AUG-11	PSB THE MARKETING SUPERSOURCE		30.31			Negotiable
322682		17-AUG-11	FTI SAND & GRAVEL INC		4,861.35			Negotiable
322683		17-AUG-11	RAM AIR ENGINEERING INC		501.31			Negotiable
322684		17-AUG-11	REF CONSULTING		2,871.70			Negotiable
322685		17-AUG-11	RITWAY AUTO PAINT		26,830.74			Negotiable
322686		17-AUG-11	SIGMA-ALDRICH INC		7,359.88			Negotiable
322687		17-AUG-11	SIRIUS COMPUTER SOLUTIONS INC		276.61			Negotiable
322688		17-AUG-11	SMITH, GREGORY		60,139.47			Negotiable
322689		17-AUG-11	SOUTH COAST WATER		159.62			Negotiable
322690		17-AUG-11	SOUTHERN CALIFORNIA EDISON COMPANY		40.00			Negotiable
322691		17-AUG-11	STATE INDUSTRIAL PRODUCTS		204,442.84			Negotiable
322692		17-AUG-11	TAYLOR MORRISON		717.95			Negotiable
322693		17-AUG-11	TESTAMERICA LABORATORIES, INC		261.60			Negotiable
322694		17-AUG-11	THE GAS COMPANY		600.00			Negotiable
322695		17-AUG-11	TRIPAC MARKETING INC		286.59			Negotiable
322696		17-AUG-11	UNIVERSAL FILTRATION & PUMPING SOLUTIONS INC		80.20			Negotiable
322697		17-AUG-11	US PEROXIDE LLC		1,904.48			Negotiable
322698		17-AUG-11	VERIZON CALIFORNIA INC		13,583.55			Negotiable
					37.42			Negotiable

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

Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Account: Checking AP and PR Page: 18
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Cleared Payment Amount	Cleared Amount	Status
322699		17-AUG-11	VONDRICK, CARL		17.00		Negotiable
322700		17-AUG-11	WESTERN WEATHER GROUP INC		6,811.06		Negotiable
322701		17-AUG-11	XU, ANNIE		12.83		Negotiable
322702		17-AUG-11	YAU, SAMMY		44.76		Negotiable
322703		17-AUG-11	ZWARKA, TERRY		68.42		Negotiable
322704		18-AUG-11	AIRGAS-WEST, INC.		378.90		Negotiable
322705		18-AUG-11	BAKERSFIELD WELL & PUMP CO		68,179.50		Negotiable
322706		18-AUG-11	BANK OF AMERICA		19,946.07		Negotiable
322707		18-AUG-11	BIOMAGIC INC		630.34		Negotiable
322708		18-AUG-11	BORGEN HEAVY EQUIPMENT REPAIR,		5,824.13		Negotiable
322709		18-AUG-11	CALIFORNIA BARRICADE INC		910.00		Negotiable
322710		18-AUG-11	CONEYBEARE INC		12,102.30		Negotiable
322711		18-AUG-11	DISCOVERY SCIENCE CENTER		52,377.00		Negotiable
322712		18-AUG-11	EVANS-HYDRO INC		52,611.10		Negotiable
322713		18-AUG-11	GATEWAY PACIFIC CONTRACTORS, INC.		559,291.00		Negotiable
322714		18-AUG-11	GATEWAY PACIFIC		62,143.45		Negotiable
322715		18-AUG-11	CONTRACTORS, INC. GODWIN PUMPS OF AMERICA, INC.		2,366.19		Negotiable
322716		18-AUG-11	GOOGLE INC.		1,057.92		Negotiable
322717		18-AUG-11	HALCYON ELECTRIC INC		5,090.00		Negotiable
322718		18-AUG-11	KEY EQUIPMENT FINANCE		7,982.74		Negotiable
322719		18-AUG-11	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		1,490.00		Negotiable
322720		18-AUG-11	NATIONAL READY MIXED CONCRETE CO		2,164.25		Negotiable
322721		18-AUG-11	OLIN CORPORATION		3,886.33		Negotiable
322722		18-AUG-11	ON ASSIGNMENT LAB SUPPORT		1,244.60		Negotiable
322723		18-AUG-11	PSB THE MARKETING SUPERSOURCE		2,263.75		Negotiable
322724		18-AUG-11	RJS SOFTWARE SYSTEMS INC		10,450.00		Negotiable
322725		18-AUG-11	SEMA CONSTRUCTION INC		186,679.34		Negotiable
322726		18-AUG-11	SIRIUS COMPUTER SOLUTIONS INC		10,252.50		Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Payment Currency: USD (US Dollar) Page: 19
 Payment Type: All Display Supplier Address: NO

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
322727		18-AUG-11	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		1,969.20			Negotiable
322728		18-AUG-11	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		112.31			Negotiable
322729		18-AUG-11	THE GAS COMPANY		4,236.98			Negotiable
322730		18-AUG-11	VOIT REAL ESTATE SERVICES		44,002.93			Voided
322731		18-AUG-11	WESTERN EXTERMINATOR COMPANY		7,669.50			Negotiable
322732		18-AUG-11	ZENON ENVIRONMENTAL CORPORATION		54,375.00			Negotiable
322733		22-AUG-11	PAULUS ENGINEERINGPAY INC		547,530.50			Negotiable
322734		22-AUG-11	ACCURATE AIR ENGINEERING INC		530.60			Negotiable
322735		22-AUG-11	AFLAC		5,938.44			Negotiable
322736		22-AUG-11	AIRGAS-WEST, INC.		2,643.95			Negotiable
322737		22-AUG-11	ARCADIS U.S., INC.		18,877.56			Negotiable
322738		22-AUG-11	AT&T		47.01			Negotiable
322739		22-AUG-11	AT&T		73.64			Negotiable
322740		22-AUG-11	BELL PIPE & SUPPLY CO		944.03			Negotiable
322741		22-AUG-11	BORGEN HEAVY EQUIPMENT REPAIR,		2,914.44			Negotiable
322742		22-AUG-11	BRITHINEE ELECTRIC		3,592.15			Negotiable
322743		22-AUG-11	BUSH & ASSOCIATES INC		11,720.00			Negotiable
322744		22-AUG-11	CLEARINGHOUSE		574.16			Negotiable
322745		22-AUG-11	COLONIAL LIFE & ACCIDENT INSURANCE CO.		2,389.24			Negotiable
322746		22-AUG-11	CONEXBEARE INC		1,684.48			Negotiable
322747		22-AUG-11	DCSE INC		4,875.00			Negotiable
322748		22-AUG-11	DEPARTMENT OF WATER RESOURCES		55,962.00			Negotiable
322749		22-AUG-11	DIONEX CORPORATION		1,262.11			Negotiable
322750		22-AUG-11	ELECTRABOND		450.00			Negotiable
322751		22-AUG-11	EVERGREEN OIL INC		105.00			Negotiable
322752		22-AUG-11	FIDELITY INVESTMENTS		440.00			Negotiable
322753		22-AUG-11	FISHER SCIENTIFIC COMPANY LLC		1,560.14			Negotiable

Payment Document : IRWD CHECK

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

Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322754	22-AUG-11	FLEET SOLUTIONS LLC			3,997.25			Negotiable
322755	22-AUG-11	FRANCHISE TAX BOARD			1,467.44			Negotiable
322756	22-AUG-11	FULL SPECTRUM ANALYTICS, INC.			26,616.69			Negotiable
322757	22-AUG-11	GAMMEL LUMBER CO.			41.48			Negotiable
322758	22-AUG-11	GRAYBAR ELECTRIC COMPANY			20,239.29			Negotiable
322759	22-AUG-11	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY			201.20			Negotiable
322760	22-AUG-11	HILL BROTHERS CHEMICAL COMPANY			2,427.50			Negotiable
322761	22-AUG-11	INDUSTRIAL METAL SUPPLY CO			76.50			Negotiable
322762	22-AUG-11	INTERNAL REVENUE SERVICE			25.00			Negotiable
322763	22-AUG-11	IRVINE PIPE & SUPPLY INC			6,270.88			Negotiable
322764	22-AUG-11	JOE RHODES MAINT. SERVICE, INC.			1,419.85			Negotiable
322765	22-AUG-11	KEMIRAMONTES, INC.			27,900.00			Negotiable
322766	22-AUG-11	LEU, ROBIN			50.00			Negotiable
322767	22-AUG-11	MC MASTER CARR SUPPLY CO			1,168.90			Negotiable
322768	22-AUG-11	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY			599,600.00			Negotiable
322769	22-AUG-11	NATIONAL READY MIXED CONCRETE CO			342.56			Negotiable
322770	22-AUG-11	ORANGE COUNTY WATER DISTRICT			89,104.40			Negotiable
322771	22-AUG-11	ORDONEZ, CYNTHIA MARIE			638.50			Negotiable
322772	22-AUG-11	PACIFIC COAST BOLT CORP			1,006.92			Negotiable
322773	22-AUG-11	PACIFIC TECHNOLOGIES INC			4,275.00			Negotiable
322774	22-AUG-11	PARKER, AUDREY			50.00			Negotiable
322775	22-AUG-11	PAUL E BRADLEY INC			562.50			Negotiable
322776	22-AUG-11	PRE-PAID LEGAL SERVICES INC			1,784.32			Negotiable
322777	22-AUG-11	PSOMAS			795.24			Negotiable
322778	22-AUG-11	R&B AUTOMATION INC			2,380.59			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Page: 21
 Payment Type: All Display Supplier Address: No Payment Currency: USD (US Dollar)

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322779	22-AUG-11	RAM AIR			1,810.62			Negotiable
322780	22-AUG-11	ENGINEERING INC			931.18			Negotiable
322781	22-AUG-11	SANTA MARGARITA			112.31			Negotiable
322782	22-AUG-11	WATER DISTRICT			4,211.66			Negotiable
322783	22-AUG-11	SOUTH COAST AIR			540.00			Negotiable
322784	22-AUG-11	QUALITY MANAGEMENT			295.00			Negotiable
322785	22-AUG-11	DISTRICT			35,578.87			Negotiable
322786	22-AUG-11	STANTEC CONSULTING			16,803.45			Negotiable
322787	22-AUG-11	SERVICES INC.			12,133.91			Negotiable
322788	22-AUG-11	T AND S LARSEN			8,424.31			Negotiable
322789	22-AUG-11	MAINTENANCE			4,800.00			Negotiable
322790	22-AUG-11	T L ASHFORD ASSOC			3,045.00			Negotiable
322791	22-AUG-11	TETRA TECH, INC			1,315.00			Negotiable
322792	22-AUG-11	TROPICAL PLAZA			788.50			Negotiable
322793	23-AUG-11	NURSERY INC			1,445.60			Negotiable
322794	23-AUG-11	VA CONSULTING, INC			5,173.89			Negotiable
322795	23-AUG-11	VPSI INC			1,178.32			Negotiable
322796	23-AUG-11	WATSON MECHANICAL, INC.			4,213.84			Negotiable
322797	23-AUG-11	WECK LABORATORIES INC			1,124.00			Negotiable
322798	23-AUG-11	WEST & SYLVESTER ELECTRICAL			12,369.71			Negotiable
322799	23-AUG-11	WILLIAMS, TWYLA			800.00			Negotiable
322800	23-AUG-11	ANTHEM BLUE CROSS			1,258.98			Negotiable
322801	23-AUG-11	APPLIED INDUSTRIAL TECHNOLOGIES - CA			1,114.80			Negotiable
322802	23-AUG-11	LLC			155.09			Negotiable
322803	23-AUG-11	AT&T			539.51			Negotiable
322804	23-AUG-11	AT&T INTERNET SERVICES			357.18			Negotiable
322805	23-AUG-11	C WELLS PIPELINE MATERIALS INC			161.63			Negotiable
322806	23-AUG-11	GRAINGER			39.91			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-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322807		23-AUG-11	HILL BROTHERS CHEMICAL COMPANY		1,596.76			Negotiable
322808		23-AUG-11	HOME DEPOT USA INC		323.03			Negotiable
322809		23-AUG-11	LAGUNA BEACH COUNTY WATER DISTRICT		579.90			Negotiable
322810		23-AUG-11	MSC INDUSTRIAL SUPPLY CO		300.19			Negotiable
322811		23-AUG-11	ORANGE, COUNTY OF		315.00			Negotiable
322812		23-AUG-11	PACIFIC PARTS & CONTROLS INC		995.13			Negotiable
322813		23-AUG-11	PACIFIC TECHNOLOGIES INC		4,275.00			Negotiable
322814		23-AUG-11	SAN DIEGO FLUID SYSTEM TECH		125.57			Negotiable
322815		23-AUG-11	SOUTHERN CALIFORNIA EDISON COMPANY		98,404.14			Negotiable
322816		23-AUG-11	STATE BOARD OF EQUALIZATION		935.00			Negotiable
322817		23-AUG-11	SWAINS ELECTRIC MOTOR SERVICE		1,029.60			Negotiable
322818		23-AUG-11	THE GAS COMPANY		672.32			Negotiable
322819		23-AUG-11	UNITED STATES POST OFFICE		29,250.00			Negotiable
322820		23-AUG-11	VERIZON CALIFORNIA INC		495.72			Negotiable
322821		23-AUG-11	WESTERN EXTERMINATOR COMPANY		595.00			Negotiable
322822		25-AUG-11	Alejandro Coria		78.00			Negotiable
322823		25-AUG-11	Casey Karpan		60.00			Negotiable
322824		25-AUG-11	Charles Boone		13.32			Negotiable
322825		25-AUG-11	Craig Cascelli		208.00			Negotiable
322826		25-AUG-11	David Crowe		111.04			Negotiable
322827		25-AUG-11	David Mazarrella		278.29			Negotiable
322828		25-AUG-11	Kirsten McLaughlin		137.04			Negotiable
322829		25-AUG-11	Mark Gingras		71.00			Negotiable
322830		25-AUG-11	Martin Perez		13.32			Negotiable
322831		25-AUG-11	Mitchell Robinson		150.00			Negotiable
322832		25-AUG-11	Raghavender Joshi		853.33			Negotiable
322833		25-AUG-11	Steven Malloy		25.00			Negotiable
322834		25-AUG-11	William Wesson		154.40			Negotiable
322835		25-AUG-11	A & Y ASPHALT CONTRACTORS INC		2,016.00			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All
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 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								
322836		25-AUG-11	ACTION ELECTRIC CORP		283.74			Negotiable
322837		25-AUG-11	ASHFORD, WALT		594.36			Negotiable
322838		25-AUG-11	AST CORPORATION		7,700.00			Negotiable
322839		25-AUG-11	AT&T		306.30			Negotiable
322840		25-AUG-11	AT&T		22,386.00			Negotiable
322841		25-AUG-11	AT&T		854.20			Negotiable
322842		25-AUG-11	BAKERSFIELD WELL & PUMP CO		628,731.00			Negotiable
322843		25-AUG-11	BDC SPECIAL WASTE		839.40			Negotiable
322844		25-AUG-11	BIOMAGIC INC		1,418.25			Negotiable
322845		25-AUG-11	BROWN, THOMAS		41.23			Negotiable
322846		25-AUG-11	CALIFORNIA BARRICADE INC		830.00			Negotiable
322847		25-AUG-11	CATIC, SELMA		62.56			Negotiable
322848		25-AUG-11	COAST PLUMBING HEATING AND AIR, INC		60.00			Negotiable
322849		25-AUG-11	CONYBEARE INC		4,931.40			Negotiable
322850		25-AUG-11	COTRONEO, FARNAZ		492.74			Negotiable
322851		25-AUG-11	COX COMMUNICATIONS		106.19			Negotiable
322852		25-AUG-11	COX, MARY JANE		23.23			Negotiable
322853		25-AUG-11	CREDENTIAL CHECK CORPORATION		534.00			Negotiable
322854		25-AUG-11	DETECTION INSTRUMENTS CORP		342.14			Negotiable
322855		25-AUG-11	DIFFEE, CHRIS		22.21			Negotiable
322856		25-AUG-11	DRUCK INC, GE SENSING		1,935.98			Negotiable
322857		25-AUG-11	EISEL ENTERPRISES INC		3,944.94			Negotiable
322858		25-AUG-11	ELLINAS MULTI-MEDIA INC		1,003.59			Negotiable
322859		25-AUG-11	EXPRESSAIR		87.00			Negotiable
322860		25-AUG-11	FARRELL & ASSOCIATES		3,315.16			Negotiable
322861		25-AUG-11	FEDEX		991.59			Negotiable
322862		25-AUG-11	FERGUSON WATERWORKS		1,614.04			Negotiable
322863		25-AUG-11	FERGUSON, DAVID		5,679.87			Negotiable
322864		25-AUG-11	FISHER SCIENTIFIC COMPANY LLC		1,222.06			Negotiable
322865		25-AUG-11	GCI CONSTRUCTION, INC.		57,930.36			Negotiable
322866		25-AUG-11	GODWIN PUMPS OF AMERICA, INC.		2,388.15			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-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322867		25-AUG-11	GORDON, MARK		44.18			Negotiable
322868		25-AUG-11	GRAINGER		869.97			Negotiable
322869		25-AUG-11	HACH COMPANY		306.77			Negotiable
322870		25-AUG-11	HAGHIGHI, SHAHRAM		26.46			Negotiable
322871		25-AUG-11	HARVARD COURT APTS		33.63			Negotiable
322872		25-AUG-11	HASLER		394.37			Negotiable
322873		25-AUG-11	HEARTLAND BUSINESS CREDIT CORPORATION		1,330.31			Negotiable
322874		25-AUG-11	HENDRICKSON, MICHAEL		32.38			Negotiable
322875		25-AUG-11	HILL BROTHERS CHEMICAL COMPANY		5,908.48			Negotiable
322876		25-AUG-11	HOME DEPOT USA INC		230.55			Negotiable
322877		25-AUG-11	IBM CORPORATION		675.00			Negotiable
322878		25-AUG-11	IRWD-PETTY CASH CUSTODIAN		1,001.72			Negotiable
322879		25-AUG-11	JIMMY'Z IMAGEZ		250.00			Negotiable
322880		25-AUG-11	JOHN G. ALEVIZOS D.O. INC.		757.46			Negotiable
322881		25-AUG-11	KALTENBACH, BRYAN		27.79			Negotiable
322882		25-AUG-11	KILL-N-BUGS TERMITES AND PEST CONTROL SERVICES		325.00			Negotiable
322883		25-AUG-11	KIM, CHAN		26.27			Negotiable
322884		25-AUG-11	KOCH MEMBRANE SYSTEMS		1,368.00			Negotiable
322885		25-AUG-11	KOLMAN, SEAN		22.60			Negotiable
322886		25-AUG-11	LAGUNA BEACH COUNTY WATER DISTRICT		36,893.58			Negotiable
322887		25-AUG-11	LEATHERWOOD CONSTRUCTION INC		1,120,755.38			Negotiable
322888		25-AUG-11	LEATHERWOOD CONSTRUCTION INC		124,528.38			Negotiable
322889		25-AUG-11	LEONARD CHAIZEZ TREE SERVICE		800.00			Negotiable
322890		25-AUG-11	LONG, JERI		60.78			Negotiable
322891		25-AUG-11	MACAHLIG, RUSSEL		77.98			Negotiable
322892		25-AUG-11	MAOR, OREN		28.08			Negotiable
322893		25-AUG-11	MATRSKY, CRAIG		36.70			Negotiable
322894		25-AUG-11	MCBAIN INSTRUMENTS		550.00			Negotiable
322895		25-AUG-11	MCCLAIN'S FURNITURE INC		3,645.00			Negotiable
322896		25-AUG-11	MCR TECHNOLOGIES INC		414.69			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-AUG-11 To 31-AUG-11
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 Payment Currency: USD (US Dollar)
 Display Supplier Address: NO

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Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322897		25-AUG-11	MERCHANTS LANDSCAPE SERVICES INC		350.00			Negotiable
322898		25-AUG-11	MOUSE GRAPHICS		2,119.49			Negotiable
322899		25-AUG-11	MSC INDUSTRIAL SUPPLY CO		194.82			Negotiable
322900		25-AUG-11	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		1,500.00			Negotiable
322901		25-AUG-11	NEPTUNE TECHNOLOGY		35,672.58			Negotiable
322902		25-AUG-11	NINYO & MOORE		22,340.00			Negotiable
322903		25-AUG-11	OLIN CORPORATION		3,932.52			Negotiable
322904		25-AUG-11	ONESOURCE		1,183.40			Negotiable
322905		25-AUG-11	DISTRIBUTORS LLC ORANGE COUNTY SANITATION DISTRICT		35,700.46			Negotiable
322941		31-AUG-11	ACTION ELECTRIC CORP		2,701.50			Negotiable
322942		31-AUG-11	ACWA HEALTH BENEFITS AUTHORITY		30,698.72			Negotiable
322943		31-AUG-11	ADS LLC		1,936.50			Negotiable
322944		31-AUG-11	APCO GRAPHICS INC		412.36			Negotiable
322945		31-AUG-11	APPLIED TECHNOLOGY GROUP INC		4,983.92			Negotiable
322946		31-AUG-11	AT&T		15.25			Negotiable
322947		31-AUG-11	AT&T		343.78			Negotiable
322948		31-AUG-11	AT&T		51.89			Negotiable
322949		31-AUG-11	AYRES HOTEL AND SUITES (DBA)		395.40			Negotiable
322950		31-AUG-11	B&C DIVING AND CONSTRUCTION		3,800.00			Negotiable
322951		31-AUG-11	BILL'S SWEEPING SERVICE INC		1,265.00			Negotiable
322952		31-AUG-11	BIOMAGIC INC		13,173.24			Negotiable
322953		31-AUG-11	BLACK BOX CORP OF PENNSYLVANIA		700.68			Negotiable
322954		31-AUG-11	BODY THERAPEUTIC PRODUCTS INC		561.39			Negotiable
322955		31-AUG-11	BOUTWELL FAY, LLP		1,295.00			Negotiable
322956		31-AUG-11	BREEN, PATRICK		25.63			Negotiable
322957		31-AUG-11	BRENNTAG PACIFIC INC		6,274.50			Negotiable
322958		31-AUG-11	BUSH & ASSOCIATES INC		10,368.00			Negotiable
322959		31-AUG-11	BUSSELL, SANDRA		27.47			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch: Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Page: 26
 Payment Type: All Payment Currency: USD (US Dollar) Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
322960		31-AUG-11	C WELLS PIPELINE MATERIALS INC		23,577.86			Negotiable
322961		31-AUG-11	CALIFORNIA BARRICADE INC		15,105.90			Negotiable
322962		31-AUG-11	CALIFORNIA MUNICIPAL UTILITIES		9,491.00			Negotiable
322963		31-AUG-11	CALIFORNIA STATE UNIVERSITY, FULLERTON		3,855.00			Negotiable
322964		31-AUG-11	CAMPBELL & LEVINE LLC		860.00			Negotiable
322965		31-AUG-11	CDW GOVERNMENT LLC		127.52			Negotiable
322966		31-AUG-11	CEJA, KIM		31.17			Negotiable
322967		31-AUG-11	CHEM TECH INTERNATIONAL INC		6,261.20			Negotiable
322968		31-AUG-11	CHEN HSO, TZUYEN		38.12			Negotiable
322969		31-AUG-11	CHENG, CALVIN		38.12			Negotiable
322970		31-AUG-11	COAST PLUMBING HEATING AND AIR, INC		120.00			Negotiable
322971		31-AUG-11	CONYBEARE INC		918.00			Negotiable
322972		31-AUG-11	CORELOGIC INC		12.00			Negotiable
322973		31-AUG-11	COX COMMUNICATIONS CREDENTIAL CHECK CORPORATION		122.52			Negotiable
322974		31-AUG-11	D & H WATER SYSTEMS INC.		100.00			Negotiable
322975		31-AUG-11	DATA CLEAN CORPORATION		3,663.08			Negotiable
322976		31-AUG-11	ESAPWA SOLUTIONS LP		826.25			Negotiable
322977		31-AUG-11	EXTERRAN ENERGY		277.11			Negotiable
322978		31-AUG-11	FEDEX		178.33			Negotiable
322979		31-AUG-11	FERGUSON WATERWORKS		16,530.00			Negotiable
322980		31-AUG-11	FIDELITY SECURITY LIFE INSURANCE COMPANY		20,170.17			Negotiable
322981		31-AUG-11	FISERV		6,338.90			Negotiable
322982		31-AUG-11	FISHER SCIENTIFIC COMPANY LLC		892.28			Negotiable
322983		31-AUG-11			1,524.45			Negotiable
322984		31-AUG-11			5,728.84			Negotiable
322985		31-AUG-11			9,861.80			Negotiable
322986		31-AUG-11			1,758.77			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-AUG-11 To 31-AUG-11
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Report Date: 01-SEP-2011 15:40
 Page: 27

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
322987		31-AUG-11	FLEET SOLUTIONS LLC		461.17			Negotiable
322988		31-AUG-11	FRANK LA PLACA EXTERMINATING INC		175.00			Negotiable
322989		31-AUG-11	FRONTLINE MANAGEMENT INC		2,962.59			Negotiable
322990		31-AUG-11	GANAHL LUMBER CO.		3,365.75			Negotiable
322991		31-AUG-11	GRAINGER		5,604.26			Negotiable
322992		31-AUG-11	H2O INNOVATION USA INC		4,274.20			Negotiable
322993		31-AUG-11	HACH COMPANY		1,168.63			Negotiable
322994		31-AUG-11	HARMSWORTH ASSOCIATES		1,580.00			Negotiable
322995		31-AUG-11	HARPER & ASSOCIATES		1,656.00			Negotiable
322996		31-AUG-11	ENGINEERING INC HILL BROTHERS		1,452.50			Negotiable
322997		31-AUG-11	CHEMICAL COMPANY HOME DEPOT USA INC		1,060.45			Negotiable
322998		31-AUG-11	HUNSAKER & ASSOCIATES	IRVINE	691.87			Negotiable
322999		31-AUG-11	II FUELS INC		30,674.35			Negotiable
323000		31-AUG-11	IRSHAD, ANEKA		19.78			Negotiable
323001		31-AUG-11	IRVINE PIPE & SUPPLY INC		1,002.15			Negotiable
323002		31-AUG-11	KEMP, ROD		30.91			Negotiable
323003		31-AUG-11	KILL-N-BUGS TERMITES AND PEST CONTROL SERVICES		650.00			Negotiable
323004		31-AUG-11	KIME, GRACE		30.51			Negotiable
323005		31-AUG-11	KNIGHT, ADAM		41.04			Negotiable
323006		31-AUG-11	KONECRANES INC		1,900.00			Negotiable
323007		31-AUG-11	LAER PEARCE & ASSOCIATES		2,375.00			Negotiable
323008		31-AUG-11	LAVAVESHKUL, PATRICK		30.06			Negotiable
323009		31-AUG-11	LEE, JOHN		29.27			Negotiable
323010		31-AUG-11	LEWIS OPERATING CORP		2,550.00			Negotiable
323011		31-AUG-11	LOW, VONESSA		29.48			Negotiable
323012		31-AUG-11	LUBRICATION ENGINEERS, INC.		7,389.75			Negotiable
323013		31-AUG-11	MALCOLM PIRNIE INC		2,828.98			Negotiable
323014		31-AUG-11	MANALO, CYRUS		70.17			Negotiable
323015		31-AUG-11	MARCUS, TODD		47.39			Negotiable
323016		31-AUG-11	MARVIN GARDENS LLC		2,593.70			Negotiable

Payment Document : IRWD CHECK

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All
 Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Account: Checking AP and PR Page: 28
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
323017	31-AUG-11		MCKEE, KEVIN		16.26			Negotiable
323018	31-AUG-11		MERCHANTS LANDSCAPE SERVICES INC		1,700.00			Negotiable
323019	31-AUG-11		MOBILE MODULAR MANAGEMENT CORPORATION		1,108.75			Negotiable
323020	31-AUG-11		MUNICIPAL MAINTENANCE EQUIPMENT INC		152.69			Negotiable
323021	31-AUG-11		MURCAL INC		910.55			Negotiable
323022	31-AUG-11		MUTUAL PROPANE		349.27			Negotiable
323023	31-AUG-11		NATIONAL READY MIXED CONCRETE CO		1,000.58			Negotiable
323024	31-AUG-11		NEWPORT BEACH, CITY OF		698.19			Negotiable
323025	31-AUG-11		NEWPORT WINDOW MAINTENANCE INC		2,314.00			Negotiable
323026	31-AUG-11		NINYO & MOORE		36,348.75			Negotiable
323027	31-AUG-11		NMG GEOTECHNICAL INC		12,246.40			Negotiable
323028	31-AUG-11		OLIN CORPORATION		33,098.58			Negotiable
323029	31-AUG-11		ON ASSIGNMENT LAB SUPPORT		3,734.40			Negotiable
323030	31-AUG-11		ONESOURCE DISTRIBUTORS LLC		736.41			Negotiable
323031	31-AUG-11		ORANGE COUNTY FIRE AUTHORITY		309.00			Negotiable
323032	31-AUG-11		ORANGE COUNTY TREASURER		1,344.54			Negotiable
323033	31-AUG-11		ORANGE, COUNTY OF		70.00			Negotiable
323034	31-AUG-11		PACIFIC STRATEGIES		2,500.00			Negotiable
323035	31-AUG-11		PERKIN, OSMAN		48.56			Negotiable
323036	31-AUG-11		PERKINELMER HEALTH SCIENCES INC		27,803.18			Negotiable
323037	31-AUG-11		PINNACLE TOWERS LLC		8.64			Negotiable
323038	31-AUG-11		PRAXAIR		1,239.14			Negotiable
323039	31-AUG-11		DISTRIBUTION INC PRINCIPAL LIFE INSURANCE		12,696.04			Negotiable
323040	31-AUG-11		PRO GROWERS INC		4,864.66			Negotiable
323041	31-AUG-11		PRUDENTIAL OVERALL SUPPLY		578.13			Negotiable
323042	31-AUG-11		PRUDENTIAL OVERALL SUPPLY		474.94			Negotiable

Payment Document : IRWD CHECK

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

Payment Register For 01-AUG-11 To 31-AUG-11
 Account: Checking AP and PR
 Payment Currency: USD (US Dollar)
 Display Supplier Address: NO

Report Date: 01-SEP-2011 15:40
 Page: 29

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
323043		31-AUG-11	PSB THE MARKETING SUPERSOURCE		7,365.89			Negotiable
323044		31-AUG-11	PSOMAS		1,402.50			Negotiable
323045		31-AUG-11	QUALITY ENVIRONMENTAL		206.36			Negotiable
323046		31-AUG-11	R&B AUTOMATION INC		1,258.75			Negotiable
323047		31-AUG-11	RAININ INSTRUMENT LLC		968.82			Negotiable
323048		31-AUG-11	RAPP, DOUGLAS		16.11			Negotiable
323049		31-AUG-11	RBF CONSULTING		61,646.56			Negotiable
323050		31-AUG-11	RONO COMPANY		522.00			Negotiable
323051		31-AUG-11	ROSS, MATTHEW		80.59			Negotiable
323052		31-AUG-11	SADEQ, AHMED		62.54			Negotiable
323053		31-AUG-11	SANDERS PAVING INC		16,306.00			Negotiable
323054		31-AUG-11	SANTA ANA BLUE PRINT		863.63			Negotiable
323055		31-AUG-11	SANTA MARGARITA WATER DISTRICT		23,221.96			Negotiable
323056		31-AUG-11	SANTIAGO AQUEDUCT COMMISSION		21,330.08			Negotiable
323057		31-AUG-11	SARBS-CALIFORNIA WATER		1,500.00			Negotiable
323058		31-AUG-11	SCHAFFNER, JULIE		41.93			Negotiable
323059		31-AUG-11	SCHINDLER ELEVATOR CORPORATION		2,029.92			Negotiable
323060		31-AUG-11	SHAMROCK SUPPLY CO INC		48.70			Negotiable
323061		31-AUG-11	SIRIUS COMPUTER SOLUTIONS INC		1,167.81			Negotiable
323062		31-AUG-11	SOUTHERN CALIFORNIA EDISON COMPANY		344,579.41			Negotiable
323063		31-AUG-11	SOUTHERN COUNTIES LUBRICANTS LLC		1,190.15			Negotiable
323064		31-AUG-11	SPARKLETT'S		211.69			Negotiable
323065		31-AUG-11	SPATIAL WAVE, INC.		4,500.00			Negotiable
323066		31-AUG-11	STANDARD & POOR'S FINANCIAL SERVICES LLC		1,500.00			Negotiable
323067		31-AUG-11	STANTEC CONSULTING SERVICES INC.		6,366.69			Negotiable
323068		31-AUG-11	TELEDYNE ISCO, INC.		229.00			Negotiable
323069		31-AUG-11	TESTAMERICA LABORATORIES, INC		1,228.15			Negotiable
323070		31-AUG-11	THE FURMAN GROUP		10,369.00			Negotiable

Payment Document : IRWD CHECK

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles
 Bank Account Currency: USD (US Dollar)
 Payment Type: All
 Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Account: Checking AP and PR Page: 30
 Payment Currency: USD (US Dollar)
 Display Supplier Address: NO

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
Payment Document : IRWD CHECK								
323071		31-AUG-11	THE GAS COMPANY		3,747.82			Negotiable
323072		31-AUG-11	THE GAS COMPANY		2,895.67			Negotiable
323073		31-AUG-11	TROPICAL PLAZA NURSERY INC		20,006.61			Negotiable
323074		31-AUG-11	TRUCPARCO		6.30			Negotiable
323075		31-AUG-11	TROGREEN LANDCARE LLC		606.62			Negotiable
323076		31-AUG-11	UNLSAN PRODUCTS		824.60			Negotiable
323077		31-AUG-11	UNITED SITE SERVICES OF CALIFORNIA INC		139.24			Negotiable
323078		31-AUG-11	USA BLUEBOOK		347.49			Negotiable
323079		31-AUG-11	UTILITY SYSTEMS SCIENCE & SOFTWARE INC.		780.00			Negotiable
323080		31-AUG-11	VERIZON CALIFORNIA INC		43.54			Negotiable
323081		31-AUG-11	VERIZON WIRELESS SERVICES LLC		7,205.03			Negotiable
323082		31-AUG-11	VOIT REAL ESTATE SERVICES, L.P.		44,002.93			Negotiable
323083		31-AUG-11	VULCAN MATERIALS COMPANY		1,224.06			Negotiable
323084		31-AUG-11	MAXIE'S ENTERPRISES, INC		298.79			Negotiable
323085		31-AUG-11	WAY III, ALFRED		60.94			Negotiable
323086		31-AUG-11	WECK LABORATORIES INC		2,590.00			Negotiable
323087		31-AUG-11	WELLS SUPPLY COMPANY		387.90			Negotiable
323088		31-AUG-11	WESTERN AV		2,467.71			Negotiable
323089		31-AUG-11	WESTERN EXTERMINATOR COMPANY		2,522.00			Negotiable
323090		31-AUG-11	WIRELESS WATCHDOGS LLC		1,244.00			Negotiable
323091		31-AUG-11	WORKPLACE RESOURCE		61.27			Negotiable
Payment Document Subtotal:					13,075,221.25			

Payment Document : IRWD Wire
 9100 01-AUG-11 YORK INSURANCE PAY 1,016.81
 SERVICES GROUP INC
 - CA
 Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Page: 31
 Payment Type: All Display Supplier Address: No Payment Currency: USD (US Dollar)

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
9101		01-AUG-11	U.S. BANK NATIONALST. LOUIS ASSOCIATION		9,640.83			Negotiable
9102		24-AUG-11	YORK INSURANCE PAY SERVICES GROUP INC - CA		2,596.29			Negotiable
9103		24-AUG-11	YORK INSURANCE PAY SERVICES GROUP INC - CA		746.43			Negotiable
9104		24-AUG-11	YORK INSURANCE PAY SERVICES GROUP INC - CA		3,468.44			Negotiable
9105		24-AUG-11	YORK INSURANCE PAY SERVICES GROUP INC - CA		3,223.50			Negotiable
9106		30-AUG-11	HELABA LANDESBANK NEW YORK HESSEN-THUERINGEN		151.87			Negotiable
9107		30-AUG-11	SUMITOMO MITSUI NEW YORK BANKING CORPORAION		3,077.26			Negotiable
9108		30-AUG-11	BANK OF AMERICA SAN FRANCISCO		2,616.11			Negotiable
9109		30-AUG-11	U.S. BANK NATIONALST. LOUIS ASSOCIATION		250.00			Negotiable
9110		30-AUG-11	CITIGROUP GLOBAL NEW YORK MARKETS INC.		3,181,944.96			Negotiable
9111		30-AUG-11	BANK OF AMERICA PAY MERRILL LYNCH		2,350,000.00			Negotiable
9112		30-AUG-11	BANK OF AMERICA SAN FRANCISCO		295.00			Negotiable
9113		30-AUG-11	BANK OF AMERICA PAY MERRILL LYNCH		640,000.00			Negotiable
9114		31-AUG-11	SUMITOMO MITSUI NEW YORK BANKING CORPORAION		3,071.00			Negotiable
9115		31-AUG-11	U.S. BANK NATIONALST. LOUIS ASSOCIATION		1,746.58			Negotiable
9116		31-AUG-11	BANK OF AMERICA SAN FRANCISCO		1,103,159.45			Negotiable
9117		31-AUG-11	SUMITOMO MITSUI NEW YORK BANKING CORPORAION		951.23			Negotiable
9118		31-AUG-11	BANK OF NEW YORK NEWARK MELLON TRUST COMPANY NA		10,063.85			Negotiable
9119		31-AUG-11	MUNICIPAL WATER FOUNTAIN DISTRICT OF ORANGEVALLEY COUNTY		1,378,167.95			Negotiable
9120		31-AUG-11	U.S. BANK NATIONALST. LOUIS ASSOCIATION		8,919.83			Negotiable

IRWD Ledger
 BANK: Bank of America N.A. Branch : Los Angeles Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Page: 32
 Payment Type: All Display Supplier Address: No


Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared	Cleared Amount	Status
9121	31-AUG-11	U.S. BANK NATIONALST. LOUIS ASSOCIATION	LOUIS	8,473.40				Negotiable
9122	31-AUG-11	U.S. BANK NATIONALST. LOUIS ASSOCIATION	LOUIS	8,456.94				Negotiable
9123	31-AUG-11	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	1,903,000.00				Negotiable
9124	31-AUG-11	FRANCHISE TAX BOARD	SACRAMENTO	87,086.42				Negotiable
9125	31-AUG-11	AIRPORT LOCK AND SAFE (DEA)	PAY	316,790.22				Negotiable
9126	31-AUG-11	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	24,518.45				Negotiable
9127	31-AUG-11	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	2,141.00				Negotiable
9128	31-AUG-11	EMPLOYEE BENEFIT SPECIALIST, INC	PAY	26,900.98				Negotiable
9129	31-AUG-11	GREAT WEST	NEED	194,927.32				Negotiable
9130	31-AUG-11	CALPERS	SACRAMENTO	534,837.72				Negotiable
9131	31-AUG-11	SCHOOL FIRST FEDERAL CREDIT UNION	SANTA ANA	54,118.54				Negotiable
9132	31-AUG-11	ORANGE COUNTY'S CREDIT UNION	SANTA ANA	2,380.00				Negotiable
9133	31-AUG-11	CALPERS	SACRAMENTO	2,953.65				Negotiable
9134	31-AUG-11	CALPERS	SACRAMENTO	317,168.73				Negotiable
9135	31-AUG-11	BANK OF AMERICA MERRILL LYNCH	PAY	2,070,000.00				Negotiable

Payment Document Subtotal: 14,258,910.76
 Bank Account Subtotal: 27,334,132.01
 Report Count : 863 Report Total: 27,334,132.01

IRWD Ledger
 BANK: Payment Register For 01-AUG-11 To 31-AUG-11 Report Date: 01-SEP-2011 15:40
 Branch : Account: Page: 33
 Bank Account Currency: () Payment Currency: ()
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Date	Cleared	Cleared Amount	Status
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*** End of Report ***

September 26, 2011
Prepared and
Submitted by: Beth Beeman
Approved by: Paul Cook 

CONSENT CALENDAR

ACWA COMMITTEE APPOINTMENT NOMINEES FOR THE 2012/2013 TERM

SUMMARY:

IRWD has been an active participant in the Association of California Water Agencies (ACWA). Staff recommends that the District continue its high level of participation by remaining involved in a number of ACWA Standing Committees. A suggested list of nominees for committee appointments is included below.

BACKGROUND:

Staff has received correspondence from ACWA requesting nominations for standing committees. This request is attached as Exhibit "A". Staff recommends the nomination of the following for the 2012/2013 term:

<u>Participants</u>	<u>Committee/Subcommittee</u>
Communications Committee	Beth Beeman
Energy Committee	Peer Swan
Federal Affairs Committee	Steve LaMar
Finance Committee	Peer Swan
Groundwater Committee	Doug Reinhart
Legal Affairs Committee	Mary Aileen Matheis
State Legislative Committee	Kirsten McLaughlin
Water Management Committee	Peer Swan
Water Quality Committee	Dave Pedersen

FISCAL IMPACTS:

The District will be responsible for all costs associated with representative participation on ACWA committees.

ENVIRONMENTAL COMPLIANCE:

Not Applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on September 13, 2011.

RECOMMENDATION:

THAT THE BOARD DIRECT STAFF TO SUBMIT THE LIST OF ACWA COMMITTEE APPOINTMENT NOMINEES FOR THE 2012/13 TERM TO THE ASSOCIATION OF CALIFORNIA WATER AGENCIES PRIOR TO SEPTEMBER 30, 2011.

LIST OF EXHIBITS:

Exhibit "A" – ACWA Committee Appointments Memo



EXHIBIT "A"

Associal
910 K St
Sacramento, California 95814-3577
916.441.4545 916.325.4840

Hall of the States
400 N. Capitol St., N.W., Suite 357 South,
Washington, D.C. 20001-1512
202.434.4760 FAX 202.434.4763
www.acwa.com

August 16, 2011

MEMORANDUM

TO: ACWA COMMITTEE MEMBERS

FROM: PAUL KELLEY, ACWA BOARD PRESIDENT

**SUBJECT: ACWA COMMITTEE APPOINTMENT NOMINATIONS FOR THE
2012-2013 TERM – DEADLINE SEPTEMBER 30, 2011**

Your service on ACWA's committee(s) has been invaluable to ACWA. We appreciate your devotion of time and expertise and look forward to working with you on ACWA issues and activities in the future.

We are fast approaching the end of the 2010-2011 committee term. With a new term comes the reconstitution of committees. If you would like to continue to serve on the same committee or would like to be considered for appointment to another committee, your name must be included on a committee consideration form for your agency. The enclosed consideration form is to be signed by either your General Manager or Board President.

Even if you are currently serving on a committee, you must submit a committee consideration form to be considered for the new term. If you are a 'Friend of ACWA' serving on a committee as a representative for a member agency, you will need to obtain the member agencies approved signature again.

In submitting your name for consideration, please do so with the understanding that committees need active, involved individuals able to expend the time and provide their expertise if appointed. Committee attendance at meetings is tracked and reviewed as part of the appointment process. **Please keep in mind that the district is responsible for all costs associated with your participation on any committee.**

Included in this packet

- Committee consideration form
- Sample committee consideration form
- Committee Purposes and Responsibilities
- Committee Process/Timeline

If you have any questions please contact Jan Jennings at janj@acwa.com or (916) 441-4545.

PK/jj
Enclosures



COMMITTEE CONSIDERATION FORM ASSOCIATION OF CALIFORNIA WATER AGENCIES

910 K Street, Suite 100
Sacramento, California 95814-3577
(916) 441-4545 Fax (916) 554-2324

***Rank**
1=first choice
2=second choice
3=third choice

NAME	COMMITTEE	Rank*
Please print legibly		

QUESTIONS? Please call Jan Jennings at ACWA (916) 441-4545.

RECOMMENDATION SUBMITTED BY:

District/Company Name _____ Phone _____

SIGNATURE: _____ Title _____

Either the Agency/District General manager or Board President must sign this form.



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910 K Street, Suite 100
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*Rank 1=first choice 2=second choice 3=third choice

NAME	COMMITTEE	Rank*
Please print legibly		
Jane Doe, General Manager	Water Management Committee	1
Jane Doe, General Manager	Federal Affairs Committee	2
John Smith, President	State Legislative Committee	1
T.O. Goode	Communications Committee	1

QUESTIONS? Please call Jan Jennings at ACWA (916) 441-4545.

RECOMMENDATION SUBMITTED BY:

District/Company Name John Doe Water District Phone _____

SIGNATURE: _____ Title _____

Either the Agency/District General manager or Board President must sign this form.

ACWA COMMITTEES

PURPOSES AND RESPONSIBILITIES

COMMUNICATIONS COMMITTEE - *STANDING/LIMITED (40 MAXIMUM)*

MEETINGS ARE HELD 4 TIMES A YEAR

- One at both the Fall and Spring conferences
- One at the Sacramento office between conferences
- One at a member agencies site between conferences

The purpose of the ACWA Communications Committee is to develop and make recommendations to the Board of Director's and association staff regarding comprehensive internal and external communications/public affairs programs. Programs are crafted to support ACWA and its members' positions on legislative, regulatory, and policy issues.

The committee is responsible for developing and updating a comprehensive communications plan for ACWA. The committee promotes the development and implementation of sound public information and education programs and practices among member agencies. It prepares materials that can be duplicated or used by member agencies for their local public information/education efforts. As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program. The committee also provides guidance to ACWA's Communications Department.

ENERGY COMMITTEE – *STANDING/UNLIMITED*

MEETINGS ARE HELD 2 TIMES A YEAR

- One at both the Fall and Spring conferences

The purpose of the Energy Committee is to work with staff in developing and making recommendations to the Board of Directors regarding:

- ♦ Programs to assure an adequate power supply for member agencies, including energy, availability, pricing, distribution and hydro generation
- ♦ Policy recommendations relating to the development of new power sources
- ♦ Recommended positions regarding state and federal legislation to the State Legislative and Federal Affairs Committees
- ♦ Assistance with the development, direction and work associated with representation before the Public Utilities Commission, the Federal Energy Regulatory Commission and other regulatory agencies dealing with energy
- ♦ Educate members on all energy matters having impact on their operations

ACWA COMMITTEES
PURPOSES AND RESPONSIBILITIES

PAGE 2

FEDERAL AFFAIRS COMMITTEE - *STANDING/LIMITED (5 PER REGION)*

MEETINGS ARE HELD 4 TIMES A YEAR

- One at both the Fall and Spring conferences
- Two between conferences (Jan & Sept) in the Sacramento office

The Federal Affairs Committee coordinates with other ACWA committees regarding their input on any issues directly related to federal issues before both Congress and the Federal administrative branches. As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program.

The committee currently has four separate subcommittees. Committee members have the opportunity to sign-up for as many of the subcommittees as they want, plus being supplemented by other members with interest in a focused area. The subcommittees with areas of responsibility are:

- ♦ Drinking Water & Energy Subcommittee: Responsible for the oversight and policy direction on Environmental Protection Agency and Energy-Water Nexus.
- ♦ Water Supply Subcommittee: Responsible for oversight and policy direction on the Safe Drinking Water Act and Endangered Species Act.
- ♦ Infrastructure & Agriculture Subcommittee: Responsible for oversight and policy direction on the Clean Water Act, and agricultural issues.
- ♦ Finance, Technology & Research Subcommittee: Responsible for oversight and policy direction on financing water infrastructure legislation.

FINANCE COMMITTEE - *STANDING/LIMITED (2 PER REGION – 1 SPOT IS FILLED BY REGION CHAIR OR VICE CHAIR; OTHER SPOT IS FILLED BY A REPRESENTATIVE FROM REGION WITH EXPERIENCE IN FINANCIAL MATTERS)*

MEETINGS ARE HELD APPROXIMATELY 4-5 TIMES A YEAR

- One at both the Fall and Spring conferences
- All other meetings are held in the Sacramento office

The Finance Committee makes recommendations to the Board of Directors regarding annual budgets, investment strategies, annual audits and the selection of the auditor, the dues formula and schedules and other financial matters that may come before the committee. Each committee member will be expected to serve on at least one of the subcommittees, which are:

- ♦ Audit Subcommittee
- ♦ Budget Subcommittee
- ♦ Investment Subcommittee
- ♦ Revenue Subcommittee
- ♦ Education Subcommittee

GROUNDWATER COMMITTEE - *STANDING/UNLIMITED*

MEETINGS ARE HELD 4 TIMES A YEAR

- One at both the Fall and Spring conferences
- One in Northern California between conferences
- One in Southern California between conferences

The Groundwater Committee monitors state and federal regulations and legislation that could affect the quality or quantity of groundwater, conducts studies, develops policies regarding the management of groundwater and coordinates with other ACWA committees on issues directly related to groundwater.

Committee members are expected to participate in a variety of activities including writing legislation, preparing comments for state or federal hearings on groundwater issues, developing programs for workshops and conferences, and providing input on state and federal legislation. As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program.

INSURANCE AND PERSONNEL COMMITTEE - *STANDING/LIMITED (2 PER REGION)*

MEETINGS ARE HELD 4 TIMES A YEAR

- One at both the Fall and Spring conferences
- Two in the Sacramento office

The Insurance and Personnel Committee works with staff in developing, reviewing and making recommendations to the Board of Directors regarding the following:

- ♦ Sponsor special studies on personnel-related problems and issues
- ♦ Sponsor safety programs for risk management or workers' compensation claims
- ♦ Define the scope of any audit to be performed by an independent actuary, as needed
- ♦ Gather, develop and publish comparative data on salary ranges, employee benefits and other personnel and administrative data pertinent to the management of member agencies

LEGAL AFFAIRS COMMITTEE - *STANDING/LIMITED (45 MAXIMUM)*

MEETINGS ARE HELD APPROXIMATELY 2-3 TIMES A YEAR

- One at both the Fall and Spring conferences
- As needed in between the conferences

The committee's primary purpose is to support the mission of the Association, and more particularly, to deal with requests for assistance involving legal matters of significance to ACWA member agencies, water rights matters, proposed ACWA bylaw revisions, etc.

LEGAL AFFAIRS COMMITTEE (CONTINUED)

The committee also works with staff to produce publications to assist water agency officials in complying with applicable state and federal laws. The committee's areas of responsibility include:

- ♦ Amicus curia filings on important cases
- ♦ Commenting on proposed regulations and guidelines of state agencies such as Fair Political Practices Commission regulations or opinions and CEQA implementation guidelines
- ♦ Entering a suit as primary litigant
- ♦ Dealing with any water rights matters of interest to member agencies
- ♦ Reviewing all proposed ACWA bylaws for technical competence and consistency with the nonprofit corporation law and other bylaws

LOCAL GOVERNMENT COMMITTEE - *STANDING/LIMITED (3 PER REGION)*

MEETINGS ARE HELD 4 TIMES A YEAR

- One at both the Fall and Spring conferences
- Two in between the conferences in the Sacramento office

The Local Government Committee:

- ♦ Recommends policies to the State Legislative Committee and the Board of Directors on matters affecting water agencies as a segment of local government in California, such as planning issues and local government organization and finance
- ♦ Plans and presents a program at each ACWA conference relating to local governance issues affecting water agencies
- ♦ Gathers data and disseminates information on the value of special districts
- ♦ Disseminates information promoting excellence in service delivery
- ♦ As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program.

MEMBERSHIP COMMITTEE - *REGULAR/UNLIMITED*

MEETINGS ARE HELD 2 TIMES A YEAR

- One at both the Fall and Spring conferences

The Membership Committee takes any suggestions regarding ACWA policy to the ACWA Board of Directors for approval, meets to review and make recommendations regarding membership eligibility and all membership applications; assists the staff with the development of recruitment and retention programs and reviews and makes recommendations regarding an equitable dues structure to the ACWA Finance Committee.

STATE LEGISLATIVE COMMITTEE - *STANDING/LIMITED (4 PER REGION)*

MEETINGS ARE HELD APPROXIMATELY 10-12 TIMES A YEAR

- Every three weeks during Session in the Sacramento Office
- One planning meeting at the end of the year in the Sacramento Office

STATE LEGISLATIVE COMMITTEE (CONTINUED)

The State Legislative committee sets state legislative policy for the Associations. Committee members are responsible for reading relevant legislation, developing positions, working with staff to draft appropriate amendments to bills, providing input to the ACWA Board of Directors, and directing ACWA legislative staff on legislative matters. As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program.

WATER MANAGEMENT COMMITTEE - *STANDING/LIMITED (4 PER REGION)*

MEETINGS ARE HELD 4 TIMES A YEAR

- One at both the Fall and Spring conferences
- Two between conferences in the Sacramento office

The purpose of the Water Management Committee is to work with staff in developing and making recommendations to the Board of Directors regarding policy and programs on significant areas of concern in water management, review and recommend positions regarding legislation and regulations as requested by other committees.

The committee is also responsible for the gathering and dissemination of information regarding management of agricultural and domestic water, conjunctive use, water management and conservation activities, development and use of water resources, and wastewater treatment and its reclamation and reuse. As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program.

WATER QUALITY COMMITTEE - *STANDING/UNLIMITED*

MEETINGS ARE HELD BY SUBCOMMITTEES

Safe Drinking Water Subcommittee meets 4 times a year

- One at both Fall and Spring conferences
- One in Northern California between conferences
- One in Southern California between conferences

Clean Water Subcommittee meets 3 times a year

- One at both the Fall and Spring conferences

Water Quality Committee was established to recommend policy and programs to the Board of Directors, State Legislative Committee and/or Federal Affairs Committee; promote cost effective state and federal water quality regulations affecting both agricultural and domestic water agencies; and provide a means for members to work together to develop and present unified comments on water quality regulations, as well as to coordinate with other organizations. The ACWA bylaws provide authority to the committee to develop and recommend ACWA positions and testimony on water quality regulatory issues. As a member of the committee, you will be enrolled as an active participant in ACWA's Outreach Program.

ACWA

COMMITTEE APPOINTMENT

Process / Timeline

AUGUST

11th

Committee Appointment Packets are sent to all Agency general managers, board presidents & Friends of ACWA contacts.

The packet contains:

- List of all agency staff, directors, associate / affiliate members currently serving on ACWA committees.
- Committee descriptions, purposes / responsibilities.
- Committee consideration form and sample for the 2012-2013 term.
- 2012-2013 Committee consideration process / timeline outline.

15th

Letters are sent to all **current** committee members notifying them of the process for reappointment to ACWA committees. **Important note:** all current committee members must stand again for reappointment by completing and submitting to ACWA a committee consideration form.

SEPTEMBER

30th

Deadline: All committee consideration forms must be submitted to ACWA.

OCTOBER

Committee Considerations are compiled and organized for recommendations by the new Region Chairs. Copy to Region Chairs and staff liaisons.

NOVEMBER

17th **Deadline:** The Incoming Region Chairs / Vice Chairs will make their recommendations for committee appointments. They will meet with the Outgoing and Incoming Region Chairs / Vice Chairs for training, input and continuity of the committee process.

14th - 25th Region recommendations are compiled and organized for the new ACWA President.

DECEMBER


1st Region committee recommendations are submitted to the incoming ACWA President and Vice President for their consideration.

16th **Deadline:** for the ACWA President to complete committee appointments.

31th ACWA sends official appointment letters to new committee members who will serve for the 2012-2013 term.

JANUARY

6th ACWA sends letters to those not receiving an appointment to ACWA committees and places those individuals on a waiting list for possible future appointment as vacancies occur.

September 26, 2011
Prepared and
Submitted by: Beth Beeman
Approved by: Paul Cook 

CONSENT CALENDAR

ACWA REGION 10 ELECTION FOR THE 2012/13 TERM

SUMMARY:

ACWA is holding elections for the ACWA Region 10 officers and Board members who will represent the issues, concerns and needs of the region for the 2012/13 term. Ballots are due on September 30, 2011. Staff recommends that the Board support the slate of candidates selected by the Region 10 Nominating Committee.

BACKGROUND:

The Region 10 Nominating Committee has recommended the following slate of candidates for the ACWA Region 10 officers and Board members:

Chair:	Darrell W. Gentry, Vallecitos Water District
Vice Chair:	Peer Swan, Irvine Ranch Water District
Board Members:	Cathy Green, Orange County Water District
	Saundra Frances Jacobs, Santa Margarita Water District
	Larry McKenney, Moulton Niguel Water District
	Richard L. Vazquez, Vista Irrigation District
	DeAna Verbeke, Helix Water District

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not Applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on September 13, 2011.

RECOMMENDATION:

THAT THE BOARD SUPPORT THE CANDIDATES AS SELECTED BY THE ACWA REGION 10 NOMINATING COMMITTEE.

LIST OF EXHIBITS:

Exhibit "A" – Official Region 10 Board Ballot for the 2012/13 Term

Region 10 Board Ballot

2012-2013 TERM



Association
of California
Water Agencies
Since 1910
Leadership
Advocacy
Information

Please return completed ballot
by September 30, 2011

E-mail: katied@acwa.com

Fax: 916-561-7124

Mail: ACWA
910 K Street, Suite 100
Sacramento, CA 95814

General Voting Instructions:

1. Please complete your agency information. The authorized representative is determined by your agency in accordance with your agency's policies and procedures.
2. You may either vote for the slate recommended by the Region 10 Nominating Committee or vote for individual region board members. Please mark the appropriate box to indicate your decision.

**Please note: DeAna Verbeke was removed under the Vice Chair candidate on the individual write-in section due to a clerical error. San Diego County candidates are not eligible to be Vice Chair this term according to the region rules.*

Region 10 Nominating Committee's Recommended Slate

- I concur with the Region 10 Nominating Committee's recommended slate below.

Chair:

Darrell W. Gentry, Vallecitos Water District

Vice Chair:

Peer A. Swan, Irvine Ranch Water District

Board Members:

Cathy Green, Orange County Water District

Sandra Frances Jacobs, Santa Margarita Water District

Larry McKenney, Moulton Niguel Water District

Richard L. Vasquez, Vista Irrigation District

DeAna Verbeke, Helix Water District

Region 10 Individual Board Candidate Nominations

- I do not concur with the Region 10 Nominating Committee's recommended slate. I will vote for individual candidates below as indicated.

Candidates for Chair: (Choose one)

- Darrell W. Gentry, Vallecitos Water District
 DeAna Verbeke, Helix Water District

Candidates for Vice Chair: (Choose one)

- Larry McKenney, Moulton Niguel Water District
 Peer A. Swan, Irvine Ranch Water District
 Joan C. Finnegan, Municipal Water District of Orange County

Candidates for Board Members: (Max of 5 choices, 2 from San Diego County and 3 from Orange County)

- James F. Atkinson, Mesa Consolidated Water District
 Darrell W. Gentry, Vallecitos Water District
 Cathy Green, Orange County Water District
 Sandra Frances Jacobs, Santa Margarita Water District
 Larry McKenney, Moulton Niguel Water District
 James B. Murtland III, Rincon del Diablo Municipal Water District
 Peer A. Swan, Irvine Ranch Water District
 Richard L. Vasquez, Vista Irrigation District
 DeAna Verbeke, Helix Water District

AGENCY NAME

AUTHORIZED REPRESENTATIVE


DATE

SUBMIT FORM

September 26, 2011

Prepared by: K. McLaughlin

Submitted by: B. Beeman

Approved by: Paul Cook 

CONSENT CALENDAR

2011 STATE LEGISLATIVE UPDATE

SUMMARY:

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

BACKGROUND:

September 9 was the last day of the 2011 legislative session and the last day for the Legislature to complete their work for the year. The Governor has until October 9 to act on legislation sent to him at the end of session. The Legislature will re-convene for the 2012 session on January 4 and will have until the end of January to act upon two-year bills.

Other 2011 Legislation:

AB 134 (Dickenson): Sacramento Regional Sanitation District

AB 134 (Dickenson), authorizing the Sacramento Regional County Sanitation District to apply for an appropriative water right for their discharged treated effluent, was passed by the Legislature and sent to Governor Brown. IRWD submitted a letter of opposition to the Governor and signed onto an opposition coalition letter. Both letters urged the Governor to veto AB 134. Unfortunately, the Governor signed AB 134 into law raising many questions as to whether other waste water agencies need to secure legislation in order to have the protection or privilege of applying for the right to their discharged water. This precedent could complicate California's already complicated water recycling laws and could have a detrimental impact on the use of recycled water across the state.

SB 250 (Rubio): Sacramento-San Joaquin Delta: Delta Plan: conveyance facility

SB 250 (Rubio) was gutted and amended on August 29 from a CEQA-related bill to instead set statutory deadlines for the completion of the Bay Delta Conservation Plan process and construction of Delta conveyance facilities. The bill would require the Department of Water Resources to complete the development of Delta conveyance facilities by February 15, 2013 and require the construction of these facilities be completed by December 31, 2015.

The timeline provided in the bill is consistent with the deadlines developed between the state and federal agencies involved in the BDCP process. The author contends that having a deadline in statute will help to move the BDCP process to completion. Senator Rubio amended SB 250 to be a two-year bill and plans to hold legislative hearings on Delta conveyance and BDCP issues and work with stakeholders in the interim this fall.

SB 215 (Huff): Quagga Mussels

Association of California Water Agencies-sponsored SB 215 (Huff) was passed by the Legislature and sent to the Governor. This bill would extend the current sunset date on quagga mussel control programs to 2017. IRWD submitted a letter of support to the Governor.

SB 900 (Steinberg): Regional Boards

SB 900 (Steinberg), sponsored by the Western Growers Association, was originally intended to secure modest reforms to the Regional Water Quality Boards. As amended in May, the bill would ease the current requirement that members of the Regional Board cannot receive a significant portion of his or her income from an entity subject to waste discharge requirements. In late August Governor Brown expressed an interest in implementing more significant reforms to the Regional Boards including reducing the number of Boards from nine to seven, reducing the members of each board from nine to five, and broadening the qualification requirements for board members. There was some discussion of amending SB 900 to reflect the Governor's proposal in order to move something through at the end of session this year. Ultimately, SB 900 was sent to the Assembly Inactive File. It is expected that the Governor will work with President Pro Tem Steinberg and the Western Growers to develop a proposal for introduction in January.

SB 293 (Padilla): Contract Retentions

SB 293 (Padilla), prohibiting a public entity from retaining more than 5% of a contract price until final completion and acceptance of a project, is expected to be sent to the Governor. Similar legislation in recent years has been passed overwhelmingly by the Legislature and ultimately vetoed by then-Governor Schwarzenegger. IRWD is working with the public works coalition to urge the Governor to veto SB 293 when it comes across his desk.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS

This item was reviewed and approved at the Water Resources Policy and Communications Committee on September 13, 2011.

RECOMMENDATION:

RECEIVE AND FILE.

LIST OF EXHIBITS:

Exhibit "A" – 2011 IRWD Legislative Matrix

EXHIBIT "A"
IRWD 2011 LEGISLATIVE MATRIX
Updated September 20, 2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>AB 19</u> Fong (D)	Building Standards: Water Meters: Multiunit Structures		Requires a water purveyor providing water service to a newly constructed multiunit residential structure or mixed-use residential and commercial structure, including a structure that is part of a common interest development, that submits and application for a water connection after a specified date, to require the installation of the meter or submeter to measure water to each unit as a condition of new water service. Requires the submeter to meet specified requirements. Relates to billing and disclosure.	04/27/2011 - In ASSEMBLY Committee on HOUSING AND COMMUNITY DEVELOPMENT: Reconsideration granted.	Sponsor: Sierra Club. Reintroduction of AB 1975 (Fong), 2010. 2_Year_Bill
<u>AB 23</u> Smyth (R)	Local Agency Meetings: Compensation Disclosure		Amends the Ralph M. Brown Act which requires each legislative body of a local agency to provide the time and place for holding regular meetings. Authorizes a convened legislative body whose membership constitutes a quorum of any other legislative body to convene a meeting of the subsequent legislative body, simultaneously or in serial order, only if a clerk or member announces the amount of compensation or stipend, if any, each member will receive as a result of convening simultaneous or serial meetings.	07/25/2011 - Signed by GOVERNOR.;07/25/2011 - Chaptered by Secretary of State. Chapter No. 91	
<u>AB 54</u> Solorio (D)	Drinking Water		Requires a mutual water company that operates a public water system to submit a map depicting approximate service boundaries. Disallows expansion without approval. Requires a company financial reserve fund. Requires board member training. Relates to projects funded under the Safe Drinking Water Revolving Fund and application processing. Relates to annexation. Relates to safe drinking water standards compliance. Requires an assessment by such company to pay water quality violation related civil fines.	09/08/2011 - In ASSEMBLY. ASSEMBLY concurred in SENATE amendments. To enrollment.	
<u>AB 83</u> Jeffries (R)	Environment: CEQA Exemption: Recycled Water Pipeline		Amends existing law regarding California Environmental Quality Act environmental impact reports. Exempts a project for the installation of a new pipeline for the distribution of recycled water within an improved public street, highway, or right-of-way.	04/11/2011 - In ASM Com on NAT RES: Reconsideration granted.	WRA: Support 2_Year_Bill
<u>AB 134</u> Dickinson (D)	Sacramento Regional County Sanitation District	Oppose	Authorizes the Sacramento Regional County Sanitation District to file an application for a permit to appropriate a specified amount of water that is based on the volume of treated wastewater that the district discharges into the Sacramento River and recovers for reuse. Authorizes the State Water Resources Control Board to grant a permit to appropriate that treated	09/06/2011 - Signed by GOV.;09/06/2011 - Chaptered by Secretary of State. Chapter No. 212	Sponsor: Sacramento Regional

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 148 Smyth (R)	Local Government: Ethics Training: Disclosure	Watch	wastewater upon terms and conditions determined by the board. Requires the board to comply with specified related requirements. Defines the term ethics laws, for purposes of training for officers and employees of a local government, to include compensation setting guidelines as established by specified organizations. Requires the local agency to post the ethics training records of all elected members on the local agency's Internet Web site, if any, and to submit a copy of the records to the Controller. Requires a local agency that has adopted a written attendance compensation policy to post the policy on the local agency's Web site.	05/27/2011 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	CSDA - Supportive 2_Year_Bill
AB 157 Jeffries (R)	Safe, Clean and Reliable Drinking Water Supply Act	Oppose	Reduces the total amount of bonds authorized to be issued pursuant to the Safe, Clean and Reliable Drinking Water Supply Act of 2012. Makes conforming reductions to amounts specified to be allocated from these bond funds for certain purposes.	06/28/2011 - In ASM Committee on WPW: Not heard.	2_Year_Bill
AB 246 Wieckowski (D)	Water Quality: Enforcement	Oppose	Authorizes a regional water quality control board to delegate to its executive officer the authority to apply for judicial enforcement to the Attorney General, a district attorney, a city attorney for a city with a population that exceeds 750,000, or a city attorney for a city and county. Authorizes a district attorney, a city attorney of a city with a specified population to bring civil actions under the Porter-Cologne Water Quality Act and only upon approval of the Attorney General.	09/07/2011 - In SENATE. From third reading. To Inactive File.	
AB 249 Berryhill B (R)	Contractors	Watch	Relates to the damages recoverable for residential property construction or improvements by a unlicensed contractor. Authorizes a person who utilizes the services of a contractor for the construction or improvement of property other than specified residential property to bring an action to recover funds paid to the contractor for performance of any act or contract during the time the contractor was not licensed. Authorizes a licensed contractor who performed a portion of such work to also bring an action.	08/22/2011 - Referred to Committee on BUSINESS, PROFESSIONS & CONSUMER PROTECTION.	2_Year_Bill
AB 262 Harkey (R)	California Regional Water Quality Control Boards	Watch	Revises the description of the boundaries of the Santa Ana Regional Water Quality Control Board and the San Diego Regional Water Quality Control Board.	02/18/2011 - To ASM Com on ENV SAFETY AND TOXIC MAT.	2_Year_Bill
AB 275 Solorio (D)	Rainwater Capture Act of 2011		Enacts the Rainwater Capture Act of 2011. Authorizes residential, commercial, and governmental landowners to install, maintain, and operate rain barrel systems and rainwater capture systems for specified	09/06/2011 - Enrolled.;09/07/2011 - *****To	

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			<p>purposes. Requires a local agency to notify a public water system of any permit program. Authorizes a landscape contractor to enter into a prime contract for the construction of such system, if it is used exclusively for landscape irrigation. Authorizes such contractors to design and install exterior parts.</p> <p>Requires the legislative body of a local agency, at least 72 hours before a regular meeting of that body, to post the agenda and staff generated reports that relate to an agenda item for the open session of that regular meeting. Requires the legislative body to post the agenda and the writings on its internet web site or in a public location if the body has not web site.</p> <p>Requires the Department of Public Health to post its progress on the establishment of primary drinking water standard hexavalent chromium on the department's Internet Web site. Includes the adoption of a primary drinking water standard for hexavalent chromium among the proposed regulations relating to maximum contaminant levels for primary or secondary water standards that are subject to a review by the Department of Finance of not more than 90 days.</p>	GOVERNOR.	
<u>AB 392</u> Alejo (D)	Ralph M. Brown Act: Posting Agendas			05/27/2011 - In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.	Sponsor: Realtors CSDA: Oppose 2_Year_Bill Inactive File
<u>AB 403</u> Campos (D)	Public Drinking Water Standards: Hexavalent Chromium	Watch		09/06/2011 - In ASSEMBLY. From Unfinished Business. To Inactive File.	
<u>AB 457</u> Wagner (R)	Public Works Contracts: Relief for Bidders		<p>Entitles a bidder who successfully challenges the award of a public works contract determined to be invalid due to errors or omissions of the public entity to recover costs and attorney's fees incurred in pursuing the challenge. Allows attorney's fees and costs to be awarded to the public entity under specified circumstances.</p>	05/03/2011 - In ASM Com on BUSINESS, PROFESSIONS & CONS. PROTECT:: Not heard.	2_Year_Bill
<u>AB 506</u> Wickowski (D)	Local Government: Bankruptcy: Neutral Evaluation	Oppose	<p>Prohibits a local public entity from filing under federal bankruptcy law unless the entity has met specified requirements including participation in a neutral evaluation process, or a local public agency has declared a fiscal emergency and has adopted a resolution at a notice public hearing, that includes findings that the agency's financial status jeopardizes the health, safety, or well-being of the residents of the agency's jurisdiction or service area absent bankruptcy protections.</p>	09/09/2011 - In SENATE. Read third time. Passed SENATE. 9/9/2011 ASSEMBLY concurred in SENATE amendments. To enrollment.	Significantly amended in favor of local governments in final days of session. CSDA to neutral.
<u>AB 550</u> Huber (D)	Sacramento-San Joaquin Delta: Peripheral Canal	Oppose	<p>Prohibits the construction of a peripheral canal that conveys water from a diversion point in the Sacramento River to a location south of the Sacramento-San Joaquin Delta, unless expressly authorized by the Legislature. Requires the Legislative Analyst's Office to complete an</p>	03/25/2011 - To ASSEMBLY Committees on WATER, PARKS	2_Year_Bill

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 576 Dickinson (D)	Delta Plan: Financing		<p>economic feasibility analysis prior to the enactment of a statute authorizing the construction of a peripheral canal. Prohibits the construction and operation of a peripheral canal from diminishing water quality.</p> <p>Requires the Delta Stewardship Council to develop a long-term finance plan to pay for the costs of implementing the Delta Plan by a specified date. Prohibits the council from adopting new fees for these purposes unless authorized by statute. Authorizes the council, before adopting and collecting long-term revenue sources, to seek to obtain early funding contributions from entities that may benefit from implementation of the Plan and to track those contributions.</p>	<p>AND WILDLIFE and APPROPRIATIONS.</p> <p>03/31/2011 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.</p>	2_Year_Bill
AB 741 Huffman (D)	Onsite Wastewater Disposal	Sponsor	<p>Amends an existing law authorizing a property owner included within an assessment district for construction of a main trunkline or collector sewer lines, to request construction plumbing to connect his or her property to the adjoining public sewer system, and creates a lien. Relates to funding. Authorize defined entities, to use this provision for the purpose of converting properties from onsite septic systems and connecting them to the sewer system and for replacing or repairing existing sewer laterals.</p>	<p>07/25/2011 - Signed by GOVERNOR.;07/25/2011 - Chaptered by Secretary of State. Chapter No. 106</p>	
AB 849 Gatto (D)	Water: Use Efficiency: Graywater Building Standards		<p>Repeals the authority of a city, county, or other local agency to adopt building standards that prohibit entirely the use of graywater. Authorizes the adoption of standards that are more restrictive than required under state requirements. Requires that an ordinance enacted pursuant to this authority include the local climatic, geological, or topographical conditions requiring different building standards. Requires the local entities consult with the local public health department prior to permit issuance.</p>	<p>09/13/2011 - *****To GOVERNOR.</p>	
AB 938 Perez V (D)	Public Water Systems	Watch	<p>Amends existing law that establishes the Safe Drinking Water State Revolving Fund and requires total funding of a single project to be determined by an assessment of affordability. Adds environmental documentation to the costs of a single project that is required to be determined by that assessment. Requires the public notice given by a public water system be in specified languages and media outlets. Establishes specified presumptions of compliance if a water system takes certain actions.</p>	<p>09/13/2011 - *****To GOVERNOR.</p>	

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 964 Huffman (D)	Water Rights: Appropriation	Support	Authorizes obtaining a right to appropriate water for a small irrigation use upon registering the use with the State Water Resources Control Board and applying the water to reasonable and beneficial use. Allows more than one such registration. Requires conditions for crop frost protection. Prohibits such use registration for a facility served or used pursuant to a permit or license for domestic or municipal use. Provides the requirements stream system registration. Relates to stream flow requirements.	09/06/2011 - Enrolled.;09/07/2011 - *****To GOVERNOR.	
AB 1048 Harkey (R)	Water Quality: Recycled Water and Wastewater: Fluoride		Requires the State Water Resources Control Board to adopt a statewide policy establishing standards for levels of fluoride in recycled water and wastewater.	03/16/2011 - Re-referred to ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.	Sponsor: SDCWA 4/25 - SDCWA pulling the bill. Working on an administrative solution. 2_Year_Bill
AB 1184 Gatto (D)	Public Employees' Retirement Benefits		Requires the Board of Administration of PERS to develop guidelines and implement program changes to ensure that a contracting agency that creates a significant increase in actuarial liability due to increased compensation bears the associated liability. Requires the system actuary to assess an increase in liability and make adjustments to the employer's rates. Applies the requirements to any significant increase in actuarial liability due to increased compensation paid to a nonrepresented employee.	09/09/2011 - In ASSEMBLY. From Unfinished Business. To Inactive File.	Inactive File
AB 1283 Berryhill B (R)	Safe, Clean, and Reliable Drinking Water Supply Act		Declares the intent of the Legislature to enact legislation relating to the Safe, Clean, and Reliable Drinking Water Supply Act of 2012.	02/18/2011 - INTRODUCED.	2_Year_Bill
AB 1354 Huber (D)	Public Works: Progress Payments: Notice: Retention	Oppose	Requires that a contractor pay a subcontractor on a public works project within 7 days after receipt of each progress payment. Relates to the time period for written notice regarding a claim against the bond of a contractor under a public works contract. Relates to retention proceeds withheld under a public works contract. Relates to progress payments made under a public works contract.	05/03/2011 - In ASSEMBLY Committee on BUSINESS, PROFESSIONS & CONSUMER PROTECTION: Not heard.	Sponsor: American Subcontractors Association California
SB 27	Public Employees'		Amends the State Teachers' Retirement Law. Relates to the Defined	08/25/2011 - In	2_Year_Bill

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
Simitian (D)	Retirement		Benefit Supplement Program and creditable compensation. Relates to the receipt of lump-sum payments. Relates to substitute employees' postretirement compensation. Authorizes penalties for late or improper adjustments to on Cash Balance Benefit Program contributions. Requires a Public Employees' Retirement System participating employer to notify the Board of Administration of payroll changes.	ASSEMBLY Committee on APPROPRIATIONS: Not heard.	
SB 31 Correa (D)	Local Government: Lobbyist Registration		Enacts a comprehensive scheme to regulate lobbying entities that lobby local government agencies, including requirements to register and make periodic reports regarding certain lobbying activities. Requires each agency to create a commission to implement and enforce these provisions. Provides that any person who knowingly or willingly violates a provision, or knowingly or willfully aides and abets any person in violation of any provision is guilty of a misdemeanor.	03/31/2011 - Referred to SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS.	2_Year_Bill
SB 34 Simitian (D)	Water Resources Investment Act of 2011	Oppose	Requires revenues and charges collected under the Water Resources Investment Program to be deposited in the state Water Resources Investment Program Fund and a number of regional investment accounts within the fund. Requires money in the regional accounts be for water-related projects and programs. Requires state account moneys be appropriated for specified statewide water-related programs and the Delta plan, mercury contamination in the Sacramento-San Joaquin Delta, and for related bond debt service.	05/04/2011 - From SENATE Committee on GOVERNANCE AND FINANCE: Do pass to Committee on APPROPRIATIONS.	Author d to convene a stakeholder process in the interim. 2_Year_Bill
SB 46 Correa (D)	Public Officials: Compensation Disclosure	Oppose_Amend	Requires every designated employee and other person, except a candidate for public office, who is required to file a statement of economic interests to include a compensation disclosure form that provides compensation information for the preceding calendar year. Requires every agency to post of that agency's Internet Web site information contained on the compensation disclosure form filed by a person required to file a statement of economic interests. Requires the adoption of emergency regulations.	08/22/2011 - In SENATE. Read third time, urgency clause adopted. Passed SENATE. *****To ASSEMBLY.	2_Year_Bill Proposed amends (reflect CSDA/ACWA amends: (1) changes should build on SCO's efforts to avoid duplication and tax/ratepayer cost. (2) Compensation not include expenses.

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>SB 52</u> Steinberg (D)	Water Quality: Sacramento Regional Sanitation District		Appropriates funds to the Department of Water Resources from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 to provide financial assistance to the Sacramento Regional County Sanitation District to offset rate increases associated with the costs of capital improvements to the district's regional sewage treatment plant.	05/02/2011 - In SENATE Committee on ENV QUALITY: Reconsideration granted.	2_Year_Bill
<u>SB 186</u> Kehoe (D)	The Controller		Authorizes the Controller to exercise discretionary authority to perform an audit or investigation of any county, city, special district, joint powers authority, or redevelopment agency. Expands existing law, providing that if reports are not made in a specified manner of if there is reason to believe that reports are false, an investigation may be made and a copy of the results transmitted to the grand jury of the county, to also include a special district, joint powers authority, or redevelopment agency.	06/29/2011 - In ASSEMBLY Committee on LOCAL GOVERNMENT: Reconsideration granted.	2_Year_Bill
<u>SB 194</u> Governance and Finance Cmt	Local Government: Omnibus Bill		Authorizes a county to accept payments by credit card, debit card, or EFT. Relates to public records. Amends the County Budget Act. Relates to the maximum amount that a local legislative body may transfer from a special fund to the general fund, invest in a foreign bank, community service district boards, general plan public meetings, Subdivision Map Act and conveyances of land, sanitation employees, local taxation, facilities improvements, local construction contracts and business improvement districts.	09/06/2011 - *****To GOVERNOR.	
<u>SB 200</u> Wolk (D)	Sacramento-San Joaquin Delta: Bay Delta Conservation	Oppose	Amends the Delta Reform Act of 2009 that requires the Delta Stewardship Council to consider the Bay Delta Conservation Plan (BDCP) for inclusion in a specified Delta Plan and the authorizes the incorporation of the plan into the Delta Plan if the BDCP meets certain requirements. Requires any state agency that is responsible for authorizing or implementing any action of the BDCP to ensure the action is consistent with specified requirements prescribed by these provisions.	03/24/2011 - In SEN. Read second time and amended. Re-referred to Committee on NATURAL RESOURCES AND WATER.	2_Year_Bill
<u>SB 215</u> Huff (R)	Invasive Aquatic Species: Mussels	Support	Extends the repeal date of existing law that generally prohibits a person from possessing, importing, shipping, or transporting, or from placing, planting, or causing to be placed or planted in any water within the state, dreissenid mussels, and authorizes the Director of Fish and Game or his or her designee to engage in enforcement activities. Provides that a person who violates, resists, delays, obstructs, or interferes with the implementation of these provisions is subject to a penalty.	09/06/2011 - *****To GOVERNOR.	

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011


Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
SB 224 Pavley (D)	Public Contracts: Department of Water Resources	Support	Amends existing law regarding public contract approvals by the Department of General Services and requires the securing of a minimum number of competitive bids, with an exemption thereto. Makes those provisions inapplicable to any contract entered into by the Department of Water Resources for the acquisition, sale, or transmission of power, or related services. Authorizes the department to award contracts for acquisition of special equipment, and contracts with a specified minimum monetary threshold.	09/14/2011 - *****To GOVERNOR.	
SB 250 Rubio (D)	Sacramento-San Joaquin Delta: Delta Plan: Facility		Amends the Sacramento-San Joaquin Delta Reform Act of 2009 which requires the incorporation of the Bay Delta Conservation Plan into the Delta Plan and requires the Bay Plan to include a review and analysis of Delta conveyance alternatives including specified canals and pipelines. Requires the Department of Water Resources development of certain Delta conveyance facilities to be completed on or before a specified date, and the construction of those facilities to be completed by a specified date.	08/29/2011 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on RULES.	2_Year_Bill
SB 293 Padilla (D)	Payment Bonds: Laborers	Oppose	Requires prime contractors or subcontractors, in a public or private work of improvement, to pay to a subcontractor certain amounts within a specified number of days after receipt of a progress payment. Makes changes relating to enforcement of claims on payment bonds, preliminary notices to enforce such claims, withholding of retention proceeds in public work construction contracts, and progress payments under such contracts. Provides an exemption. Relates to progress payments and subcontractor termination.	09/14/2011 - *****To GOVERNOR.	Gut and Amend - 5% retention. Public Works Coalition - priority oppose.
SB 449 Pavley (D)	Controller: Local Agency Financial Review		Authorizes the Controller to conduct a preliminary review to determine the existence of a local agency financial problem, and perform an audit upon completion of that review and to convene a local agency financial review committee and to authorize the committee to recommend a financial recovery plan for a local agency requesting assistance. Requires the Controller to report to the Legislature on the actions of the committee and the status of all engagements with local agencies.	06/29/2011 - In ASSEMBLY Committee on LOCAL GOVERNMENT: Reconsideration granted.	2_Year_Bill
SB 474 Evans (D)	Commercial Construction Contracts: Indemnity	Oppose	Provides that for construction contracts that are not for residential construction, a direct contract with a public agency, or the owner of private property, that purport to insure or indemnify specified individuals are unenforceable to the extent the claims are for active negligence or willful misconduct upon the part of specified individuals, or defects, or to	09/12/2011 - Enrolled.	

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>SB 475</u> Wright (D)	Infrastructure Financing		the extend the claims do not arise out of the scope of work of the individuals. Relates to public contracts. Exempts home improvements. Authorizes a local governmental agency to enter into an agreement with a private entity for financing for specified types of revenue generating infrastructure projects. Requires an agreement to include adequate financial resources to perform the agreement. Permits the agreements to lease or license to, or provide other permitted uses by, the private entity.	06/29/2011 - In ASM Com on L GOV: Reconsideration granted.	2_Year_Bill
<u>SB 571</u> Wolk (D)	Water Commission: Water Plan: Water Resources		Provides for the organization of the State Water Commission as a separate agency in state government. Enacts the Water Resources Investment Planning Act to establish regional water planning agencies and a state water investment plan. Provides the frequency for plan updates. Requires the State Department of Water Resources and regional agencies to submit related reports to the commission. Prescribes the contents of the reports and the purpose for developing the reports.	04/13/2011 - In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.	Informally tied to SB 34 (Simitian) related to a public goods charge on water. 2_Year_Bill
<u>SB 607</u> Walters (R)	Water Resources Board: Brackish Groundwater Treatment		Requires the Water Resources Control Board to either amend the State Ocean Plan, or adopt separate standards, to address water quality objectives and effluent limitations that are specifically appropriate for brackish groundwater treatment system facilities that produce municipal water supplies for local use.	09/06/2011 - Signed by GOVERNOR.;09/06/2011 - Chaptered by Secretary of State. Chapter No. 241	Sponsor: SOCWA
<u>SB 834</u> Wolk (D)	Integrated Regional Water Management Plans: Contents		Requires an integrated regional water management plan to address specified water quality and water supply matters and identify the manner in which the plan furthers a specified state policy concerning reducing reliance on the Sacramento-San Joaquin Delta for water supply and improving regional self-reliance for water, if the region depends on water for the watershed. Requires integrated regional water management plans to incorporate that requirement. Relates to plan funding.	09/09/2011 - *****To GOVERNOR.	
<u>SB 900</u> Steinberg (D)	Regional Water Quality Control Boards: Members		Amends the Porter-Cologne Water Quality Control Act. Deletes provisions of the act prohibiting a board member from participating in actions that involve the member or a waste discharger with which the member is connected. Specifies that the limitation on the member's financial interest applies only to a disqualifying financial interest within the Political Reform Act. Relates to requirements, qualifications, and to disqualifying factors for regional board members.	07/01/2011 - In ASSEMBLY. To Inactive File.	Inactive File

IRWD 2011 LEGISLATIVE MATRIX - 9/20/2011

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
<u>SB 911</u> De Leon (D)	Local Agency Bonds: Reports		Requires the Chief Fiscal Officer of a local agency issuing bonds to file a report on any project funded with its governing body within 60 days after the close of the agency's fiscal year. Provides that failure to do so on time shall result in a suspension of bond proceeds until the report is submitted. Requires a issuing local agency, upon a request about any expenditure of bond proceeds exceeding a specified amount, to make specified information available with respect to any expenditure or expenditures.	05/23/2011 - To ASSEMBLY Committee on LOCAL GOVERNMENT.	2_Year_Bill

September 26, 2011
Prepared By: F. Sanchez
Submitted by: G. Heiertz
Approved by: Paul Cook 

CONSENT CALENDAR

FREE SPRINKLER NOZZLE PROGRAM EXPANSION

SUMMARY:

IRWD partnered with Western Municipal Water District (Western) in an innovative Free Sprinkler Nozzle Program to provide 15,000 high efficiency spray head nozzles, free of charge, to eligible customers within the IRWD service area. The kick-off for the cost-effective program was September 1, and customer response has been very strong. As a result, within the first six days of the program approximately 50% of IRWD's available funding has been allocated. The program was originally designed to run as a 12-week program, ending November 11. Due to the strong response and cost-effectiveness of the program, staff recommends that the Board approve an increase in the FY 2011-12 Operating Budget of up to \$113,750 for an additional 35,000 nozzles to be funded from unallocated conservation revenues, and authorize the General Manager to amend the existing agreement with Western to reflect the increased program budget. The estimated total water saving associated with the additional funding are 695 acre-feet, based on 35,000 nozzles and a five-year life. The avoided cost is approximately \$265,490 based on avoided incremental water purchases of \$382 per acre-foot.

BACKGROUND:

Western, in partnership with other agencies, and Toro Irrigation developed an innovative, cost-effective landscape water use efficiency program. The program provides a web site (www.freesprinklernozzles.com) where customers can obtain vouchers for free high efficiency spray heads. The program is operated in partnership with Toro and its distributors so that customers have local supply houses where they can obtain the products. Western offers this program as a turn-key design to participating agencies by administering all program operations including website activities, purchase order handling, invoice payments and reporting to suppliers and participating agencies. Toro provides all nozzles, as well as support in equipment supplier recruitment and training.

IRWD entered into a partnership with Western and is participating in the current phase of the Free Sprinkler Nozzle program which was just launched on September 1. IRWD agreed to provide funding for up to 15,000 nozzles at a cost of \$3.25 each for a total of \$48,500. Funding was available in the adopted FY 2011-12 Operating Budget.

In the first six days of operation 348 vouchers representing approximately 8,700 nozzles were issued to IRWD customers. While participation is anticipated to drop off somewhat following the program launch, the program is expected to run for a 12-week period, until November 11. Even with a drop in demand, it is unlikely that IRWD's funding will last for the entire program span. Since customer demand is very strong, and the program is cost-effective for IRWD, staff is recommending that IRWD provide funding for an additional 35,000 nozzles.

The estimate of an additional 35,000 nozzles is based on an average of 280 vouchers being issued per week for the next 11 weeks, for a total of 3080 vouchers. The average number of nozzles per voucher is 25, which is a total of 77,000 nozzles. Assuming a 50% voucher redemption rate, 38,500 nozzles would be installed, although some nozzles would be funded from the original program budget. At a cost of \$3.25 per nozzle, the total additional cost for 35,000 nozzles is \$113,750. IRWD would only be invoiced on a per unit basis for actual nozzles installed.

An independent analysis of previous phases of this program revealed an estimated water savings per nozzle of 0.0199 acre-feet over a five-year life. Therefore, the total estimated water savings for 35,000 nozzles is approximately 695 acre-feet. The avoided cost to IRWD is \$265,490, based on savings of \$382 per acre-foot, which is the incremental difference between imported water and the IRWD base rate. Staff recommends IRWD's continued participation in the Free Sprinkler Nozzle Program by providing additional funding increase of up to \$113,750 and recommends the General Manager be authorized to amend the agreement with Western to reflect the increased program funding.

FISCAL IMPACTS:

The FY 2011-12 Operating Budget would be increased by \$113,750 to be funded through unallocated conservation revenues.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on September 13, 2011.

RECOMMENDATION:

THAT THE BOARD APPROVE AN INCREASE OF \$113,750 TO THE FY 2011-12 OPERATING BUDGET FROM UNALLOCATED CONSERVATION REVENUES FOR THE FREE SPRINKLER NOZZLE PROGRAM, AND AUTHORIZE THE GENERAL MANAGER TO AMEND THE EXISTING AGREEMENT WITH WESTERN MUNICIPAL WATER DISTRICT TO REFLECT THE PROGRAM BUDGET INCREASE.

LIST OF EXHIBITS:

None.

September 26, 2011

Prepared by: K. Welch/P. Weghorst

Submitted by: G. Heiertz

Approved by: Paul Cook

Handwritten signatures and initials: K. Welch, P. Weghorst, G. Heiertz, Paul Cook.

CONSENT CALENDAR

STOCKDALE WEST PILOT PROJECT FACILITIES –
FINAL ACCEPTANCE

SUMMARY:

Wood Brothers Inc. has completed construction of the Stockdale West Recharge Facilities Pilot Project (Pilot Project) in Kern County. Staff recommends that the Board:

- Accept the Stockdale West Recharge Facilities Pilot Project;
- Authorize the General Manager to file a Notice of Completion for the work; and
- Authorize the payment of the retention to Wood Brothers, Inc. 35 days after the date of recording the Notice of Completion.

BACKGROUND:

On May 9, 2011, the Board approved a construction award to Wood Brothers, Inc. for the Pilot Project subject to a not-to-exceed amount of \$2,500,000. A contract was executed and a notice to proceed was provided to Wood Brothers, Inc. on May 27, 2011 in the amount of \$2,475,885.

The construction of the Pilot Project occurred on a fast track basis in order to maximize the ability to capture high-flow Kern River water available from Buena Vista Water Storage District (BVWSD). An agreement was executed with BVWSD that provides for the delivery of up to 10,000 AF of water to the Pilot Project through July 2012. A separate agreement was executed with Rosedale-Rio Bravo Water Storage District for the operation of the facilities. Information collected from the use of the facilities will assist in the design of a long-term project. The constructed facilities will be permanent and useable throughout the life of the long-term project.

Three change orders were executed during the course of construction of the project with the last being approved under the authority of the Director of Planning and Water Resources on September 20, 2011 for \$7,552.50.

The following construction project has received a final inspection by the IRWD Planning and Water Resources Department and is recommended for acceptance:

Project Title:	Stockdale West Recharge Facilities Pilot Project
Project No.:	11595 (1326)
Design Engineer:	Dee Jaspar & Associates, Inc.
Construction Management by:	Dee Jaspar & Associates, Inc.

Contractor:	Wood Brothers, Inc.
Original Contract Cost:	\$2,475,885.00
Change Orders:	\$117,253.75
Final Contract Cost:	\$2,593,138.75
Original Contract Days:	65
Substantial Completion Days:	91
Final Contract Days:	91
Final Change Order Approved On:	September 20, 2011

FISCAL IMPACTS:

Project 11595 (1326) is included in the FY 2011-12 Capital Budget and the existing budget and Expenditure Authorizations are sufficient.

ENVIRONMENTAL COMPLIANCE:

A Notice of Exemption was filed for the Pilot Project consistent with a Class 6 Categorical Exemption as provided for in the CEQA guidelines. A new EIR for a long-term water banking and exchange program for the Stockdale West Ranch will be developed in the future once the terms and conditions for such a program have been established.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ACCEPT THE STOCKDALE WEST RECHARGE FACILITIES PILOT PROJECT; AUTHORIZE THE GENERAL MANAGER TO FILE A NOTICE OF COMPLETION FOR THE WORK; AND AUTHORIZE THE PAYMENT OF THE RETENTION 35 DAYS AFTER THE DATE OF RECORDING THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

None.

September 26, 2011

Prepared By: A. McNulty/F. Sanchez

Submitted by: G. Heiertz

Approved by: Paul Cook

CONSENT CALENDAR

BUREAU OF RECLAMATION GRANT FOR JOINT ENERGY AND WATER COMMERCIAL AUDIT PILOT PROGRAM

SUMMARY:

Irvine Ranch Water District (IRWD) has been awarded a local field services grant from the Bureau of Reclamation (Reclamation) for an innovative water / energy pilot program targeting small business customers. IRWD is the lead agency, with Southern California Edison (SCE) and West Basin Municipal Water District (West Basin) participating as project partners. The Joint Energy and Water Commercial Audit Pilot Program will design and test a comprehensive audit program for energy and water. The audit will guide the direct installation of water efficiency plumbing devices to the locations that will yield the greatest water savings. The goal of the project is to retrofit up to 500 toilets, 50 urinals, and 600 faucets with high efficiency devices within the IRWD and West Basin service areas. The total project cost is \$305,922. Reclamation funds awarded were \$73,500 with IRWD co-funding of \$62,500 plus staff time. The remaining costs will be funded by SCE, and West Basin and its two participating retailers, Cal Water and Golden State Water Company. As the grant manager, IRWD will need to allocate funds in the amount of \$136,000, with \$73,500 being reimbursable by the grant, to implement this pilot program. Staff recommends the Board approve an increase of \$136,000 to the FY 2011-12 Operating Budget, of which \$73,500 is reimbursable, and authorize the General Manager to enter into an agreement with the Bureau for the grant project.

BACKGROUND:

IRWD and West Basin partnered with SCE to apply for funding assistance from Reclamation to design and implement a pilot program that augments the existing SCE business audit program with a water component. The pilot partnership with SCE leverages the existing SCE business audit program to gather information about customer water use and encourages customers to make upgrades to their water-wasting equipment by presenting them with incentives and/or direct installation services for high-efficiency plumbing fixtures such as toilets, urinals and faucet aerators.

Commercial customers are currently eligible for a no-cost energy audit from SCE. The grant funding will add an inventory of water using devices to the audit. The water device information will enable the water agencies to follow up with device retrofits where they are most needed. The retrofits will be prioritized based on the age and performance of the existing toilets and frequency of use. As a targeting tool the audit will enable the water agencies to leverage their funding toward achieving water savings directly by retrofitting the oldest and most frequently used toilets, urinals and faucet aerators.

Achieving water savings from the retrofit portion of the program is a direct benefit to IRWD. An additional benefit will be derived from the model that this program will provide to the region. As a demonstration project, the long-term objectives are: a) encouraging Metropolitan Water

District to partner with SCE to offer the program on a regional basis; b) establishing additional water-energy partnerships with SCE; and c) seeking California Public Utilities Commission co-funding for water efficiency programs based on the embedded energy savings associated with water conservation.

The project is being jointly funded by Reclamation, IRWD, West Basin and SCE. IRWD is the lead on the project, and will be the recipient of the USBR grant funding. For budget purposes, IRWD will need to provide sufficient funding for IRWD's direct funding of \$62,500, as well as the Bureau grant portion of \$73,500, for a total of \$136,000. All of the USBR \$73,500 funding will be reimbursed to IRWD. SCE's contribution is all in the form of in-kind services. The project funding allocations, including IRWD's contribution is shown in Table 1.

Table 1: Program Funding

Funding Agency	Task	Total
IRWD	Device Installations	\$ 62,500
USBR Grant	Grant Funding (reimbursable to IRWD)	\$ 73,500
Sub-total IRWD funding*		\$136,000
West Basin and participating retail agencies	Device installations	\$121,000
IRWD, West Basin, SCE	In-Kind Services and Staff Time	\$ 48,922
TOTAL PROGRAM BUDGET		\$305,922

* \$73,500 of the total IRWD expenditures will be reimbursed through the USBR grant. IRWD's net funding contribution is \$62,500 plus staff time.

The project is anticipated to begin in Fall 2011 and will be completed in 2013. Any program funding not expended in FY 2011-12 will be requested in the FY 2012-13 Operating Budget. IRWD will enter into separate agreements with West Basin and with SCE to provide a mechanism for IRWD to reimburse each of those agencies for their share of the grant funding.

The agreement, which is included as Exhibit "A" must be fully executed by September 30, 2011 in order to access the Reclamation grant funding.

Water Savings:

Throughout the combined service areas of IRWD and West Basin, it is anticipated that approximately 10.1 million gallons (31 acre-feet) of water will be saved annually, totaling nearly 500 AF water savings over the lifetime of the devices. Additional benefits include the embedded energy savings and greenhouse gas reductions.

FISCAL IMPACTS:

The FY 2011-12 Operating Budget would be increased to add \$136,000 for the Joint Energy and Water Commercial Audit Pilot Program to be funded from unallocated conservation revenues. \$73,500 will be reimbursed to IRWD by Reclamation.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on September 13, 2011.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE AN INCREASE OF \$136,000 TO THE FY 2011-12 OPERATING BUDGET AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE AN AGREEMENT WITH THE BUREAU OF RECLAMATION FOR THE IMPLEMENTATION OF THE JOINT ENERGY AND WATER COMMERCIAL AUDIT PILOT PROGRAM.

LIST OF EXHIBITS:

Exhibit "A" – Grant Agreement between Bureau of Reclamation and IRWD for Joint Water Energy Pilot Grant

EXHIBIT "A"

7-2279 (04-2011)
Bureau of Reclamation

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION ASSISTANCE AGREEMENT

1A. AGREEMENT NUMBER R11AP35323	1B. MOD NUMBER	2. TYPE OF AGREEMENT <input checked="" type="checkbox"/> GRANT <input type="checkbox"/> COOPERATIVE AGREEMENT	3. CLASS OF RECIPIENT Special District								
4. ISSUING OFFICE Bureau of Reclamation Southern California Area Office 27708 Jefferson Avenue, Suite 202 Temecula, CA 92590		5. RECIPIENT Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618-3100 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">EIN #:</td> <td style="width: 25%;">95-2232918</td> <td style="width: 20%;">County:</td> <td style="width: 40%;">Orange</td> </tr> <tr> <td>DUNS #:</td> <td>05-927-0884</td> <td>Congress. Dist:</td> <td>48</td> </tr> </table>		EIN #:	95-2232918	County:	Orange	DUNS #:	05-927-0884	Congress. Dist:	48
EIN #:	95-2232918	County:	Orange								
DUNS #:	05-927-0884	Congress. Dist:	48								
6. ADMINISTRATIVE POINT OF CONTACT Bureau of Reclamation Leslie Cleveland Southern California Area Office 27708 Jefferson Avenue, Suite 202 Temecula, CA 92590 Phone: 951-695-5310, E-Mail: LCleveland@usbr.gov		7. RECIPIENT PROJECT MANAGER Ms. Amy McNulty Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618 Phone: 949-453-5634, E-Mail: mcnulty@irwd.com									
8. GRANTS OFFICER TECHNICAL REPRESENTATIVE Bureau of Reclamation Debra Whitney Southern California Area Office 27708 Jefferson Avenue, Suite 202 Temecula, CA 92590 Phone 951-695-5310, E-Mail: DWhitney@usbr.gov		9A. INITIAL AGREEMENT EFFECTIVE DATE: See block 17a	9B. MODIFICATION EFFECTIVE DATE:								
		10. COMPLETION DATE June 30, 2013									
11A. PROGRAM STATUTORY AUTHORITY Omnibus Public Lands Management Act 2009, P.L. 111-11 This grant uses (A)-to conserve water, (B)-to increase water use efficiency and (D)-to enhance water management. The estimated water availability of 31.04 AFY			11B. CFDA Number 15.530								
12. FUNDING INFORMATION	<u>RECIPIENT/OTHER</u>	<u>RECLAMATION</u>	13. REQUISITION NUMBER 1350100112 14A. ACCOUNTING AND APPROPRIATION DATA A10-1971-6400-100-14-0-0 3501000 411G								
Total Estimated Amount of Agreement	\$221,484	\$73,500									
This Obligation	\$221,484	\$73,500									
Previous Obligation											
Total Obligation	\$221,484	\$73,500									
Cost-Share %	75%	25%	14B. TREASURY ACCOUNT FUNDING SYMBOL 14X0680								
15. PROJECT TITLE AND BRIEF SUMMARY OF PURPOSE AND OBJECTIVES OF PROJECT: TITLE: EWC Audit Pilot Program PROJECT: The purpose of this pilot program is to determine the effectiveness of integrating a water component into Southern California Edison's (SCE) existing small and medium-sized business Non Residential Audit Program. The water agencies are interested in partnering with energy utilities and using the audit opportunities to leverage resources and maximize savings. A successful pilot could be the basis for an expanded regional integrated water/energy savings program.. Successful integration will benefit the water and energy utility customers by offering them an integrated, water and electric energy audit efficiency evaluation and high-efficiency device retrofits as applicable. SCE will benefit from a no-cost partnership opportunity with water agencies. Finally, IRWD and West Basin will benefit from a reduced-cost audit program and better targeting strategies for high efficiency toilet and faucet aerator retrofits.											
16a. Acceptance of this Assistance Agreement in accordance with the terms and conditions contained herein is hereby made on behalf of the above-named recipient BY: _____ DATE: _____		17a. Award of this Assistance Agreement in accordance with the terms and conditions contained herein is hereby made on behalf of the United States of America, Department of the Interior, Bureau of Reclamation BY: _____ DATE: _____									
16b. NAME, TITLE, AND TELEPHONE NUMBER OF SIGNER Mr. Paul Cook Interim General Manager 949-453-5310		17b. NAME OF GRANTS OFFICER William J. Steele Grants Officer 951-695-5310									

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**Grant Agreement
Between
Bureau of Reclamation
And
Irvine Ranch Water District
For
Joint Energy and Water Commercial Audit Pilot Program**

I. OVERVIEW AND SCHEDULE

1. AUTHORITY

This Grant Agreement (Agreement) is entered into between the United States of America, acting through the Department of the Interior, Bureau of Reclamation, hereinafter referred to as “Reclamation,” and Irvine Ranch Water District, CA, hereinafter referred to as the “Recipient” or “Grantee,” pursuant to Public Law 111-11 (42 USC 10364). The following section, provided in full text, authorizes Reclamation to award this financial assistance agreement:

SEC. 9504. WATER MANAGEMENT IMPROVEMENT.

- (a) Authorization of Grants and Cooperative Agreements –
- (1) **AUTHORITY OF SECRETARY** – The Secretary may provide any grant to, or enter into an agreement with, any eligible applicant to assist the eligible applicant in planning, designing, or constructing any improvement - -
- (A) to conserve water;
 - (B) to increase water use efficiency;
 - (C) to facilitate water markets;
 - (D) to enhance water management, including increasing the use of renewable energy in the management and delivery of water;
 - (E) to accelerate the adoption and use of advanced water treatment technologies to increase water supply;
 - (F) to prevent the decline of species that the United States Fish and Wildlife Service and National Marine Fisheries Service have proposed for listing under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) (or candidate species that are being considered by those agencies for such listing but are not yet the subject of a proposed rule);
 - (G) to accelerate the recovery of threatened species, endangered species, and designated critical habitats that are adversely affected by Federal reclamation projects or are subject to a recovery plan or conservation plan under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) under which the Commissioner of Reclamation has implementation responsibilities; or
 - (H) to carry out any other activity
 - (i) to address any climate-related impact to the water supply of the United States that increases ecological resiliency to the impacts of climate change; or

(ii) to prevent any water-related crisis or conflict at any watershed that has a nexus to a Federal reclamation project located in a service area and;

2. PUBLIC PURPOSE OF SUPPORT OR STIMULATION

The purpose of this pilot program is to determine the effectiveness of integrating a water component into Southern California Edison's (SCE) existing small and medium-sized business Non Residential Audit Program. The water agencies are interested in partnering with energy utilities and using the audit opportunities to leverage resources and maximize savings. A successful pilot could be the basis for an expanded regional integrated water/energy savings program.

Successful integration will benefit the water and energy utility customers by offering them an integrated, water and electric energy audit efficiency evaluation and high-efficiency device retrofits as applicable. SCE will benefit from a no-cost partnership opportunity with water agencies. Finally, IRWD and West Basin will benefit from a reduced-cost audit program and better targeting strategies for high efficiency toilet and faucet aerator retrofits.

3. BACKGROUND AND OBJECTIVES

The proposal is for IRWD and West Basin (collectively referred to as Water Agencies) to pilot a joint audit program with SCE within their respective service areas. The Water Agencies propose to partner with and leverage the existing SCE activity through the existing Non Residential Audit Program to gather water-use information about the site and encourage customers to make upgrades to their water-wasting equipment by presenting them with incentives/direct install services for high-efficiency plumbing fixtures.

The SCE Non Residential Audit Program has offered this free service to business customers since 1978. This program provides customers with energy efficiency recommendations with the intention of driving customers to the SCE rebate incentive programs. Adding a water efficiency component will increase the benefit offered to these customers as they will be receiving free devices and installation as well as reduced costs on their water bill as a result of the additional upgrades. Providing offerings for both water and energy savings will benefit all parties involved including the customers themselves.

This project builds on the findings from the USBR's WEEP Study, and addresses five of the seven barriers outlined in the Barriers and Incentive Analysis of the WEEP study. They include: Create a Partnership Framework for Program Implementation; Build CII Customer Expertise; Selectively Enhance Financial Incentives for CII; Facilitate Participation in Water and Energy Efficiency Programs; Explore Existing Mechanisms to Fund Water and Energy Efficiency Programs.

The differences between the two participating water agencies themselves may prove to demonstrate variation in "on-the-ground" implementation that can be learned from. IRWD is a

retail water agency and differs in structure to West Basin, a mid-level wholesale water agency. While IRWD serves water to several cities in Orange County and has direct contact with their end users/customers, West Basin is involved in an SCE local government partnership called the South Bay Environmental Services Center and can communicate directly with the cities within the service area through the partnership. These factors will benefit the pilot in general by illuminating aspects of the program that are best suited for expansion on a regional scale.

Based on the retrofit of 550 toilets, 50 urinals, and 600 faucets with high efficiency devices, and using standard savings by device it is anticipated that approximately 10.1 Million gallons of water will be saved annually or 31 acre-feet per year, totaling 500 AF savings over the lifetime of the devices. The water savings may vary depending on the mix of devices installed, and will be documented in any reporting.

Additional benefits include the associated energy savings and greenhouse gas reductions. According to the California Energy Commission (CEC), delivery of imported water to Southern California requires about 9,727 kilowatt-hours per million gallons (kWh/MG) because the water must be pumped over the Tehachapi Mountains. An estimated annual reduction in imported water of 31 AFY = 10.1 MG x 9,727 kWh/MG = 98 MWh savings. Each MWh = 879 lbs of greenhouse gas = 86,480 lbs of greenhouse gas = 39 metric tons of CO₂ per year.

4. PERIOD OF PERFORMANCE AND FUNDS AVAILABILITY

This Agreement becomes effective on the date shown in Block 17a of Form 7-2279, United States of America, Department of the Interior, Bureau of Reclamation, Assistance Agreement. The Agreement shall remain in effect until the date shown in Block 10 of Form 7-2279, United States of America, Department of the Interior, Bureau of Reclamation, Assistance Agreement. The period of performance for this Agreement may only be modified through written modification of the Agreement by a Reclamation Grants Officer (GO).

No legal liability on the part of the Government for any payment may arise until funds are made available, in writing, to the Recipient by the Grants Officer. The total estimated amount of federal funding for this agreement is **\$73,500**, of which the initial amount of federal funds available is limited to **\$73,500**, as indicated by "this obligation" within Block 12 of Form 7-2279, United States of America, Department of the Interior, Bureau of Reclamation, Assistance Agreement. Subject to the availability of Congressional appropriations, subsequent funds will be made available for payment through written modifications to this agreement by a Reclamation Grants Officer.

5. SCOPE OF WORK AND MILESTONES

Project Tasks

Upon notification of award the following tasks will be undertaken.

1. Enhance Audit Tool
2. Develop Collateral Materials and Installation Voucher
3. Installation Company Request for Proposals
4. Cross Training SCE Auditors

5. Audit Activity
6. Perform Installation
7. Pilot Program Analysis

Task 1 – Enhance Audit Tool

Integrate the water portion of the audit into the hand-held audit tool currently used by the SCE auditor. The following plumbing fixture questions, or similarly related questions, will be added to the electronic hand held audit tool: 1) Number of toilets on site? 2) Are they Tank or Flush Valve Toilets? 3) Is the toilet flush volume greater than 3.5 gallons per flush (gpf)? 4) Number of Urinals greater than 1.0 gpf on site? 5) Number of faucets? 6) Faucet aerator flow rate?

The questions above will also be included in the report that is given to the customer at the time of the audit. The report will contain the water and energy efficiency opportunity recommendations found on site that day as well as the potential water savings if plumbing retrofits would be appropriate for their site in addition to the existing energy savings information.

This audit information will be provided to the water agencies for all audit sites. This information will provide an accurate accounting of devices present and will aid in targeting water-use efficiency programs.

Task 2 – Develop Collateral Materials and Installation Voucher

Customers with eligible equipment (toilets flushing at a volume greater than 3.5 gpf, urinals flushing at a volume greater than 1.0 gpf, faucet aerators greater than 0.5 gallons per minute) will be offered a voucher issued by either IRWD or West Basin for the retrofit of the identified equipment from the audit report. The voucher will print along with the audit report. The voucher will include: contact information for the installation company selected by water providers, expiration date to encourage immediate action and a statement that post-install inspection may be conducted to verify installs as well as identification of all program funding partners.

Task 3 – Installation Company Request for Proposals

IRWD will issue a Request for Proposals for toilet, urinal and faucet aerator installation companies. Upon review of the proposals, IRWD will select the installation company using a competitive bid process according to IRWD's standard procedures.

For the West Basin pilot area, Cal Water and Golden State Water will hire direct installation companies to perform the installations. They will go through independent processes to obtain services from installation companies.

Task 4 – Cross Training SCE Auditors

The SCE auditors will be cross-trained to identify toilet, urinal and faucet flow rates. Auditors will be trained to look for flow rate stamps on the devices and also how to conduct a simple flow test on the faucets using a flow bag or the bucket and stop watch method; both processes measure water by turning the faucet on for a specified duration and measuring the volume of water collected to calculate the gallons per minute flow rate of the faucet.

Task 5 – Audit Activity

SCE auditors will visit businesses as assigned by the SCE Program Manager and perform the combined water and energy audits. SCE auditors will produce and review an audit report with the customer that includes both energy and water efficiency recommendations.

Water information includes (all information to be provided by water agencies during Task 1 above): 1) Quantities and flow rates of toilets, urinals and faucets; 2) Replacement devices with reduced flow rates if applicable; and 3) Estimated water savings if fixtures were retrofitted.

Customers with qualifying equipment will be eligible for water efficiency upgrades at no cost to them. Qualifying customers will be notified of their eligibility with a notification printing on the audit report. This notice will serve as a voucher that can be redeemed with the Water Agency installation companies for applicable high efficiency toilet, urinal and faucet aerator/flow restrictor installations.

Audit Milestones: 50% of the audits will be completed by the 3rd Quarter 2012 (calendar year) and the remaining audits completed by no later than the 1st Quarter of 2013 (calendar year).

Task 6 – Perform Installations

Based on the findings from the audit, customers who qualify for plumbing retrofits will receive a voucher as described in Task 5. The water audit results will be provided by SCE to the appropriate water agency. The water agencies will provide the eligible customer contact information to the installation company. The installation company will then: 1) Schedule installation date with customer; 2) Assess replacement toilet and/or urinal and aerator type and install efficient equipment; and 3) Redeem the voucher with customer who will sign to confirm installation. The voucher then becomes the supporting documentation for the invoice from the installation company to the water agency who serves the customer.

The water agencies will receive all audit findings from the SCE audit team and will therefore have the ability and opportunity to follow up with the customers to encourage the retrofit be completed before the voucher expires. The expiration date on the voucher allows for a control mechanism with regard to program budget for the installation piece.

Installation Milestones: 50% of the installations will be completed by the 3rd Quarter 2012 and the remaining installations completed by no later than the 2nd Quarter of 2013.

Task 7 - Pilot Program Analysis

The nature of this innovative pilot program is to develop an effective model for joint water and energy audits for small to medium-sized businesses. This program has two performance measures. First is the number of joint water and energy audits that are completed within the grant timeline. The second performance measure is the quantity of devices (toilets, urinals and faucets) that are retrofitted through this program, and associated water savings, using standard estimates per device.

Evaluation of the pilot will cover the audit and the installation piece. At a minimum, the analysis for the audit portion will include 1) Coordination with SCE audit team and internal staff; 2) Ease

of water measure integration into existing program; 3) Audit payment processing method from water agencies to SCE. The analysis for the install portion will include: 1) Audit findings of existing plumbing fixtures within the target customer group; 2) Number of devices installed and associated water savings; 3) Voucher redemption/Install participation rates.

Survey and analysis of the pilot program will be shared with SCE along with inclusion of their input on the pilot program evaluation and suggestions for regional implementation.

Program Implementation Strategy

The Program implementation strategy is as described above in the Project Narrative Tasks 1-6. As mentioned above, the SCE Non Residential Audit Program has been offering business customers the free energy audit program since 1978 demonstrating a sound implementation strategy. In addition, the water agencies have both implemented successful direct install programs in the past and currently offer their customers water audits upon request. This pilot has been designed as an innovative program to leverage existing efforts and experience from both SCE and the Water Agencies, with a long-term objective of building a model to greatly expand water/energy partnerships and resource conservation opportunities.

Program Schedule

The following schedule is based upon notification of award in October 2011. The milestone for the audit and installations is to be at 50% completion by the 3rd quarter 2012. The remaining audits will be completed by no later than the 1st Quarter of 2013, and the remaining installations completed by no later than the 2nd Quarter of 2013.

	Start Date	End Date
Task 1. Add water measures to SCE audit tool	October 2011	December 2011
Task 2. Develop collateral materials and voucher	October 2011	December 2011
Task 3. Hire water installation companies	October 2011	December 2011
Task 4. Cross-train SCE auditors	October 2011	March 2012
Task 5. Audit activity (include milestones)	January 2012	June 2013
Task 6. Contractor installs devices	January 2012	June 2013
Task 7. Program Analysis	January 2013	June 2013
Semi-Annual Reports	Ongoing	Ongoing
Final Report	Ongoing	June 2013

6. RESPONSIBILITY OF THE PARTIES

6.1 Recipient Responsibilities

6.1.1 The Recipient shall carry out the Scope of Work in accordance with the terms and conditions stated herein. The Recipient shall adhere to Federal, state, and local laws, regulations, and codes, as applicable, and shall obtain all required approvals and permits. If the Scope of Work contains construction activities, the Recipient is responsible for construction inspection, oversight, and acceptance. If applicable, the Recipient shall also coordinate and obtain approvals from site owners and operators.

6.1.2 Additional Recipient Responsibilities include:

In support of this Agreement, the Recipient shall comply with and perform the following activities:

1. Contribute funds and/or in-kind services in the amount of **\$221,484** to complete project activities. The amount of funding commitment from IRWD includes both in-kind labor in the amount of \$20,684 and cash contributions in the amount of \$62,500. West Basin's participating retail agencies, California Water Service Company and Golden State Water Company have committed \$80,000 and \$41,000 respectively out of budgets already allocated for direct-installation activity. Similarly, SCE is contributing funds already budgeted for audit services in the amount of \$17,300.
2. Provide coordination between interested parties and Reclamation, as mutually agreeable to Reclamation and the Recipient.
3. Clearly mark public literature, such as but not limited to, newsletter, fact sheets, identifying Reclamation as a funding agency; identify Reclamation funding in professional papers which may be prepared as a result of this activity; and include Reclamation's logo in signs or other artwork.
4. Perform the work and accomplishments in accordance with the Scope of Work
5. Report progress to Reclamation's Grants Officer (GO) on a **semi-annual** basis as outlined in Section 9 Part 9.4, Reporting Requirements and Distribution, of this agreement.
6. Immediately advise Reclamation's GO for this agreement of any issues, problems and other matters that may affect the successful implementation of this project.
7. Prepare and submit the project final report within 90 days of the project or agreement end, whichever comes first. **Report shall be a hard copy and on CD (print ready).**

6.2 Reclamation Responsibilities

6.2.1 Reclamation will monitor and provide federal oversight of activities performed under this Agreement. Monitoring and oversight includes review and approval of financial status and performance reports, payment requests, and any other deliverables identified as part of the Scope

of Work. Additional monitoring activities may include site visits, conference calls, and other on-site and off-site monitoring activities. At the Recipient's request, Reclamation may also provide technical assistance to the Recipient in support of the Scope of Work and objectives of this Agreement.

6.2.2 Substantial involvement between Reclamation and the Recipient is **not** anticipated during the performance of this Agreement. This is a grant agreement and not a cooperative agreement.

6.2.3 Reclamation shall;

1. Provide funds of **\$73,500** in Fiscal Year 2011.
2. Review financial reports and program performance reports.
3. Provide Reclamation graphics and logos.

7. BUDGET

7.1 Budget Estimate. Attachment A is the estimated budget for this Agreement. As federal financial assistance agreements are cost-reimbursable, the budget provided is for estimation purposes only. Final costs incurred under the budget categories listed may be either higher or lower than the estimated costs. All costs incurred by the Recipient under this agreement must be in accordance with any pre-award clarifications conducted between the Recipient and Reclamation, as well as with the terms and conditions of this agreement. Final determination of the allowability, allocability, or reasonableness of costs incurred under this agreement is the responsibility of the Grants Officer. Recipients are encouraged to direct any questions regarding allowability, allocability or reasonableness of costs to the Grants Officer for review prior to incurrence of the costs in question.

7.2 Cost Sharing Requirement

At least 75% non-federal cost-share is required for costs incurred under this Agreement.

7.3 Pre-Award Incurrence of Costs

The Recipient shall not be entitled to have incurred costs for this agreement, which if had been incurred after this Agreement was entered into, would have been allowable, allocable, and reasonable under the terms and conditions of this Agreement.

7.4 Allowable Costs (2 CFR Part §225)

Costs incurred for the performance of this Agreement must be allowable, allocable to the project, and reasonable. The following Office of Management and Budget (OMB) Circular, codified within the Code of Federal Regulations (CFR), governs the allowability of costs for Federal financial assistance:

2 CFR Part 225 (OMB Circular A-87), "Cost Principles for State, Local, and Indian Tribal Governments"

Expenditures for the performance of this Agreement must conform to the requirements within this Circular. The Recipient must maintain sufficient documentation to support these expenditures. Questions on the allowability of costs should be directed to the GO responsible for this Agreement.

The Recipient shall not incur costs or obligate funds for any purpose pertaining to operation of the program or activities beyond the expiration date stated in the Agreement. The only costs which are authorized for a period of up to 90 days following the project performance period are those strictly associated with closeout activities for preparation of the final report.

7.5 Changes (43 CFR §12.70).

(a) *General.* Grantees and subgrantees are permitted to rebudget within the approved direct cost budget to meet unanticipated requirements and may make limited program changes to the approved project. However, unless waived by the awarding agency, certain types of post-award changes in budgets and projects shall require the prior written approval of the awarding agency.

(b) *Relation to cost principles.* The applicable cost principles (see 43 §12.62) contain requirements for prior approval of certain types of costs. Except where waived, those requirements apply to all grants and subgrants even if paragraphs (c) through (f) of this section do not.

(c) *Budget changes.*

(1) *Nonconstruction projects.* Except as stated in other regulations or an award document, grantees or subgrantees shall obtain the prior approval of the awarding agency whenever any of the following changes is anticipated under a nonconstruction award:

(i) Any revision which would result in the need for additional funding.

(ii) Unless waived by the awarding agency, cumulative transfers among direct cost categories, or, if applicable, among separately budgeted programs, projects, functions, or activities which exceed or are expected to exceed ten percent of the current total approved budget, whenever the awarding agency's share exceeds \$100,000.

(iii) Transfer of funds allotted for training allowances (i.e., from direct payments to trainees to other expense categories).

(2) *Construction projects.* Grantees and subgrantees shall obtain prior written approval for any budget revision which would result in the need for additional funds.

(3) *Combined construction and nonconstruction projects.* When a grant or subgrant provides funding for both construction and nonconstruction activities, the grantee or subgrantee must obtain prior written approval from the awarding agency before making any fund or budget transfer from nonconstruction to construction or vice versa.

(d) *Programmatic changes.* Grantees or subgrantees must obtain the prior approval of the awarding agency whenever any of the following actions is anticipated:

- (1) Any revision of the scope or objectives of the project (regardless of whether there is an associated budget revision requiring prior approval).
- (2) Need to extend the period of availability of funds.
- (3) Changes in key persons in cases where specified in an application or a grant award. In research projects, a change in the project director or principal investigator shall always require approval unless waived by the awarding agency.
- (4) Under nonconstruction projects, contracting out, subgranting (if authorized by law) or otherwise obtaining the services of a third party to perform activities which are central to the purposes of the award, *unless included in the initial funding proposal*. This approval requirement is in addition to the approval requirements of 43 §12.76 but does not apply to the procurement of equipment, supplies, and general support services.

(e) *Additional prior approval requirements.* The awarding agency may not require prior approval for any budget revision which is not described in paragraph (c) of this section.

(f) *Requesting prior approval.*

- (1) A request for prior approval of any budget revision will be in the same budget format the grantee used in its application and shall be accompanied by a narrative justification for the proposed revision.
- (2) A request for a prior approval under the applicable Federal cost principles (see §12.62) may be made by letter.
- (3) A request by a subgrantee for prior approval will be addressed in writing to the grantee. The grantee will promptly review such request and shall approve or disapprove the request in writing. A grantee will not approve any budget or project revision which is inconsistent with the purpose or terms and conditions of the Federal grant to the grantee. If the revision, requested by the subgrantee would result in a change to the grantee's approved project which requires Federal prior approval, the grantee will obtain the Federal agency's approval before approving the subgrantee's request.

7.6 Modifications

Any changes to this Agreement shall be made by means of a written modification. Reclamation may make changes to the Agreement by means of a unilateral modification to address administrative matters, such as changes in address, no-cost time extensions, or the addition of previously agreed upon funding. Additionally, a unilateral modification may be utilized by Reclamation if it should become necessary to suspend or terminate the Agreement in accordance with 43 CFR 12.83.

All other changes shall be made by means of a bilateral modification to the Agreement. No oral statement made by any person, or written statement by any person other than the GO, shall be allowed in any manner or degree to modify or otherwise effect the terms of the Agreement.

All requests for modification of the Agreement shall be made in writing, provide a full description of the reason for the request, and be sent to the attention of the GO. Any request for project extension shall be made at least 45 days prior to the expiration date of the Agreement or the expiration date of any extension period that may have been previously granted. Any determination to extend the period of performance or to provide follow-on funding for continuation of a project is solely at the discretion of Reclamation.

8. KEY PERSONNEL

8.1 Recipient's Key Personnel

The Recipient's Project Manager for this Agreement shall be:

Ms. Amy McNulty
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618
Phone: 949-453-5634
E-Mail: mcnulty@irwd.com

Changes to Key Personnel require compliance with 43 CFR 12.70(d)(3).

8.2 Reclamation's Key Personnel

8.2.1 Grants Officer (GO):

Bureau of Reclamation
Mr. William J. Steele
Attn: Grants Officer
27708 Jefferson Ave, Suite 202
Temecula, CA 92590
Phone: 951-695-5310
E-Mail: WSteele@usbr.gov

(a) The GO is the only official with legal delegated authority to represent Reclamation. The GO's responsibilities include, but are not limited to, the following:

- (1) Formally obligate Reclamation to expend funds or change the funding level of the Agreement;
- (2) Approve through formal modification changes in the scope of work and/or budget;

- (3) Approve through formal modification any increase or decrease in the period of performance of the Agreement;
- (4) Approve through formal modification changes in any of the expressed terms, conditions, or specifications of the Agreement;
- (5) Be responsible for the overall administration, management, and other non-programmatic aspects of the Agreement including, but not limited to, interpretation of financial assistance statutes, regulations, circulars, policies, and terms of the Agreement;
- (6) Where applicable, ensures that Reclamation complies with the administrative requirements required by statutes, regulations, circulars, policies, and terms of the Agreement.

8.2.2 Grants Officer Technical Representative (GOTR):

Bureau of Reclamation
Debra Whitney
Attn: Water Conservation Specialist
27708 Jefferson Ave, Suite 202
Temecula, CA 92590
Phone: 951-695-5310
E-Mail: DWhitney@usbr.gov

- (a) The GOTR's authority is limited to technical and programmatic aspects of the Agreement. The GOTR's responsibilities include, but are not limited to, the following:
 - (1) Assist the Recipient, as necessary, in interpreting and carrying out the scope of work in the Agreement;
 - (2) Review, and where required, approve Recipient reports and submittals as required by the Agreement;
 - (3) Where applicable, monitor the Recipient to ensure compliance with the technical requirements of the Agreement;
 - (4) Where applicable, ensure that Reclamation complies with the technical requirements of the Agreement;
- (b) The GOTR does not have the authority to and may not issue any technical assistance which:
 - (1) Constitutes an assignment of additional work outside the scope of work of the Agreement;
 - (2) In any manner causes an increase or decrease in the total estimated cost or the time required for performance; or

- (3) Changes any of the expressed terms, conditions, or specifications of the Agreement.

9. REPORTING REQUIREMENTS AND DISTRIBUTION

9.1 Noncompliance. Failure to comply with the reporting requirements contained in this Agreement may be considered a material non-compliance with the terms and conditions of the award. Non compliance may result in withholding of payments pending receipt of required reports, denying both the use of funds and matching credit for all or part of the cost of the activity or action not in compliance, whole or partial suspension or termination of the Agreement, recovery of funds paid under the Agreement, withholding of future awards, or other legal remedies in accordance with 43 CFR §12.83.

9.2 Financial Reports. Financial Status Reports shall be submitted by means of the SF-425 and shall be submitted according to the Report Frequency and Distribution schedule below. All financial reports shall be signed by an Authorized Certifying Official for the Recipient's organization.

9.3 Monitoring and reporting program performance (43 CFR §12.80)

(a) *Monitoring by grantees.* Grantees are responsible for managing the day-to-day operations of grant and subgrant supported activities. Grantees must monitor grant and subgrant supported activities to assure compliance with applicable Federal requirements and that performance goals are being achieved. Grantee monitoring must cover each program, function or activity.

(b) *Nonconstruction performance reports.* The Federal agency may, if it decides that performance information available from subsequent applications contains sufficient information to meet its programmatic needs, require the grantee to submit a performance report only upon expiration or termination of grant support. Unless waived by the Federal agency this report will be due on the same date as the final Financial Status Report.

(1) Grantees shall submit annual performance reports unless the awarding agency requires quarterly or semi-annual reports. However, performance reports will not be required more frequently than quarterly. Annual reports shall be due 90 days after the grant year, quarterly or semi-annual reports shall be due 30 days after the reporting period. The final performance report will be due 90 days after the expiration or termination of grant support. If a justified request is submitted by a grantee, the Federal agency may extend the due date for any performance report. Additionally, requirements for unnecessary performance reports may be waived by the Federal agency.

(2) Performance reports will contain, for each grant, brief information on the following:

- (i) A comparison of actual accomplishments to the objectives established for the period. Where the output of the project can be quantified, a computation of the cost per unit of output may be required if that information will be useful.

- (ii) The reasons for slippage if established objectives were not met.
 - (iii) Additional pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.
- (3) Grantees will not be required to submit more than the original and two copies of performance reports.
- (4) Grantees will adhere to the standards in this section in prescribing performance reporting requirements for subgrantees.
- (c) *Construction performance reports.* For the most part, on-site technical inspections and certified percentage-of-completion data are relied on heavily by Federal agencies to monitor progress under construction grants and subgrants. The Federal agency will require additional formal performance reports only when considered necessary, and never more frequently than quarterly.
- (d) *Significant developments.* Events may occur between the scheduled performance reporting dates which have significant impact upon the grant or subgrant supported activity. In such cases, the grantee must inform the Federal agency as soon as the following types of conditions become known:
- (1) Problems, delays, or adverse conditions which will materially impair the ability to meet the objective of the award. This disclosure must include a statement of the action taken, or contemplated, and any assistance needed to resolve the situation.
 - (2) Favorable developments which enable meeting time schedules and objectives sooner or at less cost than anticipated or producing more beneficial results than originally planned.
- (e) Federal agencies may make site visits as warranted by program needs.
- (f) *Waivers, extensions.*
- (1) Federal agencies may waive any performance report required by this part if not needed.
 - (2) The grantee may waive any performance report from a subgrantee when not needed. The grantee may extend the due date for any performance report from a subgrantee if the grantee will still be able to meet its performance reporting obligations to the Federal agency.

9.4 Report Frequency and Distribution. The following table sets forth the reporting requirements for this Agreement. Please note the first report due date listed for each type of report.

REQUIRED REPORTS	Interim Reports	Final Report
Performance Report		
Format	No specific format required. See content requirements within Section 9.3 (43 CFR 12.80) above.	Summary of activities completed during the entire period of performance is required. See content requirements within Section 9.3 (43 CFR 12.80) above.
Reporting Frequency	Semi-Annual	Final Report due upon completion of Agreement's period of performance
Reporting Period	For Semi-Annual Reporting: October 1 through March 31 and April 1 through September 30.	Entire period of performance
Due Date*	Within 30 days after the end of the Reporting Period	Within 90 days after the completion date of the Agreement
First Report Due Date	The first performance report is due for reporting period ending December 31,2011	N/A
Submit to:	GO and GOTR	GO and GOTR
Federal Financial Report		
Format	SF-425 (all sections must be completed)	SF-425(all sections must be completed)
Reporting Frequency	Semi-Annual	Final Report due upon completion of Agreement's period of performance
Reporting Period	For Semi-Annual Reporting: October 1 through March 31 and April 1 through September 30.	Entire period of performance
Due Date*	Within 30 days after the end of the Reporting Period	Within 90 days after the completion date of the Agreement
First Report Due Date	The first financial report is due for reporting period ending December 31,2011	N/A
Submit to:	GO and GOTR	GO and GOTR

* If the completion date is prior to the end of the next reporting period, then no interim report is due for that period. Instead, the Recipient is required only to submit the final financial and performance reports, which will cover the entire period of performance including the last abbreviated reporting period.

10. REGULATORY COMPLIANCE

The Recipient agrees to comply or assist Reclamation with all regulatory compliance requirements and all applicable State, Federal, and local environmental and cultural and paleontological resource protection laws and regulations as applicable to this project. These may include, but are not limited to, the National Environmental Policy Act (NEPA), including the Council on Environmental Quality and Department of the Interior regulations implementing

NEPA, the Clean Water Act, the Endangered Species Act, consultation with potentially affected Tribes, and consultation with the State Historic Preservation Office.

Certain environmental and other associated compliance are Federal responsibilities, and will occur as appropriate. Reclamation will identify the need for and will complete any appropriate environmental compliance requirements, as identified above, pertinent to Reclamation pursuant to activities specific to this assisted activity. Environmental and other associated compliance shall be completed prior to the start of this project. As such, notwithstanding any other provision of this Agreement, Reclamation shall not provide any funds to the Recipient for Agreement purposes, and the Recipient shall not begin implementation of the assisted activity described in this Agreement, until Reclamation provides written notice to the Recipient that all applicable environmental and regulatory compliance analyses and clearances have been completed and that the Recipient may begin implementation of the assisted activity. If the Recipient begins project activities that require environmental and other regulatory compliance approval, such as construction activities, prior to receipt of written notice from Reclamation that all such clearances have been obtained, then Reclamation reserves the right to unilaterally terminate this agreement for cause.

II. RECLAMATION STANDARD TERMS AND CONDITIONS - STATES, LOCAL GOVERNMENTS, AND FEDERALLY RECOGNIZED INDIAN TRIBAL GOVERNMENTS

1. REGULATIONS

The regulations at 43 CFR, Part 12, Subparts A, C, E, and F, are hereby incorporated by reference as though set forth in full text. The following Office of Management and Budget (OMB) Circulars, as applicable, and as implemented by 43 CFR Part 12, are also incorporated by reference and made a part of this Agreement. Failure of a Recipient to comply with any applicable regulation or circular may be the basis for withholding payments for proper charges made by the Recipient and/or for termination of support.

1.1 Colleges and Universities that are Recipients or sub-recipients shall use the following:

2 CFR Parts 215 and 220 (Circular A 21), "Cost Principles for Educational Institutions"

Circular A 110, as amended September 30, 1999, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations" (Codification by Department of Interior, 43 CFR 12, Subpart F)

Circular A-133, revised June 27, 2003, "Audits of States, Local Governments, and Non-Profit Organizations"

1.2 State, Local and Tribal Governments that are Recipients or sub-recipients shall use the following:

2 CFR Part 225 (Circular A 87), "Cost Principles for State, Local, and Indian Tribal Governments"

Circular A 102, as amended August 29, 1997, "Grants and Cooperative Agreements with State and Local Governments" (Grants Management Common Rule, Codification by Department of Interior, 43 CFR 12, Subpart C)

Circular A-133, revised June 27, 2003, Audits of States, Local Governments, and Non-Profit Organizations"

1.3 Nonprofit Organizations that are Recipients or sub-recipients shall use the following:

2 CFR Part 230 (Circular A 122), "Cost Principles for Non-Profit Organizations"

Circular A 110, as amended September 30, 1999, "Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations" (Codification by Department of Interior, 43 CFR 12, Subpart F)

Circular A-133, revised June 27, 2003, "Audits of States, Local Governments, and Non-Profit Organizations"

1.4 Organizations other than those indicated above that are Recipients or sub-recipients shall use the basic principles of OMB Circular A-110 (Codification by Department of Interior, 43 CFR 12, Subpart F), and cost principles shall be in accordance with 48 CFR Subpart 31.2.

1.5 43 CFR 12.77 sets forth further regulations that govern the award and administration of subawards by State governments.

2. PAYMENT

2.1 Payment Standards. (43 CFR §12.61)

(a) *Scope.* This section prescribes the basic standard and the methods under which a Federal agency will make payments to grantees, and grantees will make payments to subgrantees and contractors.

(b) *Basic standard.* Methods and procedures for payment shall minimize the time elapsing between the transfer of funds and disbursement by the grantee or subgrantee, in accordance with Treasury regulations at 31 CFR part 205.

(c) *Advances.* Grantees and subgrantees shall be paid in advance, provided they maintain or demonstrate the willingness and ability to maintain procedures to minimize the time elapsing between the transfer of the funds and their disbursement by the grantee or subgrantee.

(d) *Reimbursement.* Reimbursement shall be the preferred method when the requirements in paragraph (c) of this section are not met. Grantees and subgrantees may also be paid by reimbursement for any construction grant. Except as otherwise specified in regulation, Federal agencies shall not use the percentage of completion method to pay construction grants. The grantee or subgrantee may use that method to pay its construction contractor, and if it does, the awarding agency's payments to the grantee or subgrantee will be based on the grantee's or subgrantee's actual rate of disbursement.

(e) *Working capital advances.* If a grantee cannot meet the criteria for advance payments described in paragraph (c) of this section, and the Federal agency has determined that reimbursement is not feasible because the grantee lacks sufficient working capital, the awarding agency may provide cash or a working capital advance basis. Under this procedure the awarding agency shall advance cash to the grantee to cover its estimated disbursement needs for an initial period generally geared to the grantee's disbursing cycle. Thereafter, the awarding agency shall reimburse the grantee for its actual cash disbursements. The working capital advance method of payment shall not be used by grantees or subgrantees if the reason for using such method is the

unwillingness or inability of the grantee to provide timely advances to the subgrantee to meet the subgrantee's actual cash disbursements.

(f) *Effect of program income, refunds, and audit recoveries on payment.*

- (1) Grantees and subgrantees shall disburse repayments to and interest earned on a revolving fund before requesting additional cash payments for the same activity.
- (2) Except as provided in paragraph (f)(1) of this section, grantees and subgrantees shall disburse program income, rebates, refunds, contract settlements, audit recoveries and interest earned on such funds before requesting additional cash payments.

(g) *Withholding payments.*

- (1) Unless otherwise required by Federal statute, awarding agencies shall not withhold payments for proper charges incurred by grantees or subgrantees unless—
 - (i) The grantee or subgrantee has failed to comply with grant award conditions, or
 - (ii) The grantee or subgrantee is indebted to the United States.
- (2) Cash withheld for failure to comply with grant award condition, but without suspension of the grant, shall be released to the grantee upon subsequent compliance. When a grant is suspended, payment adjustments will be made in accordance with §12.83(c).
- (3) A Federal agency shall not make payment to grantees for amounts that are withheld by grantees or subgrantees from payment to contractors to assure satisfactory completion of work. Payments shall be made by the Federal agency when the grantees or subgrantees actually disburse the withheld funds to the contractors or to escrow accounts established to assure satisfactory completion of work.

(h) *Cash depositories.*

- (1) Consistent with the national goal of expanding the opportunities for minority business enterprises, grantees and subgrantees are encouraged to use minority banks (a bank which is owned at least 50 percent by minority group members). A list of minority owned banks can be obtained from the Minority Business Development Agency, Department of Commerce, Washington, DC 20230.
- (2) A grantee or subgrantee shall maintain a separate bank account only when required by Federal-State Agreement.
 - (i) *Interest earned on advances.* Except for interest earned on advances of funds exempt under the Intergovernmental Cooperation Act (31 U.S.C. 6501 et seq.) and the Indian Self-Determination Act (23 U.S.C. 450), grantees and subgrantees shall promptly, but at

least quarterly, remit interest earned on advances to the Federal agency. The grantee or subgrantee may keep interest amounts up to \$100 per year for administrative expenses.

2.2 Payment Method

Requesting Payments -- Requests for advance or reimbursement may be made by the following methods:

(1) **SF-270, Request for Advance or Reimbursement** - Recipients may submit an original and properly certified SF-270 form to the GO. Requests for reimbursement may be submitted on a monthly basis or more frequently if authorized by the (GO). Recipients may not request advance payments for anticipated expenses that are greater than one month in advance of the request.

(2) **SF-271, Outlay Report and Request for Reimbursement for Construction Programs** - The SF-271 shall be used for construction Agreements paid by the reimbursement method, letter of credit, electronic funds transfer, or Treasury check advance, except where the advance is based on periodic requests from the Recipient, in which case the SF-270 shall be used. This request may be submitted on a quarterly basis, but no less frequently than on an annual basis. Recipients may submit an original, properly certified SF-271 form to the GO.

(3) **Automated Standard Application for Payments (ASAP)** - Recipients may utilize the Department of Treasury ASAP payment system to request advances or reimbursements. ASAP is a Recipient-initiated payment and information system designed to provide a single point of contact for the request and delivery of Federal funds. Recipient procedures must minimize the time elapsing between the drawdown of federal funds and the disbursement for agreement purposes.

Recipients interested in enrolling in the ASAP system, please contact Dee Devillier at 303-445-3461 or Sheri Oren at 303-445-3448.

3. PROCUREMENT STANDARDS (43 CFR §12.76)

(a) *States.* When procuring property and services under a grant, a State will follow the same policies and procedures it uses for procurements from its non-Federal funds. The State will ensure that every purchase order or other contract includes any clauses required by Federal statutes and executive orders and their implementing regulations. Other grantees and subgrantees will follow paragraphs (b) through (i) in this section.

(b) *Procurement standards.*

(1) Grantees and subgrantees will use their own procurement procedures which reflect applicable State and local laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in this section.

(2) Grantees and subgrantees will maintain a contract administration system which ensures that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(3) Grantees and subgrantees will maintain a written code of standards of conduct governing the performance of their employees engaged in the award and administration of contracts. No employee, officer or agent of the grantee or subgrantee shall participate in selection, or in the award or administration of a contract supported by Federal funds if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when:

(i) The employee, officer or agent,

(ii) Any member of his immediate family,

(iii) His or her partner, or

(iv) An organization which employs, or is about to employ, any of the above, has a financial or other interest in the firm selected for award. The grantee's or subgrantee's officers, employees or agents will neither solicit nor accept gratuities, favors or anything of monetary value from contractors, potential contractors, or parties to subagreements. Grantee and subgrantees may set minimum rules where the financial interest is not substantial or the gift is an unsolicited item of nominal intrinsic value. To the extent permitted by State or local law or regulations, such standards or conduct will provide for penalties, sanctions, or other disciplinary actions for violations of such standards by the grantee's and subgrantee's officers, employees, or agents, or by contractors or their agents. The awarding agency may in regulation provide additional prohibitions relative to real, apparent, or potential conflicts of interest.

(4) Grantee and subgrantee procedures will provide for a review of proposed procurements to avoid purchase of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.

(5) To foster greater economy and efficiency, grantees and subgrantees are encouraged to enter into State and local intergovernmental agreements for procurement or use of common goods and services.

(6) Grantees and subgrantees are encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.

(7) Grantees and subgrantees are encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.

(8) Grantees and subgrantees will make awards only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

(9) Grantees and subgrantees will maintain records sufficient to detail the significant history of a procurement. These records will include, but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.

(10) Grantees and subgrantees will use time and material type contracts only—

(i) After a determination that no other contract is suitable, and

(ii) If the contract includes a ceiling price that the contractor exceeds at its own risk.

(11) Grantees and subgrantees alone will be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to source evaluation, protests, disputes, and claims. These standards do not relieve the grantee or subgrantee of any contractual responsibilities under its contracts. Federal agencies will not substitute their judgment for that of the grantee or subgrantee unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction.

(12) Grantees and subgrantees will have protest procedures to handle and resolve disputes relating to their procurements and shall in all instances disclose information regarding the protest to the awarding agency. A protestor must exhaust all administrative remedies with the grantee and subgrantee before pursuing a protest with the Federal agency. Reviews of protests by the Federal agency will be limited to:

(i) Violations of Federal law or regulations and the standards of this section (violations of State or local law will be under the jurisdiction of State or local authorities) and

(ii) Violations of the grantee's or subgrantee's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the grantee or subgrantee.

(c) *Competition.*

(1) All procurement transactions will be conducted in a manner providing full and open competition consistent with the standards of §12.76. Some of the situations considered to be restrictive of competition include but are not limited to:

- (i) Placing unreasonable requirements on firms in order for them to qualify to do business,
 - (ii) Requiring unnecessary experience and excessive bonding,
 - (iii) Noncompetitive pricing practices between firms or between affiliated companies,
 - (iv) Noncompetitive awards to consultants that are on retainer contracts,
 - (v) Organizational conflicts of interest,
 - (vi) Specifying only a “brand name” product instead of allowing “an equal” product to be offered and describing the performance of other relevant requirements of the procurement, and
 - (vii) Any arbitrary action in the procurement process.
- (2) Grantees and subgrantees will conduct procurements in a manner that prohibits the use of statutorily or administratively imposed in-State or local geographical preferences in the evaluation of bids or proposals, except in those cases where applicable Federal statutes expressly mandate or encourage geographic preference. Nothing in this section preempts State licensing laws. When contracting for architectural and engineering (A/E) services, geographic location may be a selection criteria provided its application leaves an appropriate number of qualified firms, given the nature and size of the project, to compete for the contract.
- (3) Grantees will have written selection procedures for procurement transactions. These procedures will ensure that all solicitations:
- (i) Incorporate a clear and accurate description of the technical requirements for the material, product, or service to be procured. Such description shall not, in competitive procurements, contain features which unduly restrict competition. The description may include a statement of the qualitative nature of the material, product or service to be procured, and when necessary, shall set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a “brand name or equal” description may be used as a means to define the performance or other salient requirements of procurement. The specific features of the named brand which must be met by offerors shall be clearly stated; and
 - (ii) Identify all requirements which the offerors must fulfill and all other factors to be used in evaluating bids or proposals.
- (4) Grantees and subgrantees will ensure that all prequalified lists of persons, firms, or products which are used in acquiring goods and services are current and include enough

qualified sources to ensure maximum open and free competition. Also, grantees and subgrantees will not preclude potential bidders from qualifying during the solicitation period.

(d) *Methods of procurement to be followed* —(1) *Procurement by small purchase procedures.* Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not cost more than the simplified acquisition threshold fixed at 41 U.S.C. 403(11) (currently set at \$150,000). If small purchase procedures are used, price or rate quotations shall be obtained from an adequate number of qualified sources.

(2) Procurement by *sealed bids* (formal advertising). Bids are publicly solicited and a firm-fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price. The sealed bid method is the preferred method for procuring construction, if the conditions in §12.76(d)(2)(i) apply.

(i) In order for sealed bidding to be feasible, the following conditions should be present:

(A) A complete, adequate, and realistic specification or purchase description is available;

(B) Two or more responsible bidders are willing and able to compete effectively and for the business; and

(C) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

(ii) If sealed bids are used, the following requirements apply:

(A) The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of known suppliers, providing them sufficient time prior to the date set for opening the bids;

(B) The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services in order for the bidder to properly respond;

(C) All bids will be publicly opened at the time and place prescribed in the invitation for bids;

(D) A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs shall be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and

(E) Any or all bids may be rejected if there is a sound documented reason.

(3) Procurement by *competitive proposals*. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed-price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed bids. If this method is used, the following requirements apply:

(i) Requests for proposals will be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals shall be honored to the maximum extent practical;

(ii) Proposals will be solicited from an adequate number of qualified sources;

(iii) Grantees and subgrantees will have a method for conducting technical evaluations of the proposals received and for selecting awardees;

(iv) Awards will be made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered; and

(v) Grantees and subgrantees may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

(4) Procurement by *noncompetitive proposals* is procurement through solicitation of a proposal from only one source, or after solicitation of a number of sources, competition is determined inadequate.

(i) Procurement by noncompetitive proposals may be used only when the award of a contract is infeasible under small purchase procedures, sealed bids or competitive proposals and one of the following circumstances applies:

(A) The item is available only from a single source;

(B) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;

(C) The awarding agency authorizes noncompetitive proposals; or

(D) After solicitation of a number of sources, competition is determined inadequate.

(ii) Cost analysis, i.e., verifying the proposed cost data, the projections of the data, and the evaluation of the specific elements of costs and profits, is required.

(iii) Grantees and subgrantees may be required to submit the proposed procurement to the awarding agency for pre-award review in accordance with paragraph (g) of this section.

(e) *Contracting with small and minority firms, women's business enterprise and labor surplus area firms.* (1) The grantee and subgrantee will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

(2) Affirmative steps shall include:

(i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;

(iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;

(v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and

(vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (e)(2) (i) through (v) of this section.

(f) *Contract cost and price.*

(1) Grantees and subgrantees must perform a cost or price analysis in connection with every procurement action including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, grantees must make independent estimates before receiving bids or proposals. A cost analysis must be performed when the offeror is required to submit the elements of his estimated cost, e.g., under professional, consulting, and architectural engineering services contracts. A cost analysis will be necessary when adequate price competition is lacking, and for sole source procurements, including contract modifications or change orders, unless price reasonableness can be established on the basis of a catalog or market price of a commercial product sold in substantial quantities to the general public or based on prices set by law or regulation. A price analysis will be used in all other instances to determine the reasonableness of the proposed contract price.

(2) Grantees and subgrantees will negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration will be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

(3) Costs or prices based on estimated costs for contracts under grants will be allowable only to the extent that costs incurred or cost estimates included in negotiated prices are consistent with Federal cost principles (see §12.62). Grantees may reference their own cost principles that comply with the applicable Federal cost principles.

(4) The cost plus a percentage of cost and percentage of construction cost methods of contracting shall not be used.

(g) *Awarding agency review.*

(1) Grantees and subgrantees must make available, upon request of the awarding agency, technical specifications on proposed procurements where the awarding agency believes such review is needed to ensure that the item and/or service specified is the one being proposed for purchase. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the grantee or subgrantee desires to have the review accomplished after a solicitation has been developed, the awarding agency may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

(2) Grantees and subgrantees must on request make available for awarding agency pre-award review procurement documents, such as requests for proposals or invitations for bids, independent cost estimates, etc. when:

(i) A grantee's or subgrantee's procurement procedures or operation fails to comply with the procurement standards in this section; or

(ii) The procurement is expected to exceed the simplified acquisition threshold and is to be awarded without competition or only one bid or offer is received in response to a solicitation; or

(iii) The procurement, which is expected to exceed the simplified acquisition threshold, specifies a "brand name" product; or

(iv) The proposed award is more than the simplified acquisition threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement; or

(v) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the simplified acquisition threshold.

(3) A grantee or subgrantee will be exempt from the pre-award review in paragraph (g)(2) of this section if the awarding agency determines that its procurement systems comply with the standards of this section.

(i) A grantee or subgrantee may request that its procurement system be reviewed by the awarding agency to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews shall occur where there is a continuous high-dollar funding, and third-party contracts are awarded on a regular basis.

(ii) A grantee or subgrantee may self-certify its procurement system. Such self-certification shall not limit the awarding agency's right to survey the system. Under a self-certification procedure, awarding agencies may wish to rely on written assurances from the grantee or subgrantee that it is complying with these standards. A grantee or subgrantee will cite specific procedures, regulations, standards, etc., as being in compliance with these requirements and have its system available for review.

(h) *Bonding requirements.* For construction or facility improvement contracts or subcontracts exceeding the simplified acquisition threshold, the awarding agency may accept the bonding policy and requirements of the grantee or subgrantee provided the awarding agency has made a determination that the awarding agency's interest is adequately protected. If such a determination has not been made, the minimum requirements shall be as follows:

(1) *A bid guarantee from each bidder equivalent to five percent of the bid price.* The "bid guarantee" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

(2) *A performance bond on the part of the contractor for 100 percent of the contract price.* A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

(3) *A payment bond on the part of the contractor for 100 percent of the contract price.* A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

(i) *Contract provisions.* A grantee's and subgrantee's contracts must contain provisions in paragraph (i) of this section. Federal agencies are permitted to require changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Federal Procurement Policy.

(1) Administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate. (Contracts more than the simplified acquisition threshold)

- (2) Termination for cause and for convenience by the grantee or subgrantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of \$10,000)
- (3) Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of \$10,000 by grantees and their contractors or subgrantees)
- (4) Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3). (All contracts and subgrants for construction or repair)
- (5) Compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts in excess of \$2000 awarded by grantees and subgrantees when required by Federal grant program legislation)
- (6) Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction contracts awarded by grantees and subgrantees in excess of \$2000, and in excess of \$2500 for other contracts which involve the employment of mechanics or laborers)
- (7) Notice of awarding agency requirements and regulations pertaining to reporting.
- (8) Notice of awarding agency requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.
- (9) Awarding agency requirements and regulations pertaining to copyrights and rights in data.
- (10) Access by the grantee, the subgrantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.
- (11) Retention of all required records for three years after grantees or subgrantees make final payments and all other pending matters are closed.
- (12) Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and subgrants of amounts in excess of \$100,000)

(13) Mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

4. EQUIPMENT (43 CFR §12.72)

(a) *Title.* Subject to the obligations and conditions set forth in this section, title to equipment acquired under a grant or subgrant will vest upon acquisition in the grantee or subgrantee respectively.

(b) *States.* A State will use, manage, and dispose of equipment acquired under a grant by the State in accordance with State laws and procedures. Other grantees and subgrantees will follow paragraphs (c) through (e) of this section.

(c) *Use.*

(1) Equipment shall be used by the grantee or subgrantee in the program or project for which it was acquired as long as needed, whether or not the project or program continues to be supported by Federal funds. When no longer needed for the original program or project, the equipment may be used in other activities currently or previously supported by a Federal agency.

(2) The grantee or subgrantee shall also make equipment available for use on other projects or programs currently or previously supported by the Federal Government, providing such use will not interfere with the work on the projects or program for which it was originally acquired. First preference for other use shall be given to other programs or projects supported by the awarding agency. User fees should be considered if appropriate.

(3) Notwithstanding the encouragement in §12.65(a) to earn program income, the grantee or subgrantee must not use equipment acquired with grant funds to provide services for a fee to compete unfairly with private companies that provide equivalent services, unless specifically permitted or contemplated by Federal statute.

(4) When acquiring replacement equipment, the grantee or subgrantee may use the equipment to be replaced as a trade-in or sell the property and use the proceeds to offset the cost of the replacement property, subject to the approval of the awarding agency.

(d) *Management requirements.* Procedures for managing equipment (including replacement equipment), whether acquired in whole or in part with grant funds, until disposition takes place will, as a minimum, meet the following requirements:

(1) Property records must be maintained that include a description of the property, a serial number or other identification number, the source of property, who holds title, the acquisition date, and cost of the property, percentage of Federal participation in the cost of the property,

the location, use and condition of the property, and any ultimate disposition data including the date of disposal and sale price of the property.

(2) A physical inventory of the property must be taken and the results reconciled with the property records at least once every two years.

(3) A control system must be developed to ensure adequate safeguards to prevent loss, damage, or theft of the property. Any loss, damage, or theft shall be investigated.

(4) Adequate maintenance procedures must be developed to keep the property in good condition.

(5) If the grantee or subgrantee is authorized or required to sell the property, proper sales procedures must be established to ensure the highest possible return.

(e) *Disposition.* When original or replacement equipment acquired under a grant or subgrant is no longer needed for the original project or program or for other activities currently or previously supported by a Federal agency, disposition of the equipment will be made as follows:

(1) Items of equipment with a current per-unit fair market value of less than \$5,000 may be retained, sold or otherwise disposed of with no further obligation to the awarding agency.

(2) Items of equipment with a current per unit fair market value in excess of \$5,000 may be retained or sold and the awarding agency shall have a right to an amount calculated by multiplying the current market value or proceeds from sale by the awarding agency's share of the equipment.

(3) In cases where a grantee or subgrantee fails to take appropriate disposition actions, the awarding agency may direct the grantee or subgrantee to take excess and disposition actions.

(f) *Federal equipment.* In the event a grantee or subgrantee is provided Federally-owned equipment:

(1) Title will remain vested in the Federal Government.

(2) Grantees or subgrantees will manage the equipment in accordance with Federal agency rules and procedures, and submit an annual inventory listing.

(3) When the equipment is no longer needed, the grantee or subgrantee will request disposition instructions from the Federal agency.

(g) *Right to transfer title.* The Federal awarding agency may reserve the right to transfer title to the Federal Government or a third part named by the awarding agency when such a third party is otherwise eligible under existing statutes. Such transfers shall be subject to the following standards:

(1) The property shall be identified in the grant or otherwise made known to the grantee in writing.

(2) The Federal awarding agency shall issue disposition instruction within 120 calendar days after the end of the Federal support of the project for which it was acquired. If the Federal awarding agency fails to issue disposition instructions within the 120 calendar-day period the grantee shall follow 12.72(e).

(3) When title to equipment is transferred, the grantee shall be paid an amount calculated by applying the percentage of participation in the purchase to the current fair market value of the property.

5. SUPPLIES (43 CFR §12.73)

(a) *Title.* Title to supplies acquired under a grant or subgrant will vest, upon acquisition, in the grantee or subgrantee respectively.

(b) *Disposition.* If there is a residual inventory of unused supplies exceeding \$5,000 in total aggregate fair market value upon termination or completion of the award, and if the supplies are not needed for any other Federally sponsored programs or projects, the grantee or subgrantee shall compensate the awarding agency for its share.

6. INSPECTION

Reclamation has the right to inspect and evaluate the work performed or being performed under this Agreement, and the premises where the work is being performed, at all reasonable times and in a manner that will not unduly delay the work. If Reclamation performs inspection or evaluation on the premises of the Recipient or a sub-Recipient, the Recipient shall furnish and shall require sub-recipients to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

7. AUDIT (31 U.S.C. 7501-7507)

Non-Federal entities that expend \$500,000 or more in a year in Federal awards shall have a single or program-specific audit conducted for that year in accordance with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507) and revised OMB Circular A-133. Federal awards are defined as Federal financial assistance and Federal cost-reimbursement contracts that non-Federal entities receive directly from Federal awarding agencies or indirectly from pass-through entities. They do not include procurement contracts, under grants or contracts, used to buy goods or services from vendors. Non-Federal entities that expend less than \$500,000 a year in Federal awards are exempt from Federal audit requirements for that year, except as noted in A-133, §___215(a), but records must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and General Accounting Office (GAO).

8. ENFORCEMENT (43 CFR §12.83)

(a) *Remedies for noncompliance.* If a grantee or subgrantee materially fails to comply with any term of an award, whether stated in a Federal statute or regulation, an assurance, in a State plan or application, a notice of award, or elsewhere, the awarding agency may take one or more of the following actions, as appropriate in the circumstances:

- (1) Temporarily withhold cash payments pending correction of the deficiency by the grantee or subgrantee or more severe enforcement action by the awarding agency,
- (2) Disallow (that is, deny both use of funds and matching credit for) all or part of the cost of the activity or action not in compliance,
- (3) Wholly or partly suspend or terminate the current award for the grantee's or subgrantee's program,
- (4) Withhold further awards for the program, or
- (5) Take other remedies that may be legally available.

(b) *Hearings, appeals.* In taking an enforcement action, the awarding agency will provide the grantee or subgrantee an opportunity for such hearing, appeal, or other administrative proceeding to which the grantee or subgrantee is entitled under any statute or regulation applicable to the action involved.

(c) *Effects of suspension and termination.* Costs of grantee or subgrantee resulting from obligations incurred by the grantee or subgrantee during a suspension or after termination of an award are not allowable unless the awarding agency expressly authorizes them in the notice of suspension or termination or subsequently. Other grantee or subgrantee costs during suspension or after termination which are necessary and not reasonably avoidable are allowable if:

- (1) The costs result from obligations which were properly incurred by the grantee or subgrantee before the effective date of suspension or termination, are not in anticipation of it, and, in the case of a termination, are noncancellable, and,
- (2) The costs would be allowable if the award were not suspended or expired normally at the end of the funding period in which the termination takes effect.

(d) *Relationship to Debarment and Suspension.* The enforcement remedies identified in this section, including suspension and termination, do not preclude grantee or subgrantee from being subject to "Debarment and Suspension" under E.O. 12549 ((2 CFR 29.5.12 and 2 CFR 1400, Subpart C).

9. TERMINATION FOR CONVENIENCE (43 CFR §12.84)

Except as provided in 43 CFR §12.83 awards may be terminated in whole or in part only as follows:

(a) By the awarding agency with the consent of the grantee or subgrantee in which case the two parties shall agree upon the termination conditions, including the effective date and in the case of partial termination, the portion to be terminated, or

(b) By the grantee or subgrantee upon written notification to the awarding agency, setting forth the reasons for such termination, the effective date, and in the case of partial termination, the portion to be terminated. However, if, in the case of a partial termination, the awarding agency determines that the remaining portion of the award will not accomplish the purposes for which the award was made, the awarding agency may terminate the award in its entirety under either §12.83 or paragraph (a) of this section.

10. DEBARMENT AND SUSPENSION (2 CFR §1400)

The Department of the Interior regulations at 2 CFR 1400—Governmentwide Debarment and Suspension (Nonprocurement), which adopt the common rule for the governmentwide system of debarment and suspension for nonprocurement activities, are hereby incorporated by reference and made a part of this Agreement. By entering into this grant or cooperative Agreement with the Bureau of Reclamation, the Recipient agrees to comply with 2 CFR 1400, Subpart C, and agrees to include a similar term or condition in all lower-tier covered transactions. These regulations are available at <http://www.gpoaccess.gov/ecfr/>.

11. DRUG-FREE WORKPLACE (2 CFR §182 and §1401)

The Department of the Interior regulations at 2 CFR 1401—Governmentwide Requirements for Drug-Free Workplace (Financial Assistance), which adopt the portion of the Drug-Free Workplace Act of 1988 (41 U.S.C. 701 et seq, as amended) applicable to grants and cooperative agreements, are hereby incorporated by reference and made a part of this agreement. By entering into this grant or cooperative agreement with the Bureau of Reclamation, the Recipient agrees to comply with 2 CFR 182.

12. ASSURANCES AND CERTIFICATIONS INCORPORATED BY REFERENCE

The provisions of the Assurances, SF 424B or SF 424D as applicable, executed by the Recipient in connection with this Agreement shall apply with full force and effect to this Agreement. All anti-discrimination and equal opportunity statutes, regulations, and Executive Orders that apply to the expenditure of funds under Federal contracts, grants, and cooperative Agreements, loans, and other forms of Federal assistance. The Recipient shall comply with Title VI or the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and any program-specific statutes with anti-discrimination requirements. The Recipient shall comply with civil rights laws

including, but not limited to, the Fair Housing Act, the Fair Credit Reporting Act, the Americans with Disabilities Act, Title VII of the Civil Rights Act of 1964, the Equal Educational Opportunities Act, the Age Discrimination in Employment Act, and the Uniform Relocation Act.

Such Assurances also include, but are not limited to, the promise to comply with all applicable Federal statutes and orders relating to nondiscrimination in employment, assistance, and housing; the Hatch Act; Federal wage and hour laws and regulations and work place safety standards; Federal environmental laws and regulations and the Endangered Species Act; and Federal protection of rivers and waterways and historic and archeological preservation.

13. COVENANT AGAINST CONTINGENT FEES

The Recipient warrants that no person or agency has been employed or retained to solicit or secure this Agreement upon an Agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide offices established and maintained by the Recipient for the purpose of securing Agreements or business. For breach or violation of this warranty, the Government shall have the right to annul this Agreement without liability or, in its discretion, to deduct from the Agreement amount, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee

14. TRAFFICKING VICTIMS PROTECTION ACT OF 2000 (2 CFR §175.15)

Trafficking in persons.

(a) *Provisions applicable to a recipient that is a private entity.*

(1) You as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not

- (i) Engage in severe forms of trafficking in persons during the period of time that the award is in effect;
- (ii) Procure a commercial sex act during the period of time that the award is in effect; or
- (iii) Use forced labor in the performance of the award or subawards under the award.

(2) We as the Federal awarding agency may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity —

- (i) Is determined to have violated a prohibition in paragraph a.1 of this award term; or
- (ii) Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either

(A) Associated with performance under this award; or

(B) Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 *CFR part 1400*.

(b) *Provision applicable to a recipient other than a private entity.* We as the Federal awarding agency may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity—

(1) Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or

(2) Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either

(i) Associated with performance under this award; or

(ii) Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 *CFR part 1400*.

(c) *Provisions applicable to any recipient .*

(1) You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.

(2) Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:

(i) Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and

(ii) Is in addition to all other remedies for noncompliance that are available to us under this award.

(3) You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

(d) *Definitions .* For purposes of this award term:

(1) "Employee" means either:

(i) An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or

(ii) Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.

(2) "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

(3) "Private entity":

(i) Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.

(ii) Includes:

(A) A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).

(B) A for-profit organization.

(4) "Severe forms of trafficking in persons," "commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

15. NEW RESTRICTIONS ON LOBBYING (43 CFR §18)

The Recipient agrees to comply with 43 CFR 18, New Restrictions on Lobbying, including the following certification:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Recipient, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of

Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying" in accordance with its instructions.

(c) The Recipient shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

16. UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT OF 1970 (URA) (42 USC § 4601 *et seq.*)

(a) The Uniform Relocation Assistance Act (URA), 42 U.S.C. § 4601 *et seq.*, as amended, requires certain assurances for Reclamation funded land acquisition projects conducted by a Recipient that cause the displacement of persons, businesses, or farm operations. Because Reclamation funds only support acquisition of property or interests in property from willing sellers, it is not anticipated that Reclamation funds will result in any "displaced persons," as defined under the URA.

(b) However, if Reclamation funds are used for the acquisition of real property that results in displacement, the URA requires Recipients to ensure that reasonable relocation payments and other remedies will be provided to any displaced person. Further, when acquiring real property, Recipients must be guided, to the greatest extent practicable, by the land acquisition policies in 42 U.S.C. § 4651.

(c) Exemptions to the URA and 49 CFR Part 24

(1) The URA provides for an exemption to the appraisal, review and certification rules for those land acquisitions classified as "voluntary transactions." Such "voluntary transactions" are classified as those that do not involve an exercise of eminent domain authority on behalf of a Recipient, and must meet the conditions specified at 49 CFR § 24.101(b)(1)(i)-(iv).

(2) For any land acquisition undertaken by a Recipient that receives Reclamation funds, but does not have authority to acquire the real property by eminent domain, to be exempt from the requirements of 49 CFR Part 24 the Recipient must:

- (i) provide written notification to the owner that it will not acquire the property in the event negotiations fail to result in an amicable agreement, and;

- (ii) inform the owner in writing of what it believes to be the market value of the property

(d) Review of Land Acquisition Appraisals. Reclamation reserves the right to review any land appraisal whether or not such review is required under the URA or 49 CFR § 24.104. Such reviews may be conducted by the Department of Interior's Appraisal Services Directorate or a Reclamation authorized designee. When Reclamation determines that a review of the original appraisal is necessary, Reclamation will notify the Recipient and provide an estimated completion date of the initial appraisal review.

17. CENTRAL CONTRACTOR REGISTRATION AND UNIVERSAL IDENTIFIER REQUIREMENTS (2 CFR 25, APPENDIX A)

A. Requirement for Central Contractor Registration (CCR)

Unless you are exempted from this requirement under 2 CFR 25.110, you as the recipient must maintain the currency of your information in the CCR until you submit the final financial report required under this award or receive the final payment, whichever is later. This requires that you review and update the information at least annually after the initial registration, and more frequently if required by changes in your information or another award term.

B. Requirement for Data Universal Numbering System (DUNS) Numbers

If you are authorized to make subawards under this award, you:

1. Must notify potential subrecipients that no entity (*see* definition in paragraph C of this award term) may receive a subaward from you unless the entity has provided its DUNS number to you.
2. May not make a subaward to an entity unless the entity has provided its DUNS number to you.

C. Definitions

For purposes of this award term:

1. *Central Contractor Registration (CCR)* means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the CCR Internet site (currently at <http://www.ccr.gov>).
2. *Data Universal Numbering System (DUNS) number* means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at <http://fedgov.dnb.com/webform>).
3. *Entity*, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:

- a. A Governmental organization, which is a State, local government, or Indian Tribe;
- b. A foreign public entity;
- c. A domestic or foreign nonprofit organization;
- d. A domestic or foreign for-profit organization; and
- e. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. *Subaward*:

- a. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
- b. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, *see* Sec. 11.210 of the attachment to OMB Circular A-133, “Audits of States, Local Governments, and Non-Profit Organizations”).
- c. A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. *Subrecipient* means an entity that:

- a. Receives a subaward from you under this award; and
- b. Is accountable to you for the use of the Federal funds provided by the subaward.

18. PROHIBITION ON TEXT MESSAGING AND USING ELECTRONIC EQUIPMENT SUPPLIED BY THE GOVERNMENT WHILE DRIVING

Executive Order 13513, *Federal Leadership On Reducing Text Messaging While Driving*, was signed by President Barack Obama on October 1, 2009 (ref: <http://edocket.access.gpo.gov/2009/pdf/E9-24203.pdf>). This Executive Order introduces a Federal Government-wide prohibition on the use of text messaging while driving on official business or while using Government-supplied equipment. Additional guidance enforcing the ban will be issued at a later date. In the meantime, please adopt and enforce policies that immediately ban text messaging while driving company-owned or rented vehicles, government-owned or leased vehicles, or while driving privately owned vehicles when on official government business or when performing any work for or on behalf of the government.

19. AGRICULTURAL OPERATIONS [Public Law 111-11, Section 9504(a)(3)(B)]

The Recipient shall not use any associated water savings to increase the total irrigated acreage of the Recipient or otherwise increase the consumptive use of water in the operation of the Recipient, as determined pursuant to the law of the State in which the operation of Recipient is located.

20. TITLE TO IMPROVEMENTS [Public Law 111-11, Section 9504(a)(3)(D)]

If the activities funded under this Agreement result in an infrastructure improvement to a federally owned facility, the Federal Government shall continue to hold title to the facility and improvements to the facility.

21. OPERATION AND MAINTENANCE COSTS [Public Law 111-11, Section 9504(a)(3)(E)(iv.)]

The non-Federal share of the cost of operating and maintaining any infrastructure improvement funded through this Agreement shall be 100 percent.

22. LIABILITY [Public Law 111-11, Section 9504(a)(3)(F)]

(a) **IN GENERAL.**—Except as provided under chapter 171 of title 28, United States Code (commonly known as the “Federal Tort Claims Act”), the United States shall not be liable for monetary damages of any kind for any injury arising out of an act, omission, or occurrence that arises in relation to any facility created or improved under this Agreement, the title of which is not held by the United States.

(b) **TORT CLAIMS ACT.**—Nothing in this section increases the liability of the United States beyond that provided in chapter 171 of title 28, United States Code (commonly known as the “Federal Tort Claims Act”).

ATTACHMENT A

BUDGET

BUDGET ITEM DESCRIPTION	COMPUTATION \$/Unit and Unit	Quantity	APPLICANT FUNDING	RECLAMATION FUNDING	TOTAL COST
SALARIES AND WAGES					
Fiona Sanchez, IRWD	\$57.30/hour	20	\$1,146		\$1,146
Amy McNulty, IRWD	\$45.90/hour	120	\$5,508		\$5,508
FRINGE BENEFITS					
Fiona Sanchez, IRWD	\$34.40/hour	20	\$688		\$688
Amy McNulty, IRWD	\$27.60/hour	120	\$3,312		\$3,312
EQUIPMENT					
High-Efficiency Toilets (Tank)	\$300	500	\$150,000		\$150,000
High-Efficiency Toilets (Dual-Flush Valve Only)	\$150	50		\$7,500	\$7,500
High-Efficiency Urinals (Valve Only)	\$150	50		\$7,500	\$7,500
Faucet Aerators	\$2	300		\$600	\$600
Faucet Flow Restrictors	\$20	300		\$6,000	\$6,000
SUPPLIES/MATERIALS					
Marketing/Collateral Materials	\$12.50	400		\$5,000	\$5,000
CONTRACTUAL/ AUDIT & INSTALLATION					
Site Audit	\$45	400	\$17,300	\$700	\$18,000
Upgrade SCE Audit Tool	\$2,200	1		\$2,200	\$2,200
Administration: Installation Company	\$25	400		\$10,000	\$10,000
High-Efficiency Toilets (Tank)	\$100	500	\$33,500	\$16,500	\$50,000
High-Efficiency Toilets (Dual-Flush Valve Only)	\$100	50		\$5,000	\$5,000
High-Efficiency Urinals	\$100	50		\$5,000	\$5,000
Faucet Aerators	\$10	300		\$3,000	\$3,000
Faucet Flow Restrictors	\$15	300		\$4,500	\$4,500
OTHER					
Reporting, IRWD Staff	\$73.50/hour	20	\$1,470		\$1,470
TOTAL DIRECT COSTS			\$212,924	\$73,500	
INDIRECT COSTS – 2.9 %	\$53.50/hour	160	\$8,560		\$8,560
TOTAL ACTIVITY/PROJECT COSTS			\$221,484	\$73,500	\$294,984

Budget Narrative

Salaries and Wages

Amy McNulty, Water Efficiency Supervisor with IRWD, and Elise Goldman Water-Use Efficiency Specialist with West Basin will be lead coordinators for their respective agencies. Fiona Sanchez, Water Efficiency Manager of IRWD will provide overall program oversight. The budget for salaries and wages is \$6,654. This cost is based on an estimated hours of time that will be devoted to management of this project at a rate of \$57.30 for Ms. Sanchez (20 hours) and \$45.90 for Ms. McNulty (120 hours). In addition, there are no proposed salary increases that need to be accounted for.

Fringe Benefits

The fringe benefits for IRWD staff are estimated at \$4,000 based on the same number of hours of time devoted to management of this program per person as described in salaries and wages. The fringe benefit rates are \$34.40 for Ms. Sanchez and \$27.60 for Ms. McNulty. Fringe benefits include vacation, sick, holiday, FICA expense, Medicare expense, education reimbursement, PERS, life insurance, disability, insurance, health insurance, dental insurance, worker's compensation insurance, and out-of-pocket expenses. Fringe benefits are calculated at a rate of 60% for IRWD staff.

Travel

Travel expenses related to audit activity are included in the SCE contribution. In addition, travel associated with installation work is included in the "Contractual" category. The contractor will only be travelling locally to sites within IRWD and West Basin's service areas and these costs are embedded within the task to perform the installations.

Equipment

This program involves the retrofit of existing, non-efficient water using equipment with high-efficiency models and therefore purchase of devices is crucial to the program.

The equipment includes high-efficiency toilets, high-efficiency urinals and valves, faucet aerators and faucet flow restrictors. The total equipment cost for this program is \$171,600.

Supplies

The only supplies needed to implement this program will be collateral/marketing materials and will amount to \$5,000. This covers the costs to design and print the water portion of the customer's audit report/voucher. Program marketing material design and printing costs are also included in this estimate. We estimate a total unit cost of \$12.50. This is a unit price per customer for two separate items: 400 marketing pieces/ brochures (including development and printing costs) and 400 customer reports generated and printed by the SCE auditors, yielding a total budget of \$5,000.

Contractual

The companies hired to perform the installation work will be procured according to the regular public agency hiring protocol and hiring protocol for the Investor Owned Utility participants. Contractors will be contacted upon completion of the audit by the SCE auditors if there is/are qualifying devices at the site. The customer will redeem the voucher with the hired contractor(s). The contractor(s) will retrofit all listed devices and return the redeemed voucher to the respective water agency. The contractor(s) will be responsible for procuring and transporting all new equipment. Contractor(s) will also be responsible for transporting all old equipment and recycling of old devices if possible. Contractor(s) will also follow all established schedules and milestones. All of these tasks are included in the associated costs.

The hired contractor(s) will have all the necessary experience to conduct the work listed above. The contractor(s) will be available to perform work throughout the duration of the entire program.

The total cost for the contractor to perform these services is \$97,700 assuming a rate of \$100 per hour for administration. The rates were determined based on existing contracts with contractors implementing similar water conservation programs. A detailed breakdown of the contractual budget is included above in Table 1.

Environmental and Regulatory Compliance Costs

There are no environmental or regulatory compliance costs associated with this program.


Other

All reporting requirements will be performed by the IRWD Program Manager, Ms. McNulty. The reports will be submitted bi-annually and a final report upon completion of the Program.

These hours are counted as in-kind contributions of 20 hours at a rate of \$73.50 for a total of \$1,470. This rate is a combination of Ms. McNulty's "Salaries and Wages" and "Fringe Benefits" rates.

Indirect Costs

The indirect costs associated with this program include overhead and financial services and are estimated to be \$8,560. This represents 2.9% of the total program budget and is based on a melded rate of \$53.50/hour for a total of 160 hours (number of reporting hours plus the hours from salaries and wages for both Ms. Sanchez and Ms. McNulty).

September 26, 2011
Prepared by: J. McGehee/P. Uematsu
Submitted by: K. Burton
Approved by: Paul Cook 

CONSENT CALENDAR

WELLS 21 AND 22 DESALTER CONTRACT CHANGE ORDER

SUMMARY:

The Wells 21 and 22 Desalter design/build is currently being constructed by Pascal & Ludwig Constructors. Staff recommends that the Board:

- Approve an Expenditure Authorization in the amount of \$577,500, and
- Approve Contract Change Order (CCO) No. 7, in the amount of \$316,182, to Pascal & Ludwig Constructors for the Wells 21 and 22 Desalter Design/Build Project.

BACKGROUND:

Design/Build of the Wells 21 and 22 Desalter was awarded to Pascal & Ludwig in June 2010 in the amount of \$14,152,587. This plant will provide reverse osmosis treatment for seven million gallons per day of groundwater extracted from Wells 21 and 22 located in the City of Tustin. The project is receiving 25% matching funds, up to a maximum of \$11,700,000, in Title XVI funding through the United States Bureau of Reclamation (USBR) from the American Recovery and Reinvestment Act of 2009.

Contract Change Order No. 7:

CCO No. 7, in the amount of \$316,182, consists of the following:

Pump Vibration Panels, \$56,881: The original design provided for local non-recording vibration sensors. It was determined that the Dytran Triaxial Accelerometer sensors and vibration monitoring PLC control panels would improve the District's preventative maintenance diagnostics. These accelerometers provide analog signals, more accurate monitoring, vibration trending, and can be programmed to provide regular reports. The original bidding documents did not provide for this type of vibration monitoring. This work item includes Dytran vibration sensors on the 250-horsepower RO feed pumps and 250-horsepower product water pumps, and two remote PLC control panels to be connected to the main SCADA system. The original local vibration sensors were credited.

Jack and Bore Channel Work, \$248,975: The original design provided for the air gap discharges and site drainage to be combined and conveyed to the City of Tustin's storm drain in Edinger Avenue. In subsequent discussions with City staff during final design, the City determined that only site drainage would be allowed into the City's storm drain due to capacity issues. This required the design team to initiate discussions with the County of Orange Flood Control staff to obtain preliminary approval to connect to their Santa Fe Channel. The facilities consist of a second storm drain discharge system using 20-inch/24-inch steel piping, two manholes, flow metering station with telemetry and at-grade sampling tap, 42-inch jack and bore across the OCTA/Metrolink railways and channel headwall outlet structure in the Santa Fe Channel.

Second Motorized Gate, \$23,060: The original contract documents included two sliding gates – one motorized and one manual. In subsequent discussions with Orange County Fire Authority (OCFA) staff during final design, it was agreed to motorize both sliding gates. This work item is to provide for the second electric gate system.

Deleted Injection Quill Enclosures, <\$12,734>: The original contract documents required enclosures around chemical injection quills in 13 locations. In subsequent discussions with OCFA staff during final design, it was agreed that enclosures were not required at the injection quills. This work item is for the deletion of these enclosures.

Staff reviewed Pascal & Ludwig’s cost proposal, negotiated changes, and mutually agreed with Pascal & Ludwig on the costs. CCO No. 7 in the amount of \$316,182 is attached as Exhibit “A”. The construction contract summary is attached as Exhibit “B”.

FISCAL IMPACTS:

Project 10286 (1081) is included in the FY 2011-12 Capital Budget. An Expenditure Authorization is requested for CCO No. 7, prior Desalter and Pipeline construction change orders, and other construction-related work 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
10286 (1081)	\$39,921,300	\$-0-	\$39,921,300	\$35,328,800	\$577,500	\$35,906,300

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on September 20, 2011.

RECOMMENDATION:

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$577,500 FOR PROJECT 10286, AND APPROVE CONTRACT CHANGE ORDER NO. 7 IN THE AMOUNT OF \$316,182 TO PASCAL & LUDWIG CONSTRUCTORS FOR THE WELLS 21 AND 22 DESALTER, PROJECT 10286 (1081).

LIST OF EXHIBITS:

Exhibit "A" – Pascal and Ludwig Constructors Contract Change Order No. 7

Exhibit "B" – Pascal and Ludwig Constructors Construction Contract Summary

Exhibit "C" – Expenditure Authorization

CON EXHIBIT "A" ER

IRVINE RANCH WATER DISTRICT
 15600 Sand Canyon Avenue
 Irvine, California 92619
 (949) 453-5300



C.O. No. 7
 Final
 Project No. 10286 (1081)

Wells 21 and 22 Desalter
 Project Title

Date: September 8, 2011

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
Pump Vibration Panels	\$56,881		0
Jack and Bore Channel Work	\$248,975		
Second Gate to be Motorized	\$23,060		
Deleted Injection Quill Enclosures		\$12,734	
TOTAL	\$328,916	\$12,734	0

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	\$316,182	0
2. ORIGINAL CONTRACT AMOUNT	=	\$14,152,587	450
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	\$1,721,164.00	135
4. TOTAL BEFORE THIS CHANGE ORDER (2+3)	=	\$15,873,751.00	585
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$16,189,933.00	585

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

Three Hundred Sixteen Thousand One Hundred Eighty-Two ----- Dollars

9/8/11
 Date

Pascal & Ludwig Constructors
 Contractor

Alan Ludwig
 By

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
<u>J-M</u>	<u>9/12/11</u>	Department Director Approval Required <input type="checkbox"/>
IRWD Engineer or Consulting Engineer	Date	General Manager Approval Required <input type="checkbox"/>
<u>Debra Weir</u>	<u>9/12/11</u>	Committee Approval Required <input type="checkbox"/>
Principal Engineer	Date	Board Approval Required <input checked="" type="checkbox"/>
<u>Kevin L. Burt</u>	<u>9/13/11</u>	
Director of Engineering and Construction	Date	By _____ Date _____
General Manager	Date	500997
		Purchase Order No.

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

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

EXHIBIT "B"

Wells 21 and 22 Desalter Project
PR 10286 (Oracle 1681)
Construction Summary

Design/Build Contractor: **Pascal & Ludwig Constructors (Terra Tech)**
 Design Engineer: **RBF/Carollo**

Change Order	Description	Category	Contract Amount						Contract Days			Original Completion Date	
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days		Revised Total Contract Days
1	Approved by Director of Engineering and Construction on October 6, 2010 1.1 Add Municipal Water District of Orange County to additional insureds in Contract Documents, Special Provisions Section 00900 - Contractor's Insurance. 1.2 Add indemnification clause for Metropolitan Water District of Southern California and Municipal Water District of Orange County to Contract Documents, Special Provisions Section 00900 - Modifications to the General Provisions.	A	\$0.00	\$0.00	\$0.00	\$0.00	0.0%	\$14,152,587.00	0	0	0	450	10/20/2011
2	Approved by General Manager on December 8, 2010 2.1 Zone 1 analysis for wells 21 and 22 product water discharges 2.2 Raw water and product water surge analysis 2.3 Water Quality Management Plan 2.4 Bond (1%)	D D E D	\$17,745.00 \$23,625.00 \$5,880.00 \$472.00	\$47,722.00	\$0.00	\$47,722.00	0.3%	\$14,200,309.00	0	0	0	450	10/20/2011
3	Approved by Board of Directors on June 21, 2011 3.1 Emergency Generator 3.2 Surge Tank 3.3 Footlift (Straddle Stacker)	D D D	\$239,983.00 \$115,611.00 \$17,636.00	\$47,722.00	\$47,722.00	\$414,952.00	2.9%	\$14,567,539.00	0	0	0	450	10/20/2011
4	Approved by Board of Directors on July 25, 2011 4.1 Revised Site Layout 4.2 Project Enhancements 4.3 Time Extension	C A C	\$972,776.00 \$263,261.00	\$1,236,037.00	\$414,952.00	\$1,650,989.00	11.7%	\$15,803,576.00	135	0	135	585	3/9/2012
5	Approved by Director of Engineering and Construction on August 30, 2011 5.1 Emergency Generator add-on 5.2 HVAC "SCE Sure by Design" 5.3 NRW Sample Box Revisions 5.4 Miscellaneous Valve Changes 5.5 Power Supply for Controlled Access Doors 5.6 CIP Equipment Modifications 5.7 Pump Skidlift hatches	A E E C A A A	\$1,376.00 \$1,591.00 \$3,381.00 \$1,128.00 \$4,179.00 \$7,471.00 \$2,268.00	\$21,394.00	\$1,650,989.00	\$1,672,383.00	11.8%	\$15,824,970.00	0	135	135	585	3/9/2012
6	Approved by General Manager on September 8, 2011 6.1 Hirsch Controlled Access System	A	\$48,781.00	\$48,781.00	\$1,672,383.00	\$1,721,164.00	12.2%	\$15,873,751.00	0	135	135	585	3/9/2012
7	Pending Approval by Board of Directors 7.1 Pump Vibration Panels 7.2 Jack and Bore Channel Work 7.3 Second Gate to be Motorized 7.4 Deleted Injection Quill Enclosures	D E E E	\$56,881.00 \$248,975.00 \$23,069.00 -\$12,734.00	\$316,182.00	\$1,721,164.00	\$2,037,346.00	14%	\$16,189,933.00	0	135	135	585	3/9/2012

	Contract Amount	% of Original
A - District Convenience/Initiation	\$327,336.00	2.3%
B - Differing Site Conditions	\$973,904.00	6.9%
C - New Site Layout (additional future commercial area)	\$465,953.00	3.3%
D - Design - Build Enhancements from BOD baseline	\$270,153.00	1.9%
E - Permit Conditions	\$	0.0%
TOTAL (A+B+C+D)	\$ 2,037,346.00	14.4%

September 26, 2011

Prepared by: D. Lochridge

Submitted by: D. Pedersen *D.P.*

Approved by: Paul Cook *Paul Cook*

CONSENT CALENDAR

CATHODIC PROTECTION OF SIX STEEL RESERVOIRS
IN SANTIAGO CANYON – EXPENDITURE AUTHORIZATION

SUMMARY:

This project consists of installing cathodic protection equipment for six steel reservoirs in the Santiago Canyon area (Fleming, Benner, Shaw, Williams, Modjeska and Chapman). Staff recommends that the Board approve an Expenditure Authorization in the amount of \$37,400 for the Cathodic Protection of Six Steel Reservoirs in Santiago Canyon Project.

BACKGROUND:

A survey of the six steel reservoirs in the Santiago Canyon area (Fleming, Benner, Shaw, Williams, Modjeska and Chapman) showed that only two of the reservoirs have cathodic protection systems. Fleming Reservoir is equipped with an impressed current system that requires updating and Chapman Reservoir has a depleted sacrificial anode system. The remaining four reservoirs have no cathodic protection systems and, therefore, are very vulnerable to internal corrosion.

The scope of work consists of updating the impressed current system at Fleming Reservoir, replacing the anodes at Chapman Reservoir, and installing new sacrificial anode systems for the remaining four reservoirs. All of the new equipment installed in the reservoirs will be ANSI/NSF 61 certified to comply with California Department of Public Health regulations. Corpro Companies, Inc. is currently the only provider of ANSI/NSF 61 certified cathodic protection equipment, so a sole-source contract will be awarded to them for the project.

FISCAL IMPACTS:

Project 11484 is included in the approved Fiscal Year 2011-12 Capital Budget. The Expenditure Authorization is provided as Exhibit "A". The project will be funded by the Replacement Fund.

Project No.	Current Budget	Addition <Reduction>	Total Budget	Exist EA	This EA Request	Total EA Request
11484 (1637)	\$96,800	\$0	\$96,800	\$59,400	\$37,400	\$96,800

ENVIRONMENTAL COMPLIANCE:

This activity is categorically exempt from the California Environmental Quality Act pursuant to the California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15301(b), which provides an exemption for repair, maintenance, and minor alterations of existing facilities.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on September 20, 2011.

RECOMMENDATION:

THAT THE BOARD APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$37,400 FOR THE CATHODIC PROTECTION OF SIX STEEL RESERVOIRS IN SANTIAGO CANYON PROJECT 11484 (1637).

LIST OF EXHIBITS:

Exhibit “A” – Expenditure Authorization

IRVINE RANCH WATER DISTRICT

Expenditure Authorization

Project Name: CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS IN SCWD

Project No: 11484 EA No: 2

ID Split: Miscellaneous

Improvement District (ID) Allocations

Project Manager: LOCHRIDGE, DAVID

Project Engineer: LOCHRIDGE, DAVID

Request Date: September 12, 2011

ID No. Allocation % Source of Funds

101	100.0	REPLACEMENT FUND
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$59,400
This Request:	\$37,400
Total EA Requests:	\$96,800
Previously Approved Budget:	\$96,800
Budget Adjustment Requested this EA:	\$0
Updated Budget:	\$96,800
Budget Remaining After This EA	\$0

Comments:

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING DESIGN - OUTSIDE	0	24,000	24,000	0	24,000	24,000	7/10	6/12
DESIGN STAFF FIELD SUPPORT	0	2,000	2,000	0	2,000	2,000	7/10	6/12
ENGINEERING - CA&I IRWD	0	3,000	3,000	0	3,000	3,000	7/10	6/12
CONSTRUCTION	34,000	25,000	59,000	0	59,000	59,000	7/10	6/12
Contingency - 10.00% Subtotal	\$3,400	\$5,400	\$8,800	\$0	\$8,800	\$8,800		
Subtotal (Direct Costs)	\$37,400	\$59,400	\$96,800	\$0	\$96,800	\$96,800		
Estimated G/A - 180.00% of direct labor*	(\$800)	\$9,800	\$9,000	\$0	\$9,000	\$9,000		
Total	\$36,600	\$69,200	\$105,800	\$0	\$105,800	\$105,800		
Direct Labor	\$0	\$5,000	\$5,000	\$0	\$5,000	\$5,000		

*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 \$108,000. 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.

9-12-2011

09/12/11

September 26, 2011 AC
Prepared by: H. Cho/M. Cortez W
Submitted by: K. Burton KLB
Approved by: Paul Cook / Cook.

CONSENT CALENDAR

LAKE FOREST WOODS SEWER REHABILITATION PROJECT
CHANGE ORDER AND FINAL ACCEPTANCE

SUMMARY:

The Lake Forest Woods Sewer Rehabilitation Project installed a Cured-In-Place-Pipe (CIPP) liner in approximately 40,000 linear feet of sewer in The Woods area and three other areas in Lake Forest. These sewers have cracked due to tree root intrusion, and the CIPP liner was installed to create a solid pipe that will prevent tree roots from growing into the sewer and creating clogs. Additionally, 220 linear feet of 8-inch sewer was replaced with a 15-inch sewer pipe to prevent surcharging in Old Trabuco Road. A final Contract Change Order in the credit amount of <\$95,117.93> is required to adjust the contract for the final project quantities. The project has received a final inspection by staff and acceptance is recommended.

BACKGROUND:

Contract Change Order No. 3 in the credit amount of <\$95,117.93> is for adjusting the final project quantities. A Staff Report summarizing the final project additions and deletions quantities is attached as Exhibit "A". Contract Change Order No. 3 is attached as Exhibit "B".

Project Title:	Lake Forest Woods Sewer Rehabilitation
Project No.:	20747
Design Engineer:	AECOM
Construction Management by:	IRWD Staff
Contractor:	Insituform Technologies, Inc.
Original Contract Cost:	\$2,585,897.75
Final Contract Cost:	\$2,814,216.47
Original Contract Days:	210
Substantial Completion Days:	392
Final Contract Days:	392
Total Budget:	\$3,304,500

Total Project Cost (Est.): \$3,304,500

Final Change Order Approved On: September 26, 2011

FISCAL IMPACTS:

Project 20747 (1111) is included in the FY 2011-12 Capital Budget. The existing budget and Expenditure Authorization were sufficient to complete the project.

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, Sections 15301 and 15302. A Notice of Exemption was filed with the County of Orange on September 3, 2009.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE CONTRACT CHANGE ORDER NO. 3 WITH INSITUFORM TECHNOLOGIES, INC. IN THE CREDIT AMOUNT OF <\$95,117.93>; ACCEPT CONSTRUCTION OF THE LAKE FOREST WOODS SEWER REHABILITATION, PROJECT 20747 (1111); AUTHORIZE THE GENERAL MANAGER TO FILE A NOTICE OF COMPLETION; AND AUTHORIZE THE PAYMENT OF THE RETENTION 35 DAYS AFTER THE DATE OF RECORDING THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

- Exhibit "A" – Staff Report
- Exhibit "B" – Contract Change Order No. 3

EXHIBIT "A"

Staff Report For Lake Forest Woods Sewer Rehabilitation Project

This staff report summarizes Insituform Technologies Contract Change Order No. 3 documenting the additional work required for the project. Contract Change Order No. 3 in the credit amount of <\$95,117.93> includes the following 11 items:

1. Cost to Set-up Additional Spill Containment Around Creeks
After the construction contract was awarded, staff requested additional spill containment be placed near the creeks and equipment to be staged on-site in the event of a sewer spill. The additional cost to place the containment during the work around the creeks is \$28,274.24.
2. Cost to Install CIPP Liner on Eldamar in Phase 2
During the project, staff identified an additional sewer reach that required rehabilitation due to continued damage from tree roots. The sewer is an 8-inch sewer on Eldamar in Phase 2 and is approximately 260 feet long. The additional cost for CIPP installation is \$8,839.05 and is based on the same unit price (\$34/ft.) for 8-inch sewer rehabilitation for the project.
3. Deduction for Not Installing Top Hats in Truss Pipe Laterals
In The Woods area, there are 28 sewer reaches that were built using truss pipe. Truss pipe is built with two concentric plastic tubes with the annular space supported by a lattice structure. All of the truss pipe sewers are 8-inch diameter in The Woods. However, the sewer laterals were built using 8"x8" wye connections. "Top hats" could not be installed over these wye connections and the laterals were opened up. There are 108 sewer laterals in truss pipe sections, and the cost for these laterals will be removed from the contract. The unit cost for top hat installation is \$1,700 per top hat, and the total deduction is \$183,600.00.
4. Cost to Re-open Sewer Laterals without Top Hats
For the 108 sewer laterals that did not have top hats installed, Insituform incurred extra costs to re-open the 8" sewer lateral opening. The unit cost for this work was \$425 per lateral, and the total cost was \$45,900.00.
5. Cost to Connect Laterals Not on Plans on Old Trabuco Road
The existing 8-inch sewer on Old Trabuco Road was upsized to a 15-inch sewer to prevent surcharging. The record drawings show the sewer laterals connecting to another sewer. When the existing sewer was exposed, three sewer laterals were discovered connected to the sewer main. The additional cost to connect the three laterals to the new 15-inch sewer was \$9,650.00.

6. Emergency Mobilization to Remove Root Clog at Sewer Lateral Connection
A root clog formed at the sewer lateral connection at 24931 Timberwood after the sewer was rehabilitated and the top hat was installed. QPS, the top hat installation subcontractor, was available to clear the root clog. The additional cost was \$712.76.
7. Cost to Re-excavate Sewer Lateral on Eucalyptus
Insituform replaced the sewer at six lateral locations behind Eucalyptus because they over-cut the liner at the sewer lateral opening exposing the holes where the roots have grown into the sewer. These sewers were replaced at the laterals with approximately 8 foot long sections of 8-inch sewer. The pipe couplings connecting the old pipe sections to the new pipe sections were encased in concrete. However at one lateral location, the replacement pipe section was buried without concrete requiring re-excavation in order to place the concrete around the couplings. The cost for the additional excavation work was \$8,480.00.
8. Deduction for Tree Removal on Eucalyptus
There was a large Eucalyptus tree growing over one of the sewer sections to replace on the sewer behind Eucalyptus. IRWD contracted a tree contractor for the work at a cost of \$800. This amount will be deducted from the construction contract.
9. Deduction for Inspection Over-Time
During the project, the CIPP installation sometimes went past 4 PM due to the length of time required to heat the liner and to cure the liner. Field conditions lengthened the time it took to heat the water or steam to the required temperature to cure the liner. Over the course of the project, IRWD inspectors spent 77 hours working over-time. At the standard over-time rate of \$150/hour, a total of \$11,550.00 will be deducted from the construction contract.
10. Deduction for Resident Claim
A resident at 22246 Eucalyptus claimed that the contractor damaged his wood rail fence and a plant. Additionally, he claimed that a sewer cleanout was opened by the contractor, and he hired a contractor to CCTV his lateral. The CCTV video showed a small resin lip at the bottom of the sewer lateral at the lateral connection to the sewer main. This resin lip was removed by the contractor. The resident filed a claim with IRWD for the fence repair, plant replacement, and cost to CCTV the sewer lateral. The total cost was \$1,023.98. IRWD paid this claim, and the cost will be deducted from the construction contract.
11. Non-Compensatory Time Extension to Complete the Project
Staff issued a non-compensatory time extension of 81 calendar days to complete the project. Along with the 8 additional work days to complete the additional work in this change order, the project completion date was extended from May 27, 2011 to August 31, 2011.

EXHIBIT "B"

CONTRACT CHANGE ORDER

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



C.O. No. 3, Page 1 of 2

Final

Project No. 20747

Lake Forest Woods Sewer Rehabilitation Project

Project Title

Date: Sept. 19, 2011

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Costs to set-up additional spill containment around the creeks during the work in Phases 1 through 5.	\$28,274.24	\$-0-	0
2. Cost to install CIPP in 260 lf of 8" sewer on Eldamar in Phase 2.	\$8,839.05	\$-0-	6
3. Deduction for not installing top hats in 108 laterals in truss sewer pipe sections with 8" sewer lateral connections at \$1,700 per lateral.	\$-0-	\$183,600.00	0
4. Cost to open 108 sewer laterals that did not get top hats at \$425 per lateral.	\$45,900.00	\$-0-	0
5. Cost to connect to 3 laterals not shown on plans on Old Trabuco Road during the sewer upsizing.	\$9,650.00	\$-0-	1
6. Cost for QPS emergency mobilization to remove root clog at 24931 Timberwood.	\$712.76	\$-0-	0
7. Cost to re-excavate sewer lateral on Eucalyptus to place concrete on the pipe couplings.	\$8,480.00	\$-0-	1
8. Deduction for the cost of the tree removal above the sewer lateral on Eucalyptus.	\$-0-	\$800.00	0
9. Deduction for inspectors over time costs during the project.	\$-0-	\$11,550.00	0
10. Deduction for claim payment to resident Dean Harris.	\$-0-	\$1,023.98	0
11. Non-compensatory time extension to complete the project.	\$-0-	\$-0-	81
The revised project completion date shall be extended from May 27, 2011 to Aug. 31, 2011.			
TOTAL	\$101,856.05	\$196,973.98	AC

	=		DAYS ±
1. NET AMOUNT THIS CHANGE ORDER	=	<\$95,117.93>	89
2. ORIGINAL CONTRACT AMOUNT	=	\$2,585,897.75	210
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	\$323,436.65	93
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$2,909,334.40	303
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$2,814,216.47	OK 392

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

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

CONTRACT CHANGE ORDER

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



C.O. No. 3, Page 2 of 2

Final

Project No. 20747

Lake Forest Woods Sewer Rehabilitation Project

Project Title

Date: Sept. 19, 2011

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

<NINETY FIVE THOUSAND ONE HUNDRED SEVENTEEN AND 93/100 ----- Dollars

9/20/11
Date

Insituform Technologies
Contractor

By: *J. Cabrera*

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
<i>[Signature]</i>	<u>9/21/11</u>	Department Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Committee Approval Required <input type="checkbox"/> Board Approval Required <input type="checkbox"/>
IRWD Engineer or Consulting Engineer	Date	
<i>[Signature]</i>	<u>9/21/11</u>	
Principal Engineer – Engineering Operations Support	Date	
Director of Engineering and Construction	Date	By _____ Date _____
General Manager	Date	Purchase Order No. _____

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

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

September 26, 2011
Prepared by: J. Dayer/D. Lochridge
Submitted by: D. Pedersen *D.P.*
Approved by: Paul Cook *P. Cook*

ACTION CALENDAR

LANDSCAPE AND IRRIGATION MAINTENANCE CONTRACT AWARD

SUMMARY:

The current three-year landscape and irrigation maintenance contracts for the District's properties expired on June 30, 2011 and have been extended on a month-to-month basis until new contracts are awarded. Staff recommends that the Board authorize the General Manager to award three-year landscape and irrigation maintenance contracts to Tropical Plaza Nursery, Inc. for \$631,440, Pinnacle Landscape for \$240,923 and Merchants Landscape Services for \$262,080.

BACKGROUND:

Staff circulated a Project Manual to three contractors to solicit bids for landscape and irrigation maintenance services required for 136 District-owned sites divided into seven geographical areas. Bids were received from all three contractors: Tropical Plaza Nursery, Inc., Pinnacle Landscape and Merchants Landscape Services. These contractors are currently performing the work for the District and staff has been very pleased with their service and responsiveness.

The contractors were informed that the work may be awarded to multiple firms and, therefore, they were required to submit individual bids for each geographic area. The distinct advantage of this approach is that an overall cost savings of \$106,837 can be achieved by awarding the work to the lowest bidder for each geographic area rather than to the single lowest overall bidder. As shown on Exhibit "A", the lowest bid was received from Tropical Plaza Nursery, Inc. for Areas 1, 2, 5 and 7, Pinnacle Landscape for Areas 3 and 6 and Merchants Landscape Services for Area 4.

The total amount for the three-year contracts is \$1,134,443, which is \$108,422 or approximately nine percent less than the same amount for the recently expired contracts.

FISCAL IMPACTS:

Sufficient funds for the first year of the contracts, at a total cost of \$376,560, were included in the approved Fiscal Year 2011-12 Operating Budget. Funds will be budgeted for the remaining two years of the contracts through the District's budget process.

ENVIRONMENTAL COMPLIANCE:

This activity is categorically exempt from the California Environmental Quality Act pursuant to the California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15301(h), which provides an exemption for maintenance of existing landscaping.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on September 20, 2011.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THREE-YEAR LANDSCAPE AND IRRIGATION MAINTENANCE CONTRACTS WITH TROPICAL PLAZA NURSERY, INC. FOR \$631,440, PINNACLE LANDSCAPE FOR \$240,923 AND MERCHANTS LANDSCAPE SERVICES FOR \$262,080.

LIST OF EXHIBITS:

Exhibit "A" – Bid Evaluation Sheet

Bid Request Number cp080411 Addendum #2
Title IRWD Three Year Landscape Bid
Description
Bid Type Sealed Bid
Issue Date 08/10/11 10:00:01 AM Pacific
Close Date 09/8/2011 2:00:00 PM Pacific

Organization IRWD Procurement (IRWD)
Bid Creator Ms. Chris Pio Buyer
Email pio@irwd.com
Phone (949) 453-5713
Fax 888 (698) 3844

Responding Suppliers

Name	City	Response Submitted	Response Total
Tropical Plaza	Villa Park	09/07/2011 02:38:43 PM	\$1,241,280.00 (Lowest overall bid-all areas)
Merchants Landscape	Santa Ana	09/08/2011 1:54:00 PM F	\$1,469,556.00
Pinnacle Landscape	Santa Ana	09/08/2011 01:26:16 PM	\$1,398,893.00

Specification Responses

Line	Description	Tropical Plaza	Merchants Landscape	Pinnacle Landscape
1	Area 1 - Central Irvine Lump Sum Three Year Bid	\$144,720.00	\$150,228.00	\$161,594.00
2	Area 2 - Coastal Lump Sum Three Year Total	\$77,040.00	\$109,800.00	\$116,054.00
3	Area 3 - Dyer Well Lump Sum Three Year Total	\$84,240.00	\$98,208.00	\$77,125.00
5	Area 4 - Lake Forest Lump Sum Three Year Total	\$315,360.00	\$262,080.00	\$352,570.00
6	Area 5 - Turtlerock Lump Sum Three Year Total	\$320,400.00	\$517,320.00	\$420,880.00
7	Area 6 - Tustin Lump Sum Three Year Total	\$210,240.00	\$223,200.00	\$163,798.00
8	Area 7 - OPA-SCWD Lump Sum Three Year Total	\$89,280.00	\$108,720.00	\$106,872.00
		\$1,241,280.00	\$1,469,556.00	\$1,398,893.00

Summary

Area	Low Bid	Low Bidder
Area 1 - Central Irvine Lump Sum Three Year Bid	\$144,720.00	Tropical Plaza
Area 2 - Coastal Lump Sum Three Year Total	\$77,040.00	Tropical Plaza
Area 3 - Dyer Well Lump Sum Three Year Total	\$77,125.00	Pinnacle Landscape
Area 4 - Lake Forest Lump Sum Three Year Total	\$262,080.00	Merchants Landscape
Area 5 - Turtlerock Lump Sum Three Year Total	\$320,400.00	Tropical Plaza
Area 6 - Tustin Lump Sum Three Year Total	\$163,798.00	Pinnacle Landscape
Area 7 - OPA-SCWD Lump Sum Three Year Total	\$89,280.00	Tropical Plaza
2011 Contract Total	\$1,134,443.00	

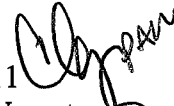
(2008 Contract Total = \$1,242,865)

September 26, 2011

Prepared by: P. Uematsu

Submitted by: K. Burton

Approved by: Paul Cook



ACTION CALENDAR

CONSTRUCTION MANAGEMENT CONSULTANT SERVICES

SUMMARY:

Due to the District's current high volume of projects and overlapping deadlines, additional construction management services are needed for approximately the next nine months. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with CH2M Hill in the amount of \$300,000 for construction management services for various capital projects.

BACKGROUND:

The District's Capital Projects Engineering staff consists of six engineers. This staff is currently performing tasks associated with numerous projects, including: the preliminary design, design, and construction of the Wells 21 and 22 project (three construction packages); the Baker Treatment Plant (two or three construction packages); nine new or existing wells that are either being drilled, rehabilitated, or equipped; several significant pipeline projects; and various other capital projects. Two of these engineers are also assigned to the Michelson Water Recycling Plant (MWRP) Biosolids and Energy Recovery Project, which requires approximately 50 to 75% of their time.

The majority of these projects are currently being constructed, and they require significant efforts to keep the construction on schedule and within budget. For example, there is heavy staff involvement in the Wells 21 and 22 Pipelines due to City of Tustin coordination, traffic control issues, unforeseen utility conflicts and revised pipeline lay drawing requirements, scheduling issues, and contractor difficulties. There will also be six concurrent well construction projects; namely Wells 21 and 22 rehabilitating and equipping, Well 78 drilling and equipping, Well 107 drilling and equipping, Lake Forest well equipping, Well TL-1A drilling, and OPA well drilling and equipping.

Based on currently active and upcoming construction projects, staff requires one additional full-time construction manager / resident engineer for a period of up to nine months. Upon completion of the current high volume of construction projects, staff anticipates that the construction services will no longer be required, as the workload should return to a level that can be supported by the District's in-house engineering staff.

Consultant Selection Process:

Over the last year, staff has requested proposals for construction engineering services for both large, more complex capital projects as well as small, simpler projects from several consultants, including Butier, CH2M Hill, HDR, Arcadis (formerly Malcolm Pirnie), SAIC (formerly R.W. Beck), Psomas, and Project Partners. Staff has evaluated several candidates from various firms and selected key individuals from HDR and Arcadis as construction engineers on the MWRP

Phase II Expansion Project, as well as construction inspectors from HDR, Arcadis, Tetra Tech, and Butier for other projects.

To support the construction of the current and upcoming projects, staff has identified an individual from CH2M Hill with extensive construction experience working as the Owner's Representative, familiarity with pipeline and mechanical construction, and the demonstrated ability to manage and coordinate multiple construction projects simultaneously. CH2M Hill has successfully worked on past District projects, and the selected individual would be immediately assigned to the Wells 21 and 22 Pipelines, Wells 21 and 22 Wellheads, and Lake Forest Well No. 2 Equipping. CH2M Hill will also be available to assist with other capital construction projects on an as-needed basis.

The scope of work for the construction engineer is defined as on-call services. Staff negotiated a very favorable fully-burdened rate of \$161 per hour, which includes a vehicle and fuel, cell phone and all out-of-office expenses. Staff recommends awarding a Professional Services Agreement with CH2M Hill in the amount of \$300,000 for on-call construction management consultant services. CH2M Hill's proposal is attached as Exhibit "A".

FISCAL IMPACTS:

Funding for the construction engineering services will be provided from the various capital projects being constructed as part of each project's budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on September 20, 2011.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH CH2M HILL IN THE AMOUNT OF \$300,000 FOR CONSTRUCTION MANAGEMENT CONSULTANT SERVICES.

LIST OF EXHIBITS:

Exhibit "A" – CH2M Hill Construction Management Consultant Services Proposal

Exhibit "A"



CH2M HILL
6 Hutton Centre Drive
Suite 700
Santa Ana, CA 92707
Phone: 714.429.2000
Fax: 714.429.2050

September 9, 2011

Mr. Kevin Burton, P.E.
Director of Engineering and Construction
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

Subject: Request for Proposals – Construction Manager for Various Projects Including Wells and Pipelines

Mr. Burton and Members of the Selection Committee:

CH2M HILL is pleased to submit our candidate Steve Bomkamp for the Construction Manager (CM) position. It is our understanding that the CM will be the District's Project Manager on multiple construction projects and will be working at the District's offices under the District's supervision. Our proposal is based on the knowledge we gained from our meetings with Irvine Ranch Water District (District) staff, and our experience providing construction management experience on wells, pipelines and water/wastewater treatment plant projects. We are confident we are providing a qualified and skilled candidate to address the key areas of concerns for the District and for making these projects a success.

Specifically, the CH2M HILL candidate offers the District the following:

- A hands-on interactive CM who is experienced in managing Third Party construction management projects including multiple engineering firms and general contractors.
- A CM experienced in contract administration of pipeline, wells, and water/wastewater projects. The projects will require extensive collaboration with the District, the design team, the general contractor, the engineer of record, public relations, and other project stakeholders.
- The CM's General Contractor experience, which will provide the perspective and skills to interact with contractors and support the team.
- A CM that is local to Southern California and is experienced on large-scale public works projects.

We are confident that the experience and background of our candidate will help the District successfully deliver this project. As requested, Exhibit A includes the resume of our proposed CM. Exhibit B includes the candidate's associated billing rate and total contract amount. Should you have any questions regarding our submittal, please contact Fred Soroushian at 714-435-6232, or Azhar Khan at 323 401 7830. Fred Soroushian is CH2M HILL's corporate principal with contractual responsibility to bind our firm to the terms of the project.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Fred Soroushian".

Fred Soroushian, P.E.
Vice President

A handwritten signature in black ink, appearing to read "Azhar Khan".

Azhar Khan, P.E.
Construction Management Services – Operations Lead

EXPERIENCED

COLLABORATIVE

PROBLEM-SOLVING

A-1



EXHIBIT A – RESUMES

This exhibit includes resumes for the following:

Construction Manager – Steve Bomkamp

EXPERIENCED

COLLABORATIVE

PROBLEM-SOLVING

Construction Manager

Steve is a construction manager and resident engineer with experience on water and wastewater treatment, pipeline, pump stations, and reservoir projects for industrial, municipal, and utility clients, as well as plant maintenance and other capital improvement projects. Steve has experience and expertise in claims avoidance, dispute resolution, impact mitigation, change order negotiation, material takeoffs, progress reports, invoicing, pay request processing, and document tracking. He also has experience and expertise in project controls, using Primavera P3 and Expedition, including schedule analysis, project documents control, estimating, and project scheduling.

- 19 years of construction management and resident engineering experience, including large-scale public works projects.
- 9 years employment with CH2MHILL, all within Southern California, local residency established, well networked with the engineering and technical resources of local CH2MHILL offices.
- 5 years experience working within a large complex staff augmentation program for Orange County Sanitation District as an RE.
- A proven hands-on interactive manager, experienced managing projects with multiple engineering entities and contractors. Knows how to solicit added value and contributions from every member of the team.
- General Contractor experience provides perspective and skills to interact with contractors and to support the team.
- Experience implementing significant design additions during active construction phase and coordinating and communicating these changes with engineers and the project team.

Education

B.S., Mechanical Engineering, University of Washington

Project Experience

Resident Engineer; Various Wastewater Treatment Plant Projects and Capital Improvements Program; Orange County Sanitation District; Huntington Beach, California; 2005 to Present. Resident engineer providing construction management leadership as an integrated client staff member on assigned projects within a \$2.4 billion capital improvements program. Responsible for direct oversight of the general contractor on various projects while administering all aspects of the construction contract and managing the contributory roles and responsibilities of design consultants, engineers, inspectors, schedulers, estimators, operations and maintenance personnel, environmental and safety professionals, and other client staff.

Specific projects included:

5-49 Bitter Point Pump Station and 5-50 Rocky Point Pump Station.

These projects involve a significant amount of buried piping work of various diameter sizes up to 60" diameter for the associated sewer, water, drain, etc services to and from the stations. The most relevant examples are:

- a section of 30" sewer piping placed in the Caltrans right of way paralleling the curb Coast Highway in Newport Beach
- a 12" jack and bore sewer crossing of Coast Highway
- a 12" open cut sewer crossing of Coast Highway

These jobs involved extensive interfacing with City of Newport Beach, Caltrans, Community Groups, Business Owners, Home Owner Groups, Residents, and the Public. The project also involved specific permits and planning for traffic lane closures, traffic control, mitigating impacts to public traffic routes around seasonal demands, and minimizing and managing impacts to adjacent businesses and residential areas.

Job No. J-77, Plant No. 2 Effluent Pump Station Annex (EPSA), \$45 million. The project consisted of construction of a new effluent ocean outfall pump station, electrical building, standby power facility, associated plant piping additions and modifications, and appurtenant works. The project also involved The project also included significant lengths of welded steel pipe as large as 144" diameter. The Pump Building houses three 2,500-horsepower, 120-mgd, vertical centrifugal, dry pit pumping units; primary and secondary inlet wet wells; junction box annex structure; pump discharge piping and valves; pump motor cooling water system; and various appurtenances. The Electrical Building, located adjacent to EPSA,

Steve Bomkamp (continued)



houses the control room, pump VFDs, switchgear, motor control centers, and appurtenant equipment. The suction piping ranges from 96-inch diameter to 144-inch diameter; associated hydraulic structures (junction boxes) convey flow to EPSA from OOBs, Plant 2 primary clarifiers, and Plant 2 secondary clarifiers. The discharge piping ranges from 102-inch diameter to 120-inch diameter; associated junction boxes convey flows from the EPSA pumps to either of the District's main and back-up outfalls. The Standby Power Facility houses three 2-MW generator sets, 12.47 kV switchgear, 125 VDC battery bank and chargers, voltage regulators and excitation system, synchronizing system and protective relaying, grounding resistors, and 480V motor controllers.

Job No. P2-80, Plant No. 2 Primary Treatment System Rehabilitation and Refurbishment, \$20 million. The project consisted of the rehabilitation and refurbishment of 14 primary clarifiers, 7 sludge pump stations, and appurtenant facilities within a continuously operating treatment plant. Modifications to the pump stations include: installation of 21 new progressive cavity-type primary sludge pumps; 21 new grinders; pneumatically operated plug valves on the primary clarifier sludge withdrawal lines; new check valves, plug valves, pressure relief valves, steam and plant water flushing systems, seal water systems, and pumping appurtenances; new primary sludge flow and density meters; and new sludge sample systems. Construction of three new electrical buildings and refurbishment of four existing buildings to house complete new electrical, instrumentation and control systems, and air conditioning systems. Rehabilitation and refurbishment of the existing scum systems for each pump station, including: removal of the existing submersible scum box pumps, baffles, and appurtenances; installation of a new chopper type scum pumps with integral three-way valve for scum box mixing; new scum piping, valves, and appurtenances; and removal of the existing, and installation of new scum troughs, scum skimmers and appurtenances in each clarifier. Modifications to the existing foul air condensate sumps. Complete electrical, instrumentation, and control systems. Miscellaneous site work.

Job No. P2-91, Plant No. 2 Primary Sludge Feed System, \$17 million. The project consisted of construction of a Sludge Blending

Facility (SBF), SBF Electrical Building, tunnel and yard piping and piping modifications, power feed system, modifications to the Thickener Building, and other items. Two large blending tanks equipped with supporting mixer/chopper pumps are to work as an integral part of an elaborate sludge conveyance system between the plant's primary clarifiers and digesters to provide more uniform process operation of the various holding basins.

Deputy Construction Manager; Water Department Capital Improvements Program; City of San Diego; California; 1999 to 2005. Construction Manager providing full-scope construction management services for a major component of the capital improvements program (CIP), a comprehensive program covering fiscal years 1998 to 2008, with an estimated cost of nearly \$800 million. The planned CIP includes projects to repair, replace, upgrade, and expand water treatment plants, pump stations, pipelines, and reservoirs. Responsibilities included all aspects of administration and management of individual construction contracts at the project level within the overall program and executing project controls and quality assurance. Reviewed and interpreted specifications and drawings; evaluated and processed change order requests; oversaw and coordinated offsite resource personnel, such as estimators, project engineers, and specialty inspectors; supervised subordinate project engineer and inspectors; negotiated changes and resolved disputes; processed pay requests, change orders, and field orders. Responsible for budgetary estimating, monitoring, and reporting; coordinating owner, engineer, and contractor relations; project documentation control and tracking all deliverables; and schedule analysis, progress reporting, and impact mitigation.

Specific projects included:

Alvarado Water Treatment Plant Expansion and Upgrade, Phase 1, \$52 million. This project increased the rated capacity of the plant from 120 mgd to 150 mgd. Construction included a new 200-mgd, three-stage, rapid-mix facility with two parallel trains, each train having an inline jet mixer first stage and turbine-type mechanical mixers in the second and third stages. Also included were eight new dual-cell anthracite/sand filters with a capacity of 75-mgd; a new raw water chemical building

providing storage for 114,000 gallons of ferric chloride, 48-ton containers of chlorine, 13,600 gallons of liquid polymer, and housing two 6,600-gallon ferric chloride day tanks, two 750-gallon liquid polymer day tanks, a 55-pound-per-hour dry polymer feed system, and a 600-gph potassium permanganate feed system. A new finished water chemical building was designed to provide storage for a new 19,000-gallon bulk tank and two 2,800-gallons-per-day tanks for sodium hydroxide, and space for two relocated 4,000-gallon aqua ammonia storage tanks with new metering pump feed systems for all chemicals. The project also included a four-pump, 10,000-gpm, 1,000-horsepower finished water pump station supplying the high zone distribution system, which was rehabilitated, including three new pumps and all new piping. A new six-pump, 114,000-gpm, 2,200-horsepower raw water pump station was designed. Three 450-horsepower and two two-speed, 200-horsepower pumps were installed initially with pump can and piping installed for a future 450-horsepower pump. The pump station provided raw water from Lake Murray to the front end of the treatment plant as a supplemental and emergency water source. Auxiliary facilities included two 1,500-KVA substations, one 480-VAC and another at 12-KV. A stationary 1,200-KW standby power generator, and one portable 350-KW standby generation unit, along with a plantwide fiber optics system were also part of the project. The LM pump station is rated at 80 mgd but can produce higher flows with all the pumps operating.

Alvarado Water Treatment Plant, Phase 1A, Earl Thomas Reservoir Replacement, \$27 million. This project entailed the construction of the world's largest, circular, prestressed concrete reservoir and included the following principle components of work: demolition and disposal of the existing reservoir; excavation, shoring, backfill, and disposal of excess excavation and other spoil materials; interim and final grading and paving; import of all required backfill materials; construction of the 35-million-gallon reservoir and appurtenances; inlet, outlet, overflow, underdrain, and miscellaneous piping (up to 72 inches in diameter); construction of a tunnel for installation of approximately 900 feet of 60-inch-diameter piping to connect to the plants other reservoirs; inlet/outlet vaults holding 72-inch butterfly valves, underdrain inspection vault, reservoir overflow structure,

and other valve vaults; 72-inch-diameter effluent and distribution piping and connections, storm drain systems; associated electrical and control systems; new guard station, restroom, access gates and columns, and perimeter security fencing; and, landscaping and irrigation systems.

Alvarado Water Treatment Plant, Phase 2, \$30 million. The project entailed the expansion of the rated capacity of the plant from 150 to 200 mgd and included the following principle components: two new 80-million-gallon flocculation and sedimentation basins with influent, effluent, and overflow channels; new flocculation equipment; new chain and flight sludge removal equipment; rehabilitation of the control system for the original eight filter bays; replacing hydraulic valve actuators with electric for the filter valves; rehabilitation of the existing control consoles; new filter instrumentation, venturi flow transmitters, differential pressure transmitters, and turbidimeters; new programmable controllers; process instrumentation and plant control systems; electric power distribution facility; yard piping; site drainage piping; cathodic protection system; railings; perimeter security fencing and retaining walls; curbs, sidewalks, paving, and surface improvements; valve and meter vaults; and plant piping and connections.

Experience Prior to CH2M HILL

Field Engineer; Distribution Construction (Underground Gas General Construction); Pacific Gas and Electric Company; Northern California; 1991 to 1993. Assisted the Regional Superintendent in the San Joaquin Valley region; served on cost management policies and procedures committee; and provided technical and managerial support to crews in the San Joaquin Valley and Sacramento Valley regions. Responsibilities included regional department training and support for cost management systems, personal computer use, and all other technical training and support to the field offices; monitoring and reporting job cost and schedule performance, client satisfaction, and workload forecasting for the performance incentive plan; setting up and monitoring department overhead and capital tools accounts; policies and procedure contact to field offices; monitoring department estimators' workload and assisting with estimating and CAD work as needed; providing input and opinion on continuous improvement to the cost

Steve Bomkamp (continued)



management systems; communicating input and concerns from and to the systems' field users; and keeping field users informed and updated on cost management systems issues.

Senior Project Engineer and Interim Project Manager; Various Projects; Western Summit Constructors, Inc.; San Diego, California; 1996 to 1999.

While working for Western Summit Constructors completed the following projects: WWTP upgrade for Clark County Sanitation District, \$6.5 million; Water Pump Station for the Las Vegas Valley Water District, \$3.5 million; and WWTP Expansion for the City of Corona, \$30 million. Responsibilities included project scheduling, schedule updates, and impact analysis; reviewing equipment and layout for compliance with specifications and design; reviewing and estimating change order requests; managing the contract; responding to requests for clarification to specifications and drawings; generating project pay requests and invoices; budget monitoring and reporting; owner, engineer, sub-contractor, vendor, and supplier management and relations coordination; equipment and material take-offs, submittal reviews, and quality control; and project documentation control and tracking of all deliverables.

Project and Field Engineer; Various Projects; Medland Controls, Inc.; San Diego, California; 1996.

Responsibilities included performing fabrication, wiring, testing, installing, and startup of control panels and systems. Provided control system installation, maintenance, and repair. The project also required project progress reporting, directing project drafting activities, initiating and directing research and development, and supervising assigned staff.

Professional Development

CH2MHILL Construction Project Administration Training, October 2000

CH2MHILL Design-Build Contracts Training, October 2000

CH2MHILL Health, Safety, Security, and Environmental Training Program – continual

CH2MHILL Drug Free Workplace - continual

Expedition, Contract Control Software Course, CH2M HILL, Inc., February 2000

Business Course, Santa Rosa Junior College, Fall 1994

Primavera P3 Advanced Project Scheduling Course, Granite, TIC, and Western Summit Constructors, May 1998

Basic Project Management Course, American Management Association, July 1993

HVAC Direct Digital Control Course, University of California, San Diego, Spring 1996

Wide variety of safety, SWPPP, environmental, permitting, technical, management, administrative, and computer courses and training

Steve Bomkamp (continued)



References

Gino Rapagna, Program Manager, IPMC,
Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Direct line: (714) 593-7893
Email: Gino.Rapagna@CH2M.com

Chris Cervellone
Engineering Supervisor
Orange County Sanitation District
10844 Ellis Avenue, Fountain Valley, CA 92708
Direct line: (714) 593-7360
Email: ccervellone@ocsd.com

Iraj Asgharzadeh
Senior Civil Engineer
City of San Diego
600 B Street, Suite 800
San Diego, CA 92101
(619) 533-5105
Email: IAsgharzadeh@sanidiego.gov

Kirk Whitaker
PM for City of San Diego (now with San Diego
County Water Authority)
PH: 858-522-6850



EXHIBIT B – PROPOSED RATE SCHEDULE and CONTRACT AMOUNT

The following proposed hourly rate is fully burdened and includes all consultant overhead charges, including benefits, vehicle, phone, and all out-of-office expenses. The District will provide office area and computer for the construction manager. The total not-to-exceed contract amount is \$300,000 billed on a time and materials basis. The proposed rate is valid through June 30, 2012, and subject to negotiations after this date.

<i>Position</i>	<i>Rate per hour</i>
Construction Manager – Steve Bomkamp	\$161.00 ⁽¹⁾


Additional support staff can be made available at the request of the District.


Foot Notes:

(1) Overtime rate will be same as straight time rate.

September 26, 2011

Prepared by: Tony Mossbarger

Submitted by: Debby Cherney 

Approved by: Paul Cook 

ACTION CALENDAR

ENTERPRISE ASSET MANAGEMENT SOFTWARE NEEDS ASSESSMENT AND EVALUATION – CONSULTANT SELECTION

SUMMARY:

The IRWD Application Strategic Plan finalized earlier this year recommended several steps be taken to better align the District's software applications with its strategic vision, including the implementation of an Enterprise Asset Management (EAM) system. An EAM system will improve the District's ability to manage its assets from acquisition to retirement, providing tools for preventive and predictive maintenance, financial analysis, and reporting. While the Application Strategic Plan made recommendations regarding the replacement of existing EAM tools, a more detailed study is needed to establish the District's approach and desired outcomes from an EAM system, as well as to identify a preferred software alternative.

Staff recommends that the Board authorize the addition of two projects to the FY 2011-12 Capital Budget and accompanying Expenditure Authorizations in the amount of \$125,000 each, and authorize the General Manager to execute a Professional Services Agreement with EMA, Inc. in the amount of \$196,880 for the Enterprise Asset Management Software Review project.

BACKGROUND:

In July 2010, the Board approved a Professional Services Agreement with Pacific Technologies, Inc. to develop an Applications Strategic Plan with an emphasis on Utility Billing, Asset Management, Customer Relationship Management, and Budgeting and Planning. The completed Application Strategic Plan determined that a new EAM system to replace the District's existing TABWARE system (implemented over 15 years ago) should be a high priority for the District. While certain components of the TABWARE system have been utilized (tracking preventive maintenance activities, for example), TABWARE's limited capabilities did not allow staff to develop a fully functional asset management system.

Modern EAM systems are designed to manage the entire life of an asset, from acquisition to retirement. The functions performed by an asset management system include support of asset maintenance and renewal optimization, monitoring and managing performance maintenance and asset management work, responding to unplanned asset events, planning and scheduling non-urgent maintenance tasks, assigning and performing non-urgent asset work, managing inventory, and producing asset maintenance reports. These systems have become substantially more sophisticated in the 15 years since the District implemented the TABWARE system.

While the Applications Strategic Plan provided a high-level gap-fit analysis and recommended direction, a more detailed review of requirements and specific system selection was also recommended. Whichever system is ultimately selected, integration with other District applications such as Utility Billing, Oracle ERP (fixed assets, payroll, business intelligence), and Geographical Information Systems (GIS) will be required. The selected software system must also have the ability to manage vertical assets (treatment and pumping facilities, buildings, etc.), linear assets (pipelines),

and rolling assets (trucks, portable generators, etc.). The different EAM systems have differing levels of strength in their ability to manage these various asset-classes.

Consultant Selection Process:

It was determined that a consultant team that understands the sophistication of EAM systems, including a system's ability to manage multiple types of assets throughout the enterprise, should be retained to provide the expertise to assist in identifying, evaluating, and selecting a new EAM system. Staff prepared a Request for Proposal for consulting services to perform a needs assessment for and evaluation of EAM software. The scope of work was summarized in eight phases:

- Phase 1 – Project initiation and management
- Phase 2 – Develop asset management strategy
- Phase 3 – Survey existing system and develop requirements
- Phase 4 – Prepare proof of concept and test cases
- Phase 5 – Conduct demonstration
- Phase 6 – Check references
- Phase 7 – Conduct site visits
- Phase 8 – Prepare final report

The Request for Proposal was issued on June 3, 2011 to five pre-selected consultants with experience in reviewing, assisting with selection, and implementing Enterprise Asset Management software: EMA, Inc., Five Point Partners, Pacific Technologies, Inc., RMC, and Westin. All five consultants submitted proposals. Staff from multiple departments reviewed and ranked the proposals, as shown in the Consultant Selection Matrix which is attached as Exhibit "A". Based on the initial consensus ranking, the three consultants ranked highest were interviewed on August 29, 2011.

Based on the proposals and interviews, staff believes that EMA, Inc. demonstrated the best understanding of the Enterprise Asset Management project and has extensive experience not only developing Enterprise Asset Management strategies, but utilizing software systems to support the strategy. EMA, Inc. had the most experienced project team and is the most capable of assisting the District with development of an EAM strategy and a proof of concept to support it. EMA, Inc.'s proposal is attached as Exhibit "B".

While EMA, Inc.'s proposed fee is higher than second-best ranked Westin's fee, the major difference is the amount of time devoted to developing an asset management strategy. EMA, Inc. proposed to devote more effort to Enterprise Asset Management strategy development than Westin, a process which staff believes will be valuable in the ultimate selection and successful implementation of software. Staff recommends awarding a contract to EMA, Inc. in the amount of \$196,880.

FISCAL IMPACTS:

Costs to implement an Enterprise Asset Management software package are expected to vary widely depending on the software selected and necessity and complexity of integrating that with the District's existing technology. At this time, subject to Board approval, staff will add two new projects to the FY 2011-12 Capital Budget to fund the project from replacement funds, as summarized in the table below:

Project No.	Current Budget	Addition <Reduction>	Total Budget	Existing EA	This EA Request	Total EA Request
11619	\$0	\$125,000	\$125,000	\$0	\$125,000	\$125,000
21619	\$0	\$125,000	\$125,000	\$0	\$125,000	\$125,000
Total	\$0	\$250,000	\$250,000	\$0	\$250,000	\$250,000

ENVIRONMENTAL COMPLIANCE:

This activity is not subject to the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15060 (c)(1) Preliminary Review. An activity is not subject to CEQA if the activity will not result in a direct reasonably foreseeable indirect physical change to the environment.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee meeting on September 20, 2011.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF PROJECTS 11619 AND 21619 TO THE FY 2011-12 CAPITAL BUDGET AND ACCOMPANYING EXPENDITURE AUTHORIZATIONS IN THE AMOUNT OF \$125,000 EACH, AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH EMA, INC. IN THE AMOUNT OF \$196,880 FOR THE ENTERPRISE ASSET MANAGEMENT SOFTWARE REVIEW PROJECT.

LIST OF EXHIBITS:

- Exhibit "A" – Consultant Selection Matrix
- Exhibit "B" – EMA's Scope of Work and Fee Proposal
- Exhibit "C" – Expenditure Authorization
- Exhibit "D" – Expenditure Authorization

EXHIBIT "A"

CONSULTANT EVALUATION MATRIX

ENTERPRISE ASSET MANAGEMENT SOFTWARE NEEDS ASSESSMENT AND EVALUATION CONSULTANT SELECTION												
Item	Description	Weights	EMA		Five Point Partners		PTI		RMC		Westin	
A	TECHNICAL APPROACH	25%										
1	Overall Project Understanding / Approach	40%	1.2		3.0		3.0		2.1		1.8	
2	Scope of Proposal	60%	2.0		3.0		3.2		2.3		2.1	
	Weighted Score (Technical Approach)		1.7		3.0		3.3		2.2		2.0	
B	QUALIFICATION AND EXPERIENCE	75%										
1	Project Manager	30%	1.5		3.0		3.0		2.5		3.0	
2	Project Team	20%	1.5		2.8		3.0		2.5		2.1	
3	Firm's Experience	20%	1.0		3.0		3.0		2.0		1.8	
4	Interview	30%	1.5		5.0		5.0		3.2		2.5	
	Weighted Score (Experience)		1.4		3.6		3.6		2.6		2.4	
	COMBINED WEIGHTED SCORE		1.5		3.4		3.5		2.5		2.3	
	Ranking of Consultants		1		4		5		3		2	
C	SCOPE OF WORK											
TASK			Task Hours	FEE	Task Hours	FEE	Task Hours	FEE	Task Hours	FEE	Task Hours	FEE
1	Project Initiation and Management		174	\$32,440			66	\$8,240	104	\$18,802		\$19,320
2	Develop Asset Management Strategy		296	\$47,080		\$32,000	112	\$14,020	228	\$46,145		\$16,640
3	Survey Existing System & Develop Requirements		204	\$25,360			90	\$12,680	254	\$41,240		\$25,920
4	Prepare Proof of Concept and Test Cases		232	\$28,600		\$32,000	88	\$9,810	314	\$58,968		\$18,720
5	Conduct Demonstrations		48	\$8,640			92	\$11,720	132	\$26,277		\$20,520
6	Check References		40	\$4,920			18	\$2,170	66	\$10,628		\$4,080
7	Conduct Site Visits		120	\$18,480		\$32,000	36	\$4,410	118	\$20,821		\$10,200
8	Prepare Final Report		68	\$9,360		\$32,000	130	\$15,200	148	\$26,769		\$15,120
	Additional Expenses			\$22,000		\$20,000		\$10,350				\$12,980
	TOTAL HOURS AND FEE		1,182	\$196,880	0	\$148,000	632	\$88,600	1364	\$249,650	0	\$143,500
D	OTHER											
	Joint Venture		None		None		None		None		None	
	Sub Consultants						Spatial Wave		Silver Bridge Associates, Inc Denburgh Consulting		Van	
	Exceptions taken to IRWD Std. Contract		None		Yes		Yes		None		None	
	Insurance (Professional & General Liability)		Yes		Yes		Yes		Yes		Yes	
	RANKINGS:											
	1 - Best											
	2 - 2nd Best											
	3 - 3rd Best											
	4 - 4th Best											



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June 30, 2011

Tony Mossbarger
Director of Administrative Services
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

SUBJECT: Consulting Services to Perform an Enterprise Asset Management Software Review

Dear Ms. Mossbarger and Selection Committee:

EMA is pleased to submit this proposal in response to the District's RFP for Consulting Services to Perform an Enterprise Asset Management Software Review.

EMA has been selecting and overseeing the implementation of EAM systems for over 20 years. Our industry expertise allows us to not only understand how your current systems are used but determine to what extent these systems are used to implement industry best practices.

We will conduct an interactive, entertaining educational curriculum to prepare IRWD personnel to actively participate in all phases of the project. We will introduce IRWD staff to essential concepts and best practices related to asset management and program-driven maintenance.

EMA is familiar with all of the potential EAM vendors. Our staff provides all the diverse skill sets necessary to evaluate your existing Enterprise Asset Management process and collect the necessary requirements for the software demonstrations and reviews.

We have successfully applied our assessment approach with hundreds of clients and are confident that our final recommendation will identify the required software modules necessary to meet all documented requirements.

We look forward to working with you on this project. If you have any questions about our approach, please do not hesitate to contact us.

Sincerely,

Craig Yokopenic
Executive Vice President
EMA, Inc.

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PROJECT APPROACH

EMA is a utility industry leader in the development and dissemination of asset and work management best practices and the selection and implementation of enterprise asset management systems. EMA's extensive experience with technology design and integration, asset performance management, risk mitigation strategies, critical infrastructure protection and security planning, and service level definition provide the necessary context for a balanced, sustainable asset management program that addresses the unique needs of a utility. We have a proven track record of utility clients who have implemented successful EAM systems and improved asset reliability.

PHASE 1: PROJECT INITIATION, PROJECT MANAGEMENT, PROJECT KICKOFF

This Phase is comprised of a request for information to IRWD, an updated project plan, and a kick-off meeting. It also includes identifying or finalizing the IRWD Project Team, a core group that will provide input and review project goals and deliverables.

The requested information will likely take 1 - 2 weeks for IRWD to compile. The data provides a foundation for EMA's understanding of current business processes and business rules. Key topics of the kick-off meeting will include project goals, metrics of success, assumptions, constraints, roles and responsibilities, and the project schedule. Following the workshop EMA will finalize the project plan and provide meeting minutes.

Metrics will be identified for project critical or high risk issues. An example of project metrics for a current EMA Enterprise Asset Management Implementation project are shown below:

Performance Dimension	Current Activity	Project to Date
Stakeholders are Committed	●	●
Business Benefits are Realized	●	●
Team is High Performing	●	●
Work and Schedule are Monitored	▲	▲
Scope is Realistic and Managed	▲	▲
Challenges and Risks are Mitigated	▲	▲

Figure 1: Sample EAM Implementation Project Metrics

Specifics of the various performance dimensions are not shown. Metrics for IRWD's project will be developed during the project kickoff.

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EMA's Responsibility: Maintain the project plan, meet monthly with IRWD's project manager to address outstanding issues and validate invoicing, manage the EMA consultant resources, and manage the delivery of the project.

Deliverables Include:

- Updated Project Plan
- Kickoff Meeting Minutes
- Project Goals and Project Metrics documentation
- Progress Reports

PHASE 2: ASSET MANAGEMENT STRATEGY

To be a world class organization IRWD needs an asset management strategy that defines a set of steps (projects and practice changes) for implementing an asset management program to meet the District's business objectives and to adopt industry best practices. We will work interactively (interviews and workshops) with IRWD staff and the IRWD Enterprise Asset Management Committee to formulate this strategy. EMA will assist IRWD through education, assessment, and strategy development based on industry leading practices for asset management in the water and wastewater industry.

The first step will be to validate the asset value life cycle as shown in Figure 2 with IRWD staff. This provides a basis for the interviews with engineering, planning, water operations, wastewater operations, finance, and water quality staff to determine IRWD's business needs for an enterprise asset management system.

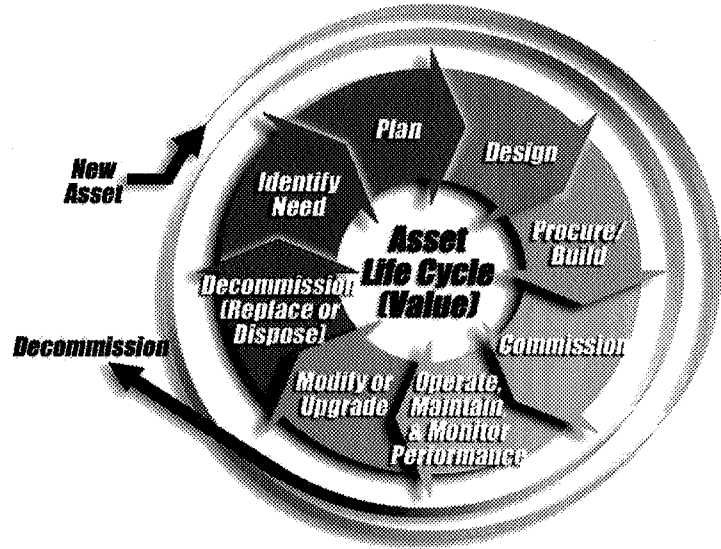


Figure 2: Asset Value Life Cycle

The objectives of this phase include:

- Introducing asset management concepts to include leading practices for the entire asset life-cycle
- Developing a vision for asset management at IRWD

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- Developing a draft asset management strategy and presentation to inform and gain commitment from the IRWD Enterprise Asset Management Committee for asset management program implementation
 - Incorporating committee comments and finalize asset management strategy

Task 1 – Interviews Education and Asset Management Vision Development Workshop

EMA will conduct interviews with key maintenance, engineering, planning, water operations, wastewater operations, finance, water quality, and management stakeholders to gain an understanding of their perspectives on the current systems, identifying issues associated with the systems and related business processes, and documenting stakeholder goals for the replacement system and needed business process changes.

Using the data gathered from the desk audit, interviews with staff, and by observations in the workplace, EMA will assess all business practices regarding the following asset management functions:

1. Overall Maintenance Strategy
2. Maintenance Tactic Selection
3. Information Technology Infrastructure
4. EAM Software Access and Use
5. EAM Software Data Quality
6. Planning and Scheduling
7. Material Management
8. Condition Based Maintenance
9. Reliability Analysis
10. EAM Software History and Performance Measures
11. Asset Management
12. Workforce Flexibility
13. Education, Training, and Skill Management

Specifically, this assessment will be done through the use of an assessment tool developed by EMA.

EMA will then rank current maintenance and asset management capabilities against industry practices. Figure 3 below, is an example (for Condition Based Maintenance) from a recently completed asset management strategy project. Along with the assessment score, we capture our observations, possible solutions - including ideas provided by your staff, and an urgency score. The information becomes the cornerstone in our strategic asset management plan development process.

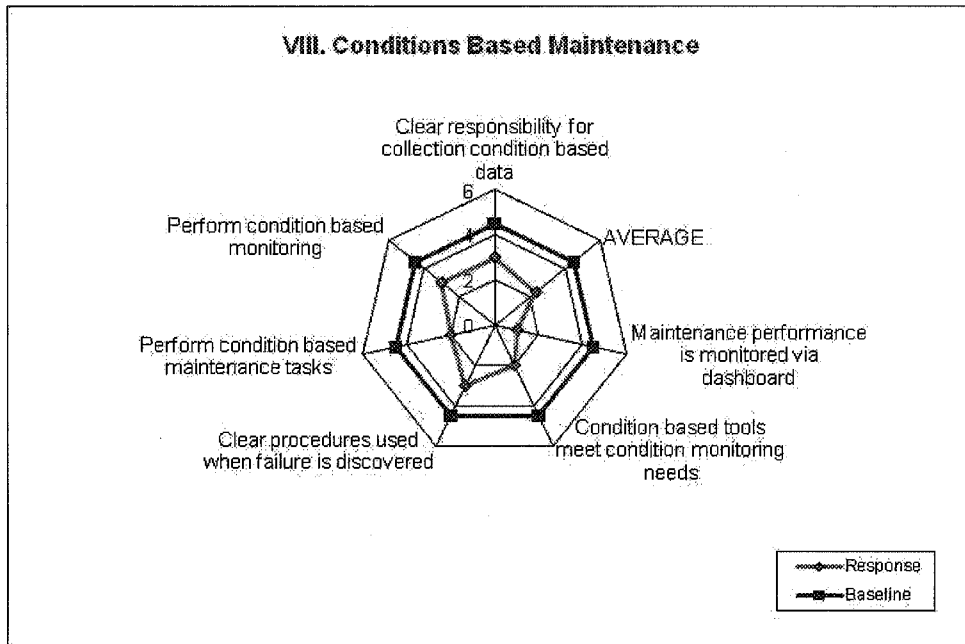


Figure 3: Asset Management Assessment is the basis for planning

Also as part of this task, EMA will conduct an interactive, entertaining, and educational workshop to prepare IRWD personnel to actively participate in all remaining phases of the project. Through a simulation activity, we will introduce IRWD staff to essential concepts and best practices related to asset management and program-driven maintenance. Together we will craft a shared vision for the outcomes of the asset management strategy. EMA's educational workshop includes simulation exercises that will allow IRWD staff to put new concepts into practice and immediately see the impact of asset management and maintenance management decisions based on varying information quality, different business practices, and organizational structures. At the conclusion of the workshop, the IRWD team will be ready to create an asset management strategy. They will understand why certain practices, certain types of data, and certain system functionalities are important. They may even be able to implement some "quick win" improvements to current practices that take immediate advantage of what they have learned.

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Task 2 – Asset Management Strategy Design

EMA's asset management strategy design philosophy encompasses business practices, technology, and organizational issues. A successful asset management strategy requires more than a set of business rules or a piece of software – it requires that people change the way in which they work and the way in which work is completed.

Organizational, business process, and technology changes are interdependent. When introducing a new business practice, it is important to introduce the supporting technology at the same time and to align the organization to effectively execute the new practice. This may involve new job positions or new responsibilities for existing positions and it may require training to prepare staff to take on the newly created roles.

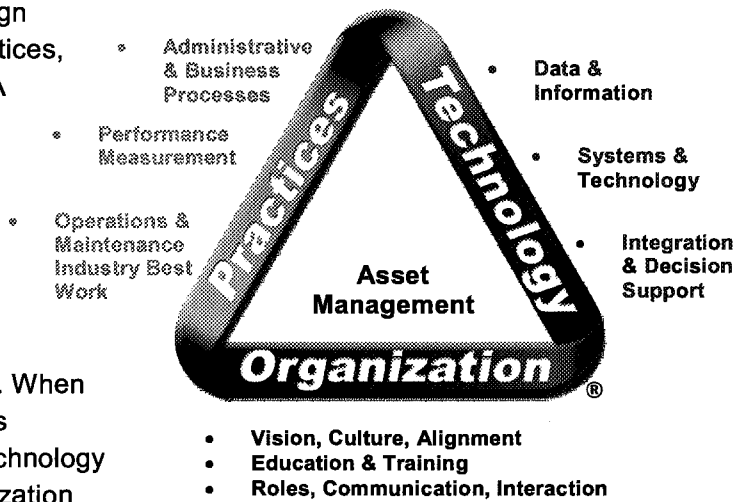


Figure 4: EMA's OPT Approach to Asset Management Strategy

The asset management strategy will be based on your need to address the gaps within the 13 asset management best practices competencies. By applying priority values to the competencies and identifying their dependencies, we will help your organization develop a Plan that is both valuable and practical. The plan will address the following subjects:

1. **Overall maintenance strategy** – Recommendations for any improvements to the overall maintenance strategy will be made in a high-level plan that addresses requirements, risk mitigation, and equipment reliability while optimizing available wrench-on-bolt time and controlling costs. Factors like organization structure and deployment options will also be examined.
2. **Maintenance tactic selection** – Identifying the best methods for selecting maintenance tactics for your assets such as Reliability Centered Maintenance (RCM), the less rigorous Maintenance Task Analysis (MTA) approach, or task replication depending on asset criticality.
3. **Information technology infrastructure** – Identify benefits and costs of technology devices and requirements of the computing infrastructure to support any technology recommendations stemming from this plan.

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4. **Enterprise asset management access and use** – We will ensure appropriate access to your system based on individual roles and responsibilities. We will develop a plan to ensure access and speed levels.
 5. **Data quality** – We will develop a plan to define static and transactional data needed for all levels of management and reporting (as defined in competency #8 & #9) and assigning responsibility for the input of said data.
 6. **Planning and scheduling** – We will develop a plan to define quality work plans from the tactic selection competency (competency #2). The plan will define how to best manage the work plans through work bundling and how to effectively assign and schedule work.
 7. **Material management** – We will focus on identifying the best stocking / purchasing options based on reliability requirements of your different assets and also focus on how to track materials as inventory items.
 8. **Condition based maintenance** – Tying into the maintenance tactic selection, we provide a framework to develop an appropriate condition based maintenance program based on your CBM needs, the frequency of the tests, and your asset geography.
 9. **Reliability analysis** – We will develop a plan to ensure appropriate reliability data is captured to support proper reliability analysis. Along with a proper data infrastructure, we will define the skill and training requirements needed for a proper reliability analysis program.
 10. **Maintenance history and performance measures** – We will identify the requirements for an appropriate maintenance performance management dashboard and develop a plan for the development of such a tool using the selected asset management software backlog management and maintenance history data.
 11. **Enhancements to asset management with the maintenance section** - Full life-cycle management of assets will transition from maintenance to replacement through capital projects, likewise causing a transition and coordination between the maintenance section and engineering. The plan will leverage on work already done by the IRWD staff.
 12. **Education, training, and skill management** – the implementation of an asset management program strategic plan must be supported by education training and skill management. We will define in each individual competency the appropriate level of training and education needed to support proper implementation. This includes the effort needed to inform or include maintenance customers and other stakeholders in the plan.
 13. **Workforce flexibility** – Flexibility of the workforce will be a key element of the strategic plan to enable minimizing travel time and fleet expense while optimizing wrench-on-bolt time. We'll help you develop a plan to identify the appropriate levels of flexibility needed within your organization and how to put in place such a program.

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In a series of workshops we will discuss the assessment results and develop the asset management strategy. While we need to address multiple competencies with varying levels of importance to IRWD, in the end we will deliver one single integrated strategy. The strategy will include multiple task or “projects” which will be consistently laid out to present vital information including the project name, the desired outcomes/solutions to problems, clear recommended actions, associated priority values, the estimated time to achieve the results, the resource requirements including funding and staff’s time. While the projects will be prioritized, we will also show clear interdependence of various projects to ensure the work is done in an intrinsic order.

We will conduct interviews with IRWD staff and facilitate collaborative workshops to determine what the specific requirements of the Asset Management Strategy Plan are. Armed with a comprehensive understanding of best practices along with business objectives and the specific personnel and site information accrued in Tasks above, IRWD staff will be able to participate actively in this collaborative process. By including the IRWD staff, the level of success of the final program will be greatly enhanced. Ultimately, it is the IRWD staff that will make the strategy work.

We will work with the IRWD team members to ensure the workflows and asset management concepts address the specific business needs and priorities of IRWD.

The result will be viable, defensible asset management strategies that will help IRWD take optimal care of their assets now as well as in the future.

EMA’s Responsibility: Conduct Interviews with each department identified in the RFP and up to three workshops, develop a draft AM strategy based on these interviews and industry best practices, conduct a workshop with IRWD EAM committee to review the draft plan, accept comments, and finalize the strategy.

Deliverables Include:

- Asset Management Assessment report with strengths and weaknesses identified and quantified
- Review of AM best practices
- AM Vision and draft AM Strategy, including Asset life cycle decision workflows and identification of supporting tools, specific inspection and condition assessment procedures, job descriptions and any changes to the organizational structure to support the asset management strategy
- Presentation of draft strategy
- Finalized AM strategy which will include:
 - Desired outcomes/solutions to problems
 - Recommended actions with priority

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- Estimated time to achieve the results
 - Resource requirements
 - Interdependence of actions

PHASE 3: SURVEY EXISTING SYSTEMS AND DEVELOP KEY PROCESS REQUIREMENTS

Task 1 – Review and Document Current Systems

During this phase we will build on the documentation review that was done in phase one by reviewing the existing work order management system(s). EMA has previously developed requirements documents for implementing Enterprise Asset / Work Management systems in the utility industry. We will provide these as survey tools to analyze the existing systems. This approach will allow us to not only understand how the current systems are used but determine to what extent these systems are used to implement industry best practices. We will review any existing documentation on standard operating procedures not provided in phase one. We will observe and document the execution of all existing Enterprise Asset Management processes for each of the systems.

Task 2 – Document required Enterprise Asset Management Processes

During this task we will compile process requirements into a comprehensive requirements document. This document will be supplemented with requirements by EMA that are needed to support EAM best practices. EMA has a library of EAM requirements as well as documented workflows for support of utility and fleet operations. These will be added to the requirements document and reviewed with District staff to determine which are appropriate.

We will meet with each user group to validate their requirements. A second workshop will be held with representatives of all the groups to identify common requirements that may have been missed, requirements for integration to other systems, and requirements or workflows that cut across more than one group. A final workshop will be held with the EAM committee to review the requirements document and add any additional high level asset management requirements or workflows as required. As before, we will not start with a blank page to determine these requirements. EMA will provide samples for review that we have developed on other projects and our work with Water Environment Federation on the Strategic Asset Management (SAM) project for utility O&M. For SAM project description, see Appendix A: Copy of “Leading asset management practices help utilities optimize their asset life cycle cost” article in *Water Asset Management International*, December 2010.

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EMA's Responsibility: Observe and document system requirements for each functional group, facilitate workshop with each functional group document requirements, facilitate cross-functional workshop and update requirements, facilitate workshop with EAM committee and finalize EAM requirements.

Deliverables Include:

- Requirement review documents for each of the five existing work order management systems
- Documented EAM requirements for each group
- Combined requirements document updated with integration requirements and other requirements that cut across more than one functional group
- Final document with high level asset management requirements

PHASE 4: PROOF OF CONCEPT AND TEST CASES

Task 1 – Prepare Proof of Concept

Phases 2 and 3 identified the key business rules and requirements to support work orders and the asset management strategy that the proof of concept must support. During this task EMA will convert all of the previously defined requirements into a proof of concept document for the District to review. We will conduct a workshop with IRWD staff to review the proof of concept for inaccurate or missing requirements. This task will also provide an opportunity to identify and include supplemental information such as technical architecture requirements of IRWD, hardware requirements, interfaces definition, reports definition, data quality issues with the existing systems, data conversion, training plan requirements, and testing requirements.

Task 2 – Prepare Test Cases

During this task we will develop test cases that will be used in the various scenarios performed during software demonstrations. Test cases will be developed for both asset management strategy as well as the execution of work orders. We will incorporate the existing requirements defined during the review of existing systems and the use of industry best practices. The test cases will contain all of the information required to not only perform a detailed evaluation the system but ensure an apples to apples comparison can be completed.

We will build on our past experience to bring draft test cases to IRWD. We have been selecting and overseeing the implementation of EAM systems for over 20 years. This allows us to bring sample test cases to start with and then modify with IRWD specific data.

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We have test cases available that include but are not limited to:

- Support of asset maintenance and renewal optimization
- Monitor and manage performance maintenance and asset management work
- Respond to Unplanned Asset Events
- Plan and Schedule Non-Urgent Asset/Maintenance Work (geographically, by skill, by equipment type, etc)
- Assign and Perform Non Urgent Asset Work
- Inventory management
- Development of standard and non standard reports

The test cases will also include generation of any needed reports or key performance indicators (KPI) from the various systems. Reports and KPIs are needed to support the management of the various business process represented in the test cases. Reports and KPIs should be automatically reported. Example reports and KPIs may include:

- Number of service interruptions
- Number of pending, closed and overdue work orders
- Maintenance crew metrics
- Work Orders completed in the scheduled time and those that took longer than planned, opened work orders, etc.
- Worst performing assets
- Assets with the highest cost of maintenance, maintenance cost to asset value
- Ratio of proactive to reactive work orders
- Cost of proactive maintenance work orders completed
- Cost of reactive maintenance work orders completed
- Cost by asset type and criticality
- Inventory management reports

Task 3 – Develop Short List of Vendors

EMA is familiar with all of the potential EAM vendors. We will provide a list of vendors that meet IRWD's criteria. We will include vendor and product name, current version, technical requirements and published priced data.

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PHASE 5: VENDOR SOFTWARE DEMONSTRATION

Task 1 – Facilitate and Manage Detailed Software Demonstrations

EMA will schedule and facilitate three software demonstrations. These demonstrations will be conducted onsite at IRWD in room provided by the District. The District will also provide internet connectivity. Vendors will be required to demonstrate on the current version of the software with all current patches applied. Prior to the demonstrations EMA will provide the vendors with the proof of concept and test cases. Vendors will be required to work through all test cases.

EMA will develop evaluation and question worksheets. IRWD and EMA staff will attend the demonstrations and fill out the worksheets. Any issues needing further clarification will be communicated to the vendor to allow them to provide clarification at the end of the demonstration.

Demonstrations will be limited to 6 hours. The EAM team will meet immediately following the demonstration(s) to compare notes and discuss the demonstration.

PHASE 6: VENDOR REFERENCE CHECKS

Task 1 – Develop Reference Check Questions and Compile a List of Vendor References

EMA will modify our standard EAM vendor reference evaluation forms with information developed in previous phases of the project. We will provide these to IRWD for review. We will meet with the EAM team after they have had time for review and modify the forms with any additional information.

Our standard reference forms address all areas critical to project success including:

- Software functionality and ease of use
- Upgrades and patches
- Vendor support
- Vendor services during implementation
- Hardware and software requirements
- Technical issues
- Administration and support requirements
- Training
- Others

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Task 2 – Conduct Reference Checks

EMA will schedule and conduct all reference checks. We will communicate with prospective vendors the intent of the reference checks and provide them with a summary of the reference forms. We will identify who can best answer the specific questions. Calls will be scheduled and we will conduct a phone interview for the reference check.

It is often difficult to get all of the identified information during the reference checks. We will work to get as complete an assessment as possible.

PHASE 7: SITE VISITS

Task 1 – Identify and Schedule Site Visits

EMA will identify potential organizations for site visits and work with IRWD to determine which locations will be visited, with preference given to those located in close proximity to IRWD. We will require at least one site visit for each of the vendors under consideration. We anticipate four site visits total.

Task 2 – Conduct Site Visits and Document Results

Prior to conducting site visits we will review with the IRWD EAM team a site evaluation worksheet. EMA will modify our standardized worksheets with IRWD specific requirements and provide them for review. Areas of evaluation will be similar to those identified in the reference check phase

EMA will contact all of the organizations to be visited and setup times for the meetings and provide the target organization with an overview of the intended visit. We will work with target organizations to schedule the appropriate staff.

EMA with IRWD staff will attend all site visits. After the site visits we will collect the worksheets from all staff in attendance and compile the results for review with IRWD.

PHASE 8: FINAL REPORT

Task 1 – Prepare Final Report

EMA will prepare a report combining all the information developed in the previous 7 phases. The results of each phase will be provided in standalone sections to allow easy reference. We will also provide a recommended software solution. The recommendation will identify the required software modules necessary to meet all documented requirements.

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PROJECT SCHEDULE

Per requirements, see attached MS Project file detailing our proposed project schedule.

ID	Task Name	Duration	Start	Finish	August	September	October	November	December	January
1	Phase 1 - Project Initiation, Project Management, Project Kickoff	127 days	Mon 8/7/11	Tue 1/24/12	7/24	7/31	8/7	8/14	8/21	8/28
2	Task 1 - Project Initiation	10 days	Mon 8/7/11	Fri 8/12/11						
3	1.1 - Contract Negotiation and Insurance Requirements	5 days	Mon 8/7/11	Fri 8/5/11						
4	1.2 - Request for Information	5 days	Mon 8/8/11	Fri 8/12/11						
5	Task 2 - Project Management	127 days	Mon 8/7/11	Tue 1/24/12						
6	2.1 - Finalize Updated Project Plan	3 days	Mon 8/8/11	Wed 8/10/11						
7	2.2 - Ongoing Communication with IRWD's PM and Team	127 days	Mon 8/7/11	Tue 1/24/12						
8	2.3 - Monthly Project Status Reports	127 days	Mon 8/7/11	Tue 1/24/12						
9	Task 3 - Project Kickoff	3 days	Mon 8/8/11	Wed 8/10/11						
10	3.1 - Review Project Goals & Metrics - Obtain Agreement & Document Results	3 days	Mon 8/8/11	Wed 8/10/11						
11	Phase 2 - Asset Management Strategy	40 days	Mon 8/15/11	Fri 10/7/11						
12	Task 1 - Interviews Education and Asset Management Vision Development	20 days	Mon 8/15/11	Fri 9/9/11						
13	Task 2 - Asset Management Strategy Design	20 days	Mon 9/12/11	Fri 10/7/11						
14	2.1 Prepare Strategy	10 days	Mon 9/12/11	Fri 9/23/11						
15	2.2 Present Draft Preliminary Asset Management Strategy to IRWD Enterprise Asset Management Committee	5 days	Mon 9/26/11	Fri 9/30/11						
16	2.3 Incorporate IRWD Comments/Feedback into Final Asset Management Strategy	5 days	Mon 10/3/11	Fri 10/7/11						
17	Phase 3 - Survey Existing Systems and Develop Key Requirements	27 days	Mon 9/26/11	Tue 11/1/11						
18	Task 1 - Survey Existing Systems (Tabware, RTA, MS Access, and IBM DB2)	15 days	Mon 9/26/11	Fri 10/14/11						
19	1.1 - Review and Document Current Systems	15 days	Mon 9/26/11	Fri 10/14/11						
20	1.2 - Observe and Document Existing Enterprise Asset Management Processes	15 days	Mon 9/26/11	Fri 10/14/11						
21	Task 2 - Document Required Enterprise Asset Management Processes	12 days	Mon 10/17/11	Tue 11/1/11						
22	2.1 - Develop Requirements	12 days	Mon 10/17/11	Tue 11/1/11						
23	Phase 4 - Proof of Concept and Test Cases	15 days	Wed 11/2/11	Tue 11/22/11						
24	4.1 - Prepare Proof of Concept	5 days	Wed 11/2/11	Tue 11/8/11						
25	4.2 - Prepare Test Cases	10 days	Wed 11/9/11	Tue 11/22/11						
26	4.3 - Develop Short List of Vendors	5 days	Wed 11/9/11	Tue 11/15/11						
27	Phase 5 - Vendor Software Demonstrations	10 days	Mon 11/28/11	Fri 12/9/11						
28	5.1 - Facilitate & Manage Detailed Software Demonstration	10 days	Mon 11/28/11	Fri 12/9/11						
29	Phase 6 - Vendor Reference Checks	15 days	Wed 11/9/11	Tue 11/29/11						
30	6.1 - Develop Reference Check Questions & Compile List of Vendor References	5 days	Wed 11/9/11	Tue 11/15/11						
31	6.3 - Conduct Reference Checks	10 days	Wed 11/16/11	Tue 11/29/11						
32	Phase 7 - Site Visits	20 days	Wed 11/30/11	Tue 12/27/11						
33	7.1 - Identify and Schedule Site Visits	5 days	Wed 11/30/11	Tue 12/6/11						
34	7.2 - Conduct Site Visits and Document Results	15 days	Wed 12/7/11	Tue 12/27/11						
35	Phase 8 - Final Report	20 days	Wed 12/28/11	Tue 1/24/12						
36	Task 1 Prepare final report	20 days	Wed 12/28/11	Tue 1/24/12						

Project: 2 Irvine EAM Project Schedule
Date: Thu 6/30/11

Task Split

Progress Milestone

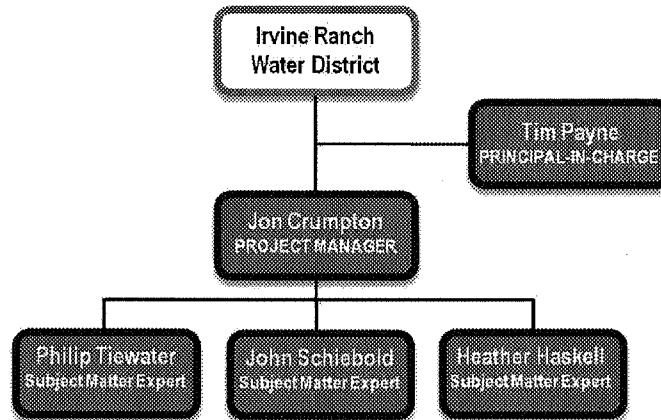
Summary Project Summary

External Tasks External Milestone

Deadline

PROPOSED PROJECT TEAM, QUALIFICATIONS, AND EXPERIENCE OF PROJECT STAFF

Our staff provides all the diverse skill sets necessary to evaluate your existing work process, understanding how the current systems are being used, develop an asset management strategy and collect the necessary requirements for the software demonstrations, reviews and recommendation to select an Enterprise Asset Management system.



The EMA team proposed for your Enterprise Asset Management Software Review project is highlighted below. Detailed resumes are included in the Appendix B.

Tim Payne, Principal-In-Charge

Tim is a proven leader with a strong business background complemented by extensive experience in utility operations management, product deployment, crisis recovery, and strategic planning. Tim is Executive Vice President of EMA. He is seasoned in strategy development with demonstrated success in development of projects from concept to launch. He served as the Project Director for the private consortium that designed, built, and operated Seattle Public Utilities' Tolt Treatment Facility. Tim's expertise also includes managing cross-functional teams, developing creative solutions, and thinking outside the box. He is currently leading EMA's team in the implementation of an Enterprise Asset Management System at Seattle Public Utilities.

Jon Crumpton, Project Manager

Jon has over twenty-five years of management consulting experience for utility industries (electric, water, gas, wastewater) and public works operations (streets, solid waste collection, storm water, watershed management, airport, parks & recreation, facility maintenance, fleet maintenance, traffic engineering). His expertise includes: project management (PM), enterprise asset management (EAM), computerized maintenance management systems (CMMS), bill of materials (BOM) programs, business process analysis and reengineering, supply chain & inventory management (SCM), configuration

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management (CM), procurement engineering, purchasing, estimating, and quality assurance (QA) program & procedures development.

Philip Tiewater, Subject Matter Expert

Philip brings over 30 years of experience with public agencies. He was an engineer, planner, project manager, and department manager. He helped local governments design, build, and manage a variety of facilities including streets and highways, bridges, culverts and pipelines, pump stations and plants, and buildings. As a management consultant Philip has helped clients improve their organization by asking the right question, at the right time. He guides his clients down the path of self discovery which is vital to lasting organizational improvement. He is a leader in EMA's ongoing Strategic Asset Management work on projects and with Industry Research and is familiar with all of the major EAM vendors.

John Schiebold, Subject Matter Expert

John is a Senior Project Manager with over 15 years of experience in the design, development, and implementation of technological solutions for municipal clients. John focuses on understanding a municipality's business needs for the technology and then tailoring technical solutions to address those needs as precisely as possible. He has led several large CRM (311) implementations, as well as integrations with Customer Information Systems, Work Management Systems, and other key business systems. John is also a certified Project Management Professional (PMP).

Heather Haskell, Subject Matter Expert

Heather has seven years of experience in utility database design, maintenance, and analysis. Her experience includes software installation, user support, application design and development, quality control/quality assurance (QC/QA), and project coordination. Heather is also experienced with the implementation, user support, and training aspects related to Cityworks' EAM system.

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PROJECT FEE SCHEDULE AND TRAVEL EXPENSES

Project Task	Tim Payne	Jon Crumpton	John Schiebold	Philip Tiewater	Heather Haskell	Support	Total Hours	Cost
Hourly Rate	\$270.00	\$180.00	\$190.00	\$180.00	\$100.00	\$85.00		
Phase 1 - Project Initiation, Project Management, Project Kickoff								
Task 1 - Project Initiation								
1.1 - Contract Negotiation and Insurance Requirements	8	16					24	
1.2 - Request for Information		2				8	10	
Task 2 - Project Management								
2.1 - Finalize Updated Project Plan		16					16	
2.2 - Ongoing Communication with IRWD's PM and Team	12	48					60	
2.3 - Monthly Project Status Reports		48					48	
Task 3 - Project KickOff								
3.1 - Review Project Goals & Metrics - Obtain Agreement & Document Results		8	8				16	
Phase 2 - Asset Management Strategy								
Task 1 - Interviews Education and Asset Management Vision Development								
Task 2 - Asset Management Strategy Design							0	
2.1 Prepare Strategy		32	16	16		16	80	

Project Task	Tim Payne	Jon Crumpton	John Schiebold	Philip Tiewater	Heather Haskell	Support	Total Hours	Cost
Hourly Rate	\$270.00	\$180.00	\$190.00	\$180.00	\$100.00	\$85.00		
2.2 Present Draft Preliminary Asset Management Strategy to IRWD Enterprise Asset Management Committee		16					16	
2.3 Incorporate IRWD Comments/Feedback into Final Asset Management Strategy		8				8	16	
Phase 3 - Survey Existing Systems and Develop Key Requirements								
Task 1 - Survey Existing Systems (Tabware, RTA, MS Access, and IBM DB2)							0	
1.1 - Review and Document Current Systems				8	64		72	
1.2 - Observe and Document Existing Enterprise Asset Management Processes		4			40		44	
Task 2 - Document Required Enterprise Asset Management Processes							0	
2.1 - Develop Requirements		16	16	16	40		88	
Phase 4 - Proof of Concept and Test Cases								
4.1 - Prepare Proof of Concept		16			24		40	
4.2 - Prepare Test Cases		16	24	8	80	40	168	
4.3 - Develop Short List of Vendors				8	16		24	
Phase 5 - Vendor Software Demonstrations								
5.1 - Facilitate & Manage Detailed Software Demonstration		48					48	

Project Task	Tim Payne	Jon Crumpton	John Schiebold	Philip Tiewater	Heather Haskell	Support	Total Hours	Cost
Hourly Rate	\$270.00	\$180.00	\$190.00	\$180.00	\$100.00	\$85.00		
Phase 6 - Vendor Reference Checks								
6.1 - Develop Reference Check Questions & Compile List of Vendor References		8				8	16	
6.3 - Conduct Reference Checks		8				16	24	
Phase 7 - Site Visits								
7.1 - Identify and Schedule Site Visits		16				16	32	
7.2 - Conduct Site Visits and Document Results			64			24	88	
Phase 8 - Final Report								
Task 1 Prepare final report	8	8	8	4	8	32	68	
Total Hours	28	374	200	84	312	184	1182	
Total Cost	\$7,560.00	\$67,320.00	\$38,000.00	\$15,120.00	\$31,200.00	\$15,640.00		\$174,840.00
Estimated Expenses								\$22,000.00
Total Project								\$196,840.00

EMA IS A LEADER IN THE DEVELOPMENT AND DISSEMINATION OF ASSET AND WORK MANAGEMENT BEST PRACTICES

EMA's track record is demonstrated by experience working with over half of the largest North American water and wastewater utilities that serve populations of 1,000,000 or more. We have published or contributed to numerous manuals and articles on the subjects of asset and maintenance management and benefit-cost analysis. EMA is currently involved in research, pilot studies, and publications related to asset management with the following organizations: Association of Metropolitan Water Agencies (AMWA), Water Research Foundation (formerly known as AwwaRF), Geospatial Information Technology Association (GITA), National Association of Clean Water Agencies (NACWA) and the Water Environment Research Foundation (WERF). Our involvement in this research keeps us up-to-date on industry issues and provides us with knowledge we in turn are able to share with our clients.

BROAD KNOWLEDGE OF ASSET MANAGEMENT TOOLS GIVES US A UNIQUE AND CREATIVE PERSPECTIVE

EMA has been implementing asset and work management programs for over 25 years. We are vendor-independent and able to speak objectively about current system capabilities and reasonable expectations for data quality and technology. At the same time, we have developed close working relationships with major vendors, sharing our knowledge of the water and wastewater business and learning, in turn, about the functions and architecture of each product. This allows us to configure commercial software in a manner that supports utility best practices.

Following are profiles of several projects similar in nature to your project.

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SAINT PAUL REGIONAL WATER SERVICES (SPRWS), MN

CMMS Selection, and then Implementation of Modifications and Improvements to the Computerized Maintenance and Asset Management System

Firm Name:	Saint Paul Regional Water Services
Address:	1900 Rice St. Saint Paul, MN 55113
Contact:	Martha Burckhardt
Contact Title:	Project Manager
Phone Number:	651-266-1631
Email Address:	martha.burckhardt@ci.stpaul.mn.us

Saint Paul Regional Water Services (SPRWS) has approximately 98,000 accounts, serving a total population of about 417,000. As a part of carrying out their IT Master Plan, SPRWS selected and implemented a Computerized Maintenance Management System (CMMS) in a shared project with the City of Saint Paul (SPRWS is a Department in the City, but also governed by an independent Board of Commissioners). The City elected to implement the CMMS with no additional consultant support. The CMMS was implemented to address maintenance needs for Public Works, Water Distribution, and Water Production. Additionally, it supports time recording for all employees, which is then uploaded into the City of Saint Paul's financial and payroll system.

A few years after the City's implementation, SPRWS asked EMA to conduct a work flow analysis of the maintenance work flows, to identify how well the work flows and CMMS supported SPRWS' needs, and to provide a recommendation regarding the fit of the incumbent CMMS. The resulting recommendations identified significant opportunity to better take advantage of the installed CMMS. EMA was hired to provide assistance to SPRWS during a multi-phase project to design new work flows and implement modifications to the CMMS.

This project included reconfiguring the software, and designing and implementing work practices that built on the capability of SPRWS staff and the CMMS. This includes production and distribution, maintenance and asset management work flows, planning and scheduling work, procurement/inventory management, and timekeeping. As part of the project, work processes were identified and documented (as-is), and new business processes (to-be) were designed and implemented.

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GRAND RAPIDS, MI

Work and Asset Management Implementation Upgrade

Firm Name:	City of Grand Rapids, Grand Rapids Environmental Services
Address:	1300 Market, S.W. Grand Rapids, MI 49503
Contact:	Mike Lunn
Contact Title:	Environmental Services Manager
Phone Number:	616-456-3914
Email Address:	mlunn@grcity.us

The Grand Rapids Environmental Services (ESD), an enterprise fund within the City of Grand Rapids, provides wastewater services to the City and surrounding customer communities. Its primary function is to provide municipal wastewater and stormwater services to the Greater Grand Rapids area. Key facilities include a wastewater plant (daily average flow of about 50 MGD), 54 sanitary sewage lift stations, and 1,100 miles of sanitary sewer.

In FY10, they handled about 500 stormwater service requests, 1,335 sanitary sewer requests, 2,500 collection/stormwater system work orders, and 17,000 facilities work orders.

Key systems in place include Azteca's Cityworks work management system, IBM's Maximo work management system, Sensus meter reading, electronic payments through Online Resources, the NCR Remittance Processor (Purepay's ItemAge Software), the City Treasurer's Payment Software (Quadrant's RASWIN software), the City Assessor BS&A Equalizer, Linko Data Systems Industrial Pretreatment Program Database, Cisco Call Center Premium Interactive Voice Response System (IVR), Cisco Voice over Internet Protocol (VoIP) Phone System, ESRI Geographic Information System (GIS), and Microsoft Dynamics Financial Management System.

EMA worked with ESD to analyze and redesign workflows with their Cityworks system to standardize and streamline communications between the office and the field, and support the department's asset management goals. The redesigned workflows ensured that asset management-related data was collected consistently, while taking advantage of the department's technology investments. A key to the project's success was deploying the system to field staff using mobile laptops with live connections to the City's GIS and Cityworks applications. Field crews receive and update Cityworks service requests and work orders in real time in the field. The redesigned process uses 90% less paper than the previous process, with a goal of being completely paperless by the end of 2011.

Additionally, it was Grand Rapids' desire to upgrade to Maximo 7.1. EMA was selected to execute the following tasks:

- Implement work processes for inventory related equipment order requests
- Implement work processes for work order requests
- Implement Maximo Start Centers for multiple user security groups
- Provide end-user and system administration coaching

Grand Rapids subsequently determined it would also be beneficial to review the practices around using Maximo. EMA worked directly with O&M staff to assess, refine, and develop plant operation and maintenance practices in both ESD and the Water System. This involved working with ESD and Water to define their maintenance goals and objectives, and assessing the current situation. Other activities included:

- Assisting in the creation of a planner/scheduler position
- Reviewing assets list to ensure all assets are in Maximo
- Analyzing the current open work orders with operations, planner, and maintenance
- Reviewing and rewriting job plans
- Reviewing all predictive maintenance work orders
- Assisting ESD management in the design of the maintenance and operations organization

HOUSTON PUBLIC WORKS AND ENGINEERING DEPARTMENT, CITY OF HOUSTON

WMS Systems Evaluation and Identification of Future Technology Standards

Firm Name:	Houston Public Works and Engineering Department, City of Houston
Address:	611 Walker Street, 25 th Floor Houston, TX 77002
Contact:	Ogilvie Gericke
Contact Title:	Chief Technology Officer
Phone Number:	832-395-2004
Email Address:	Ogilvie.Gericke@cityofhouston.net

The Houston Public Works and Engineering (PW&E) department retained EMA to assess and document two Work Management Systems (WMS) currently in use. The objective was to provide a meaningful assessment of these WMS's to assure they meet the unique needs of the separate PW&E divisions. The focus was to provide a high-level technology

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assessment of each system relative to current and future business needs and identify each system's strengths and weaknesses.

Evaluation of the Two Current WMS Systems

PW&E currently use both Azteca Cityworks and Infor EAM.

The Utility Maintenance Branch (UMB) and the Parks and Recreation Department currently use Cityworks. Infor EAM is currently used within the Public Utilities Division (PUD) for plant management and maintenance by the Wastewater Operations (WWO) division and the Drinking Water Operations (DWO) division. At the same time Traffic and Transportation is seeking to implement the Infor work management system as well.

- Key Questions answered include:
 - Are two systems needed to meet current and future separate and unique needs within the PW&E divisions?
 - What are the current and future needs and requirements of the different business units?
 - What are the unique functionality differences of each of the current WMSs?
 - If the separate divisions' unique business needs, can be met by one distinct WMS what would be involved to migrate the existing data into one system?
 - Is there a significant difference between the two systems' complexity level related to converting/importing data from another WMS? If differences exist what are they?
 - If a single system is not viable how can the unique data from each independent system be combined to generate PW&E department level reports?
 - What technical and end user involvement (retraining, setup, etc.) would be required for either alternative?
 - What is the ROI to migrate to a single system (compare annual O&M with migration costs)?
 - If such a migration effort should be undertaken when should it occur and why?

Identification of Future Technology Standards for WMSs

EMA identified future technology standards and trends for the two WMS's in question.

Areas of technology within each WMS reviewed were:

- Common Platforms Standards – such as operating system, user interface, reporting platforms, and application database options
- Identified integration methodologies preferred by each vendor

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- Identified mobile solutions specific to each vendor's capabilities and suggested what future mobile solutions might entail
 - Identified WMS Interfaces

EMA identified the level of effort and technical methodology that could be utilized to implement the desired interfaces between the existing WMS's and other core business applications used by the City and specifically PW&E divisions. A summary of the overall level of effort involved to interface each of the two WMS systems with other City of Houston core business applications listed below was defined.

- GIS interface
- SCADA interface: Motorola 311 interface
- SAP financial interface
- ePlus document management systems

CLEVELAND PUBLIC POWER

CMMS Selection Implementation

Firm Name:	Cleveland Public Power
Address:	1300 Lakeside Avenue Cleveland, OH 44114
Contact:	Robert Bonner
Contact Title:	Assistant Commissioner of Engineering & Planning
Phone Number:	(216) 664-3922
Email Address:	rmbonner@cpp.org

Cleveland Public Power (CPP) owns and operates four facilities located throughout the City of Cleveland. Cleveland Public Power's three hundred megawatt system ranks as the largest municipally owned electric utility in the State of Ohio and one of the largest in the United States.

EMA, working with software vendors, has provided and installed, at 4 CPP facilities, an internet browser-based electronic work order and asset management software program, with an integrated inventory management software program as part of the core module. This allows for complete automation and 100% agency-wide visibility of Cleveland Public Power's work order and installation process. These systems are networked to provide system-wide communications.

EMA worked with the software vendor to provide all functions necessary to effectively schedule, monitor, and assess associated work order and inventory efforts at CPP

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facilities, individually, and system-wide. This included modules for Equipment Information, Preventive Maintenance Job Plans, Work Orders, Inventory, etc. All modules were completely integrated. The EAM system also has the capability to interface with other types of CPP computer systems (BANNER CIS, Financial, Purchasing, Personnel, Process Control, etc.).

EMA met the overall goals of CPP for this project which included:

- Moving from the existing system to a more-modern, user-friendly “off the shelf” application environment
- Providing a more effective, easy-to-use, accepted tool for first line supervisors, assisting them in their duties of scheduling and tracking work orders and overseeing inventory
- Enabling facility managers to maximize the effectiveness of work order efforts, to plan future work based on applicable data and to ensure necessary purchasing to support maintenance
- Enabling the system-wide interface between departments to support informed decisions regarding capital replacements and asset management

The installation of the new system occurred in phases, one facility at a time. This project involved substantial and on-going communications including attendance at monthly meetings, submissions of plans, schedules, proposed configurations, test results, etc. as well as review and follow-up on received instructions.

EMA was recently retained for a second phase that will improve inventory control and provide improved management oversight. This is currently underway.

SEATTLE PUBLIC UTILITIES

Maximo Re-implementation

Firm Name:	Seattle Public Utilities
Address:	PO Box 34018 Seattle, WA 98124-4018
Contact:	Bob Keenan
Contact Title:	Director, Utility Operations Support
Phone Number:	(206) 386-9089
Email Address:	Bob.keenan@seattle.gov

SPU is the largest combined (water, drainage, wastewater, and sold waste) utility in Washington State. The Utility has 1400 employees. The water system serves a population 1.3 million people and 28 wholesale customers. The system includes two water supply reservoirs and two small well fields, as well as two primary treatment plants,

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approximately 1,800 miles of pipeline, 400 million gallons of treated water storage, and 30 pump stations. The drainage and wastewater system, with more than 1,400 miles of combined and sanitary sewers and 460 miles of drainage pipeline. The solid waste line of business is responsible for two recycling and disposal stations, two household hazardous waste collection facilities, and continued monitoring and maintenance at two superfund sites with active environmental control systems, as well as administration of the graffiti and illegal dumping programs.

In spite of significant asset investment over the past decade, SPU lacked an integrated set of tools and data to manage, maintain, and replace assets in an optimal way. SPU had multiple departments with Maximo and Hansen systems. While the current version of Maximo v 5.2 had been highly customized in an attempt to meet business requirements, SPU still maintained multiple, sometimes conflicting data sources upon which to base decisions about assets. In addition, different groups within and across the lines of business managed work orders differently, complicating attempts to analyze the volumes of available data in support of decision-making.

As a result, SPU asked EMA to re-implement their Maximo system to provide effective decision-making data to indicate whether the Utility was performing too much or too little maintenance on some assets, repairing and maintaining some of those assets too long and replacing others too soon, and installing new assets which are more expensive to acquire, operate, and maintain than is necessary. EMA set out to optimize SPU's work management system so that SPU staff involved in maintaining and managing assets of the Utility could consistently and in a standardized way quantify Utility performance improvement.

Working together, EMA and SPU have completed or are in process to complete the following activities:

- Gathered and analyzed requirements for work and asset management
- Developed a consistent, logical system design, including workflows, processes, and procedures
- Recommended and in-process of reorganizing to centralized Planning and Scheduling
- Installed Maximo version 7 and will upgrade to 7.5
- Designed and configuring Maximo tables, screens, workflows, asset hierarchies, and codes to implement the desired design
- Establishing interfaces to external systems (SCADA, Banner, etc.)
- Data migration
- System testing and training
- Deploy into production (Q2 2012)

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- Creating and implementing a plan for sustaining the asset data management environment, including data stewardship

BROWARD COUNTY

Maximo Selection and Implementation

Firm Name:	Broward County Water and Wastewater Services
Address:	2555 West Copans Road Pompano Beach, FL 33069
Contact:	Dale Livergood
Contact Title:	Project Manager
Phone Number:	954/831-0839
Email Address:	dlivergood@broward.org

EMA assisted Broward County Water and Wastewater Services with an upgrade of the utility's Maximo enterprise asset management system (EAM) from version 4 to version 7. In addition to technical services associated with Maximo configuration and data conversion, EMA provided professional consulting services to introduce industry best practices for asset, work, and materials management. EMA also provided assistance with data clean-up and the development of data maintenance processes and technology to create a seamless, integrated GIS/EAM data repository for field asset information. The project was launched in 2009 and was completed in 2010. The contract budget was \$1,332,756. The project was completed ahead of schedule and under budget.

Several years prior to this project, EMA provided Broward with services to analyze its Maximo implementation and plan the upgrade process.

Leading asset management practices help utilities optimize their asset life cycle cost

The Water Environment Research Foundation (WERF), Water Research Foundation (WaterRF), and Global Water Research Coalition have collaborated in an ongoing research programme to define strategic asset management (SAM) practices and develop tools and techniques that help utilities implement asset management programmes. In this paper, Linda Blankenship, Terry Brueck, Frank Godin and Walter Graf look at the progress of this research.

The Water Environment Research Foundation (WERF) has been planning and conducting research related to asset management since late the 1990s. This research has been designed to provide guidance and tools for utility managers to address decisions on operating, maintaining and investing in their infrastructure, based on service and risk levels.

In early 2002, WERF convened a workshop with an international group of experienced utility managers to develop its research priorities for strategic asset management (Wagner et al, 2002). Several key efforts recommended in that workshop have since been completed, including a comprehensive set of strategies and protocols on condition assessment for water and wastewater utility assets (Marlow et al, 2007) and the development of WERF's Sustainable Infrastructure Management Program Learning Environment (SIMPLE), a web-based knowledge base for asset management, which is now also supported by the Water Research Foundation (WaterRF).

In 2006, WERF decided to focus on a more comprehensive research approach to address the needs of utilities for providing comprehensive guidance and tools to implement strategic asset management. WERF and research partners WaterRF, UK Water Industry Research and the Global Water Research Coalition, further defined the goals of the research to define strategic asset management (SAM) practices and develop associated tools and techniques for implementation. Specifically, in its request for pre-proposals, WERF indicated that it wanted the research programme to:

- Improve communication and awareness among the key stake holders (public officials, policy makers, utility staff and the

ratepayers) regarding the benefits (as well as costs) of embracing a SAM programme in the utilities

- Help better understand the barriers and obstacles faced by wastewater (and water) utilities in implementing a SAM programme
- Help develop a utility-friendly, step-by-step SAM implementation programme to suit the needs of a diverse range of wastewater facilities (small, medium and large)
- Establish a web-based database for compiling case studies on successful SAM implementation experience and lessons learned
- Develop analytic tools (gap analysis, cost-benefit analysis, risk management etc.) for SAM implementation (that are stand-alone and also can be integrated with the WERF-developed SIMPLE web tool)
- Forecast and proactively plan for asset failures, as well as related adverse effects on the environment
- Increase accuracy in predicting the economic life of assets, with the objective of improving long-term capital planning, by proactively allocating funds when most needed
- Help utilities to extend current CIP (Capital Improvement Plan) projections from five years to a ten-year cycle, then to a 20-year cycle
- Help realize cost savings or make improved financial decisions for the utilities that have to do 'more with less' increasingly in the current economic climate and given the vast backlogs of deteriorated infrastructure
- Help forge strong partnerships with agencies (national and global) that are involved in asset management

This programme, 'Strategic Asset Management Communication and Implementation' (known as 'the SAM Challenge') is being managed under the direction of Programme Director

Linda Blankenship, P.E., BCEE, Terry Brueck and Frank Godin, EMA Inc., St. Paul, Minnesota, USA.
Email: lblankenship@ema-inc.com

Walter Graf, Water Environment Research Federation, Alexandria, Virginia, USA.
Email: wgraf@werf.org

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Walter Graf of WERF. Since 2007, EMA, together with partner firms GHD, MWH and CSIRO, has led the broad research programme addressing these above-noted goals through four principal tracks of research: public communication; benchmarking and case studies; decision / analysis implementation guidance; and remaining asset life, as depicted in Figure 1.

Overview of the research programme

The research programme began in July 2007 with completion of Task Orders 1 and 2 in June 2009. Task Order 3 work took place from July 2009 to July 2010. Additional research is being undertaken from 2010 to 2011. The first three task orders of the research programme comprise more than \$2 million in research funds between WERF and its global funding partners.

As previously noted, there are four concurrent tracks of research. Track 1 addresses public communication tools that utilities can use to engage decision-makers and ratepayers in supporting the need for SAM and investment in infrastructure. Track 2 addresses best appropriate or leading practices for asset management among utilities, as well as development of case studies so that utilities can learn how to implement SAM. Track 3 addresses the development of tools for decision analysis and implementation of asset management practices. Track 4 addresses the state-of-the-science on techniques and models for predicting remaining asset life for both above- and below-ground wastewater assets.

Some key deliverables published include:

- A report (Blankenship et al, 2009) on the perception of elected and appointed decision-makers on issues related to public support for SAM and infrastructure sustainability. It

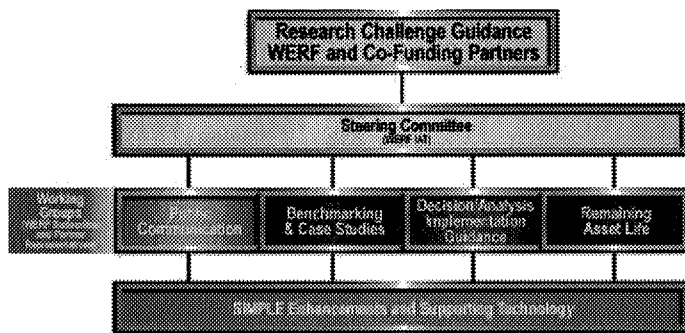


Figure 1
Overview of WERF SAM Research Programme

includes key communication messages, a compendium of available public outreach materials, a strategic communication checklist and case studies of utilities with successful outreach programmes. This report was followed by a report on the experience using Citizen Advisory Committees (Blankenship et al, 2010) to gain support for infrastructure sustainability, and provides insight in how to establish and work with such committees.

- A report (Rose, 2010) that provides guidance to asset managers on critical success factors for developing an asset management programme and alternative pathways to implementation, data and information requirements for decision-making, and readily-available decision support tools. Recommendations are provided for development of other tools for future phases of the research.
- A report (Marlow et al, 2009) identifying the state-of-the-science for predicting remaining asset life for both above- and below-ground wastewater assets. This report documents the worldwide experience using key approaches to estimating remaining asset life.
- Case studies of utility implementation of elements of SAM. To look at options for current asset state, the approach being used by the city of Atlanta, Georgia, USA, to assess and prioritize combined and sanitary sewer system improvements was described. To identify the best operations and maintenance (O&M) strategies, the Massachusetts Water Resources Authority's use of reliability-centred maintenance to lower maintenance costs at the Deer Island Treatment Plant was examined. To understand which assets are critical to sustain performance, Seattle Public Utilities', Washington, business risk processes developed for identifying critical sewer infrastructure were documented. To better understand stakeholder expectations of required level of service, Columbus Water Works',

Georgia, independent customer survey programme was described. Lastly, in looking at the best funding strategy, the approach that the city of Hamilton, Ontario, uses to gain support from its elected city representatives was documented.

- A tool called SAM GAP for utilities to self-assess their asset management practices as compared to leading practices based on a set of approximately 160 practice statements.
- A tool for utilities to assess benefits and costs of investments as a means of optimizing asset life cycle by comparing operations and maintenance investments with capital investment alternatives. The tool provides a practical application of fundamental benefit-cost concepts.

These last three items are available only online at SIMPLE, WERF and WaterRF's web-based knowledge platform. This knowledge platform contains all of WERF's research products that address strategic asset management. It can be accessed at www.werf.org.

Benchmarking leading practices

In North America, SAM began to be applied in the late 1990s in response to issues of aging infrastructure and associated financial viability. SAM differs from operational and tactical asset management in that it addresses a longer time horizon, encompassing the entire life cycle of the assets, while operational and tactical asset management focus on timeframes of typically one year or less. A key part of the research process has been to benchmark best appropriate or leading practices for SAM.

As an initial step to prepare for the benchmarking process, the research team developed an initial survey to identify the greatest areas of opportunity for improvement for the implementation of strategic asset management. This survey was based on the ten-step process that guides utilities to develop their SAM plan as illustrated in Figure 2.

These ten steps are described briefly

as follows:

- **Step 1** – Inventory assets and develop a robust hierarchy based on parent-child relationships
- **Step 2** – Assess condition and performance of the assets
- **Step 3** – Determine residual life of the assets
- **Step 4** – Determine replacement cost and date
- **Step 5** – Set target levels of service
- **Step 6** – Assign the business risk exposure (BRE) rating for the asset (where BRE or criticality is defined as the consequence times the likelihood of failure)
- **Step 7** – Determine appropriate maintenance strategies for the asset classes and / or assets based on desired risk and service levels
- **Step 8** – Determine appropriate CIP plan for investment based on desired risk and service levels as well as life cycle cost evaluations
- **Step 9** – Address funding requirements and strategy
- **Step 10** – Complete building of the asset management plan

These steps represent the core steps to develop an asset management plan, and most utilities will not complete them in a linear process. In practice, each utility will define its unique drivers and focus accordingly to build the SAM plan and associated programme, and continue to refine it over time in an iterative manner.

54 utility organizations responded to the survey issued by the research team, resulting in initial identification of gaps for improvement as shown in Figure 3.

Clearly, many utilities believe that understanding condition (and associated performance) of their assets is an important focus. Determining business risk and appropriate maintenance levels are also high priorities. Determining residual life, replacement costs and date and appropriate capital improvement are also ranked highly. The research team used these results, in combination with the benchmarking process, to determine the areas of focus for best appropriate or leading practice. The subsequent benchmarking process used in Track 2 is shown in Figure 4.

The utilities that completed the previously-noted initial survey were invited to use a self-assessment tool to compare their asset management practices with leading practices. The self-assessment tool was developed in collaboration with WaterRF. The tool is called SAM GAP and it is available through WERF and WaterRF's web-based knowledge platform SIMPLE. Through approximately 160 practice statement questions, SAM GAP

assesses practice levels for seven core organizational 'quality elements' of SAM: processes and practices; information systems; data and knowledge; service delivery; organizational issues; people issues; and asset management plans. These 160 practice statements address the practices required to complete the ten-step process as shown previously in Figure 2, which leads to an asset management plan and programme.

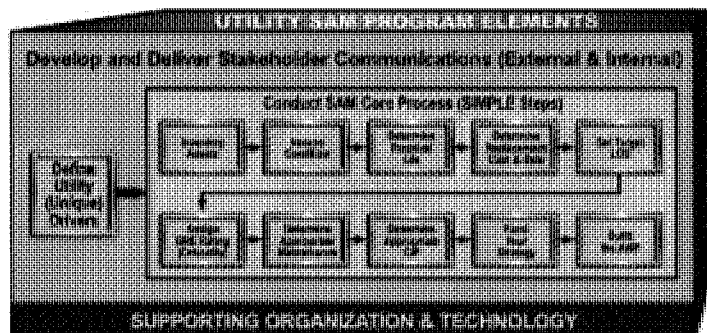
36 utility organizations completed a SAM GAP-based self-assessment of their asset management practices. In order to maximize the learning opportunities in the benchmarking process, the research team looked to identify asset management practice areas where some utilities had practices in which they scored significantly better than the majority of other utilities.

Utilities with leading practices were found by identifying practice areas where some utilities had relatively high scores (generally above 0.85 to 0.90 depending on the area) in combination with many utilities that had lower scores (generally 0.70 and below) to be able to identify practice areas where the opportunity for significant numbers of utilities to learn and significantly advance their practices existed. These results were verified with the utilities by phone interview. Further refinements were made based on applicability to the majority of North American-based utilities, as well as having a manageable number of practice areas to document.

With the self-assessments completed and the results analyzed, six key areas of opportunity were identified, together with the corresponding leading utilities, as follows:

- Accounting and costing – this practice area includes asset valuation, tracking and reporting, residual life, and future renewal liabilities.
Corresponding leading utilities: Orange County Sanitation District (California, USA)
- Strategic (asset) planning and asset management plans – this practice area includes predicting likely failure modes, life cycle cost, and optimized decision making (repair, rehab, replace), and state-of-the-asset portfolio reporting.
Corresponding leading utilities: Orange County Sanitation District, EPCOR (Edmonton, Canada), United Utilities (UK) and Sydney Water (Australia)
- Business risk management – this practice area includes business risk exposure, probability and consequence of failure and risk analysis and reduction.

Figure 2
Ten-step process for SAM plan development



Corresponding leading utilities: DuPage Water Commission (Illinois, USA), Orange County Sanitation District, EPCOR, Seattle Public Utilities (Washington, USA), United Utilities and Sydney Water

- Maintenance – this practice area includes maintenance policies, use of reliability centred maintenance and maintenance planning, scheduling and control.

Corresponding leading utilities: Orange County Sanitation District and Sydney Water

- Secondary data and knowledge – this practice area includes asset condition and performance data
Corresponding leading utilities: EPCOR
- Organization and people – this practice area includes organizational issues (roles and responsibility for asset management) and people issues (culture, managing change, etc.)
Corresponding leading utilities: Orange County Sanitation District, Seattle Public Utilities and United Utilities (Note that strategic asset planning and asset management plans, as well as organization and people, are separate practice areas in SAM GAP. However, given that the areas are interrelated, it was decided to combine these practices areas).

The areas identified above include most of the highest ranked priorities confirmed in the initial survey (including asset condition, maintenance, and business risk exposure). All of the leading practice utilities noted above have had business-focused, results-driven asset management programmes in place for five years or more.

Leading practice identification

The research team conducted detailed site visits to analyze and document the leading utility practices. Results from this analysis are presented as follows:

Accounting and costing

This practice area includes asset valuation, tracking and reporting, residual life, and future renewal liabilities. Leading utilities use multiple

valuation methods depending on the purpose and intended audience for the information.

For example, they will use replacement cost instead of historical cost-to-value assets for planning. In addition, they will use alternate methods to depreciate assets based on actual evaluation of performance to identify renewal needs. For example, one utility conducts condition-based assessment of all asset classes on a five-year rolling basis, with the use of a modern engineering equivalent replacement approach (basically using current engineering approaches to the design of replacement assets) to determine future renewal.

Leading practice utilities use business case analysis to make decisions on capital improvements, as well as O&M budget improvements. This analysis incorporates all relevant cost categories, including capital, labour for O&M, materials, contract and rental services. It may include consideration of non-financial benefits and costs such as environmental and social benefits, for so-called triple bottom line analysis. It may also include risk-weighted costs, in which cost of the consequence of occurrence are weighted by the probability. These types of analyses are generally undertaken for larger investment decisions due to the resources required to conduct the analysis. These approaches help utilities to optimize the asset life cycle cost.

Business risk management

This practice area includes business risk exposure, and risk analysis and reduction, with risk defined as 'the product of the probability and consequence of failure'. Leading practice utilities assess risk on a periodic and regular (e.g. annual / biannual) basis and look broadly at all types of risks. Multiple levels of risk are defined and reviewed including strategic (longer-term) and operational (shorter-term) risks.

For example, one leading practice utility uses nine risk categories as follows: environmental (defined as non-anthropogenic water quality

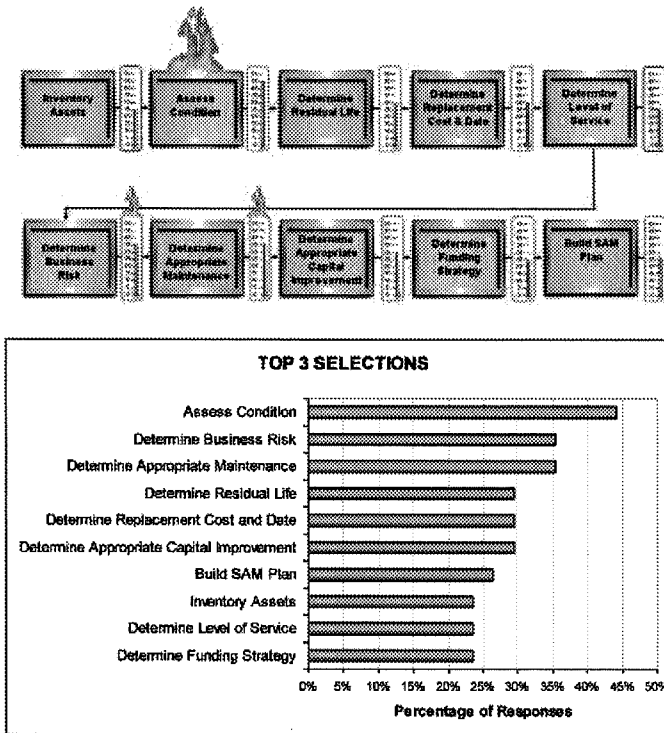


Figure 3
Results from survey of 54 utilities to the question: 'What steps will most improve asset management for your utility?'

impacts), regulatory impacts including air quality and noise issues, financial (affecting their bond rating or rate impact), legal (lawsuits and claims), public health (human-caused water quality impacts), public trust, safety, security (including thefts and vandalism) and workforce (grievances, equality complaints, workplace violence prevention and succession planning).

Leading practice utilities identify areas of unacceptable risk for further evaluation and mitigation. Analysis followed by corrective action for critical infrastructure is undertaken to mitigate risk – for example, development of contingency plans for all high risk issues.

Periodically, they will conduct incidence reviews with their governance. A corporate risk policy is in place, which is used to implement risk management on an organization-wide basis. They use a standard risk assessment methodology with a business risk exposure score for assets. For assets that score above a threshold risk level, they will take appropriate action such as a capital project for the asset. This approach allows risk to be reduced while optimizing asset life cycle cost and meeting target service levels.

In analyzing business cases, leading practice utilities will conduct an analysis of all relevant risk factors in a business case analysis. They will define risk profiles based on probability (likelihood) and consequence of occurrence. The probability factor may be adjusted based on timing of projects to mitigate risk or result in projects that

are given more consideration in the near term. In addition, leading practice utilities analyze the probability of failure considering multiple factors and modes of failure. For example, the use of deterioration curves based on multiple factors improves confidence in probability of failure predictions.

Leading practice utilities assess performance using post-implementation audits to understand the results that were achieved, identify lessons learned, and ensure actions are taken to adjust levels of risk to the desired level.

Organization and people

This practice area includes vision, roles, and responsibility for SAM in the organization, development of a supporting culture, continuous improvement to improve business processes, and training and knowledge for the workforce. Leading practice utilities will have a mission as well as a vision and policies that specifically refer to SAM, which demonstrate their commitment to their principles of level of service, risk management, addressing the entire asset life cycle, and so on, as a means to achieve business goals.

A leading practice in this area includes creating a corporate asset manager and steering team, with well defined roles and responsibilities. The steering team, comprised of senior management, sets policy and provides guidance to achieve and maintain cross-organization commitment to asset management. The corporate asset manager serves as the day-to-day support to ensure certain key functions are carried out. Identification of asset management functions and responsibil-

ities is made in all organizational units where appropriate.

Leading practice utilities have asset management goals and concepts that are clearly defined and widely communicated in a way that is meaningful to all staff. There is an organization-wide understanding and commitment to asset management. Demonstrated willingness to change processes is evident because continuous analysis and improvement take place. A workforce development programme is in place to support asset management. Specific training has been identified to improve knowledge of asset management principles, concepts and their application specific to the roles of staff. For example, one leading practice utility has provided business case development, reliability centred maintenance and customer service training to ensure understanding and application consistent with its SAM programme.

New staff are educated in the role of asset management in the organization. Knowledge sharing and exchange of personnel to foster asset management principles and practices takes place. In leading practice utilities, there is a mindset of infrastructure sustainability that supports the asset management culture. Asset management is viewed as a positive force that helps the business succeed and improve services for customers and stakeholders. Quality processes exist for asset management, such as management systems, quality processes, audits, routine self-assessment, and formalized benchmarking processes.

Maintenance

This practice area includes maintenance policies, maintenance planning, scheduling and control. Leading practice utilities have a maintenance strategy in place for their key asset classes. They have developed this strategy using a variety of analyses of failure such as fault tree analysis, use of Weibull curves (which is a type of probability distribution that defines time-to-failure based on specified factors for the asset) and reliability centred maintenance to focus maintenance resources and to select the appropriate maintenance tactics. Failures are analyzed to improve the inspection process. Information on the condition of assets is collected during routine preventive maintenance work.

Leading practices utilities have very targeted procedures when responding to a work request. For example, when responding to field system issues, one utility uses a three-tiered review process. First, highly trained customer service representatives identify / screen calls for priority. Then, dispatch

performs a validation process by calling back the customer to determine which crew to dispatch. A First Call Responder (FCR), a highly experienced technician is dispatched. These individuals typically resolve 60% of calls on the first visit. If the FCR cannot resolve the call, they provide scopes for the field crew. In addition, the field staff has appropriate mobile solution tools to capture information directly in the field.

Workflow management is supported by maintenance management software interfaced with other systems as required. For example, the maintenance management system is embedded in GIS (geographic information system) to support work management in the field, and integrated with FIS / purchasing to track material cost against work orders. Technology is used to create work bundles to optimize on-site work and minimize travel time.

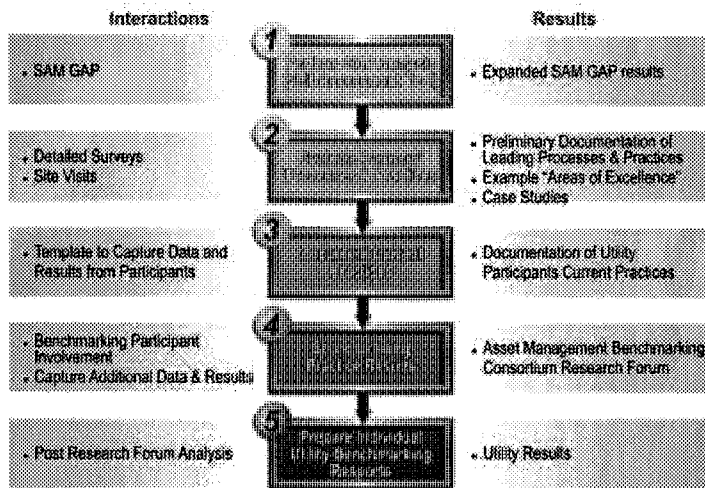
Planner-schedulers or maintenance specialists focus on improving the planning of maintenance including the coordination between operations and maintenance functions. A certain amount of planned backlog is maintained by trade in order to have projects available for maintenance staff at all times. Planned work is compared to unplanned work to determine how effective the programmes are and make adjustments. Flexibility of the workforce is assured by staffing for a base load of planned maintenance, and contracting out items, such as corrective work as well as high-volume, low-risk items, such as closed-circuit television inspection of pipes, silt removal, leak detection, and extension of lines. Planned maintenance frequencies are analyzed to optimize the work. All these approaches help to ensure that the asset life cycle cost is optimized.

Secondary data and knowledge

This practice area includes asset condition and performance data. Leading utilities focus on defining the data that is truly necessary to make informed decisions. They recognize that data requires resources to collect and maintain and therefore strive to reduce the costs of data collection and management. They assure quality data by periodic reviews for completeness. For example, one leading practice utility assigns data stewards, whose roles are to assure the data quality as part of their job, which typically includes many other related functions.

Leading practice utilities have good data hierarchy of assets reflecting parent-child relationships so that asset data can be rolled up. The data

Figure 4
Benchmarking steps, interactions and results



collected includes capital, operating and maintenance costs including labour, and contract expenses. SCADA system data is used to determine performance and condition issues. Condition-based assessments are performed based on an analysis of asset risk (likelihood / probability and consequence of failure) as well as cost.

Strategic (asset) planning and asset management plans

This practice area includes predicting likely failure modes, life cycle cost, and optimised decision-making (repair, rehab, replace), and state-of-the-asset portfolio reporting.

Leading practice utilities have identified the resources required to maintain the viability and sustainability of the utility in the long term. They do this by analyzing how to balance service levels, environmental regulations and financial limitations, and the impacts of changes in each area. They have engaged their customers and stakeholders in a variety of ways, such as through willingness to pay and other types of surveys. These evaluations are typically done to look at short, medium and long-term implications, in lesser levels of details for longer time horizons.

They have linked asset management to their business improvement. They have taken a continuous improvement approach to their asset management plans, starting with the most critical need or area, and expanding and refining over time to keep their plans up-to-date.

Leading practice utilities have clearly defined business goals that drive budget planning for both O&M and capital budgets. They track and measure performance against goals on a regular and frequent basis, such as monthly, quarterly and annually. State-of-the-asset reporting and key performance indicators are used.

They use risk-based approaches for overall asset strategy and separate assets into distinct groups. For example, one leading practice utility uses the

categories of 'avoid to fail' and 'plan to replace' strategies to distinguish its most critical assets. Leading practice utilities prepare different types of plans for different purposes and audiences. These strategies and plans are clearly linked to and drive operation plans and tactical response for their maintenance strategy. They identify the confidence in decisions that are being made and act to either improve confidence when needed through additional evaluation. Quality processes are in place such as auditing of capital improvement projects decisions to analyze results and identify lessons learned.

Next steps

An Asset Management Benchmarking Consortium Research Forum (ABC Research Forum) was held in the United States during the summer 2010. At the ABC Research Forum, the research team and leading practice utilities presented the leading practice results. In addition, working sessions were held with participating utilities in order to compare, contrast and adapt practices, and identify critical success factors and implementation needs for their selected two practice areas. ●

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Wagner, E, Speranza, E, Rogers, J, Bacon, L, Ispass, A and Bobchek, C (2002) *Research Priorities for Successful Asset Management: A Workshop*. Water Environment Research Foundation. Co-published by IWA.

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EMA

TIMOTHY S. PAYNE

FIELDS OF SPECIAL COMPETENCE

- Project Management
- Operations and Management
- Strategic Planning and Management of Technology
- Analysis, Planning and Implementation
- Policies and Best Practices
- Risk Management and Security Improvements
- Finance, Negotiations, and Startups
- Crisis Management
- Regulatory Compliance

EXPERIENCE OVERVIEW

Tim is a proven leader with a strong legal education and business background complemented by extensive experience in operations management, product development, crisis recovery, marketing and strategic planning. Tim is Executive Vice President leading the West Region of EMA. He is a seasoned strategist with demonstrated success in development projects from concept to launch. He served as the Project Director for the private consortium that designed, built and operated Seattle Public Utilities' Tolt Treatment Facility. Tim's expertise also includes managing cross-functional teams, developing creative solutions, and thinking outside the box. Tim brings, with him, a unique perspective as an elected City Council member in his community.

ACADEMIC BACKGROUND

- Juris Doctorate, University of Arkansas, Leflar School of Law
- Bachelor of Arts, English, Seattle University
- Bachelor of Arts, Business Administration, Seattle University

EXPERIENCE HIGHLIGHTS

- *Workforce and Succession Planning Project, Tualatin Valley Water District, Beaverton, OR, Principal In Charge.* Provided executive oversight to the team of organization and human resource consultants to assess areas of vulnerability for knowledge retention;

identify talent, knowledge and skill profiles for vulnerable positions; identify and assess internal candidate pool; design leadership and skill development programs for the workforce; and identify knowledge retention tools that best match the District's work style and environment.

- *Process Control System & SCADA Upgrades, Miramar Water Treatment Plant, Alvarado Water Treatment Plant, & Otay Water Treatment Plant, San Diego, CA, Principal In Charge.* Serve as the sponsoring Executive for the project. Actively review and monitor project progress. Provide QA/QC over sight. During this extended SCADA System upgrade process, EMA worked with the Water Department to initiate and implement a master plan to standardize and systematically upgrade each of the water treatment plant control systems. The implementation of this plan began at Alvarado in 1999 is scheduled to complete in 2010. EMA provided control system evaluation, master planning, standards development, and implementation of the multi-phased upgrade of the three treatment plants (455 MGD combined capacity). This included design of fault-tolerant PCS master stations, operator interfaces, process history, reusable standard control function blocks, and installation and commissioning assistance. EMA has been the Water Department's Control System Engineer throughout this process and has worked with various Engineers and Construction Managers at each treatment plant while maintaining a standard hardware and modular software design and implementation approach to each plant. EMA provided planning, project and construction management, control system design, and control system implementation services including: Control System review (QA) of A&E designs; Computer and network system design to include SCADA security; PLC, Wonderware and historical programming and implementation; Factory and Site Acceptance Testing, Start up and commissioning; O&M Manuals, Training and on-going support of application software. The City of San Diego saves more than \$1.5 million per year due to optimization made possible with the new SCADA technology and optimizing control.
- *SCADA Integration Program, Seattle Public Utilities, WA, Program Manager.* Directed project which included scoping, planning and business case analysis of the integration of 4 SCADA systems that control elements of water, wastewater and drainage utility operations. Integration of the SCADA systems into one comprehensive system will provide critical operating information that will enhance day-to-day operational decision-making as well as long-term capital improvement planning. This \$17M program will be implemented over an 8-year timeframe. Presentation of the program with all costs and benefits was unanimously approved by the Utility's Executive Team.
- *Maximo Implementation, Sacramento Area Sewer District, CA, Principal In Charge.* Implementing Maximo CMMS for the wastewater utility with a mobile component for work management and for GIS. The CMMS interfaces with GIS and CCTV software.
- *Maximo Implementation, Sacramento County Department of Water Resources, CA, Principal In Charge.* Implementing Maximo CMMS for the water and storm water utilities with interfaces to GIS, CIS, SCADA, and Compass HR.

- *Maximo Best Practices, Sacramento Regional County Sanitation District #1, CA, Project Manager.* Implementing best practices and supporting the Maximo upgrade from 4.11 to MXES for the sanitation district.
- *Tolt Treatment Facility – Design Build Operate Project, Seattle Public Utilities, Project Director,* Directed design engineering, construction, quality assurance, permitting, WMBE, safety, archaeological and environmental protection. Negotiated three major contract amendments totaling \$6.5M with 18% margin.

Delivered Azurix water treatment design/build/operate (DBO) project on time and within budget, despite significant archeological discovery. Developed recovery plan that acknowledged sensitivity of discovered artifacts while meeting construction schedule. Negotiated a \$2.6M amendment to the Service Agreement with municipality. Hired Native Americans to assist in recovery. Completed project without sacrificing archaeological integrity or cultural sensitivity.

Managed startup and initial operations and on-going P&L of \$112M, 120 MGD water treatment facility, largest DBO in the US.

- *Security Implementation Program, Seattle Public Utilities, WA, Project Manager.* Project included development of functional requirements enhancements to physical, technical, organizational and procedural aspects of the Utility. Implementation of improvements to multiple remote and in-town infrastructure sites. Additionally, lead the effort to design and implement new policies and procedures related to technical site access improvements and the integration of those to a central monitoring facility.
- *Security Implementation Program, City of Lincoln Water, NB,* Participated as part of the design team developing functional requirements for a comprehensive \$6M security program. Development was based on a vulnerability assessment that identified specific threats. Worked closely with Lincoln Water’s operations management and staff to develop policies, procedures and training to integrate new technology and requirements into daily operations. Advising Lincoln Water on continuing implementation of Phase 2 improvements based on analysis of Phase 1 operational performance.
- *Table Top Exercises for Electric and Water Outage Project, Seattle Public Utilities and Seattle City Light Department, WA, Facilitation.* Assisted with facilitation of all Table Top Exercises for the Electric Outage Program and the Water Outage Program. The program involved over 140 participants, from the Mayor through front-line supervisors, in each exercise. Successfully met all objectives set by SPU’s design team.
- *Table Top Exercise for Terrorist Threats & Natural Disasters for Major Water & Wastewater Utilities,* Developed, designed and facilitated emergency response Table Top Exercises for major utilities including City of Baltimore Water and Orange County Utilities (Florida). Exercises included 30 – 100 municipal officials, utility executives, managers and supervisors. Exercises required active participation and preparation on the part of those involved.
- *Vice President, American Water Services.* Directed \$2.4M per year in operations & maintenance services provided to municipal clients. Served as managing officer for joint-

corporation operating 120-million gallon/day water treatment facility serving 850,000 consumers of the largest water utility in Washington State. Maintained a perfect record during tenure for meeting stringent State & Federal water quality regulations. Managed successful client relations.

For the same water treatment facility, returned it to full capacity in nine days after a valve failure flooded the mechanical and instrumentation areas, destroying 80% of instrumentation and shutting down the facility. Marshaled team to clean up, assess and repair facility. Cut recovery time by one week from the original estimate. Recovered 95% of claimed loss from insurance carrier.

- *Senior Operations Manager, Philip Services, \$ 2B environmental and industrial services firm.* Established compliance management group, creating a new revenue stream for Philip Services. Revenue grew from \$650K in the first year to \$2.4M in the third year. Created option of full permitting, safety, training and other regulatory compliance services. Directed and managed the launch of the industrial cleaning group. Initiated marketing campaign and pricing strategy. Increased equipment and labor utilization, providing value-added service to existing clients
- *Risk Manager, Crowley Maritime, a \$1.5B marine transportation enterprise.* Reported on risk management issues related to remote site operations on the Exxon Valdez spill response. Conducted safety meetings with marine personnel. Managed, planned and executed safety drills including a full-field, real-time tsunami evacuation drill. Managed all accident/safety incident reports. Communicated reports & observations to client management in weekly meetings.

CERTIFICATES, LICENSES, AND MEMBERSHIPS

City of Gig Harbor, WA

City Council Member, Position No. 1, 2006 - Present

Environmental Coalition of Seattle & the Sound (ECOSS), a regional environmental education non-profit

Chairman, Board of Directors, 2002 – 2007

President, Board of Directors, 1999 – 2002

Board Member 1994 – 2007.

Western States Environmental, Inc.

Board of Directors, 2002 – Present

American Water Works Association (AWWA)

Member, 2001 – Present

AWWA Research Foundation (AwwaRF), now Water Research Foundation (WRF)

Energy Benchmarking Study for Wastewater and Water Facilities

Member, Working Group, 2001 – 2002



EMA **JON B. CRUMPTON, PMP**

FIELDS OF SPECIAL COMPETENCE

- Utility industries and Public Works Operations Management Consulting
- Computerized Maintenance Management/Enterprise Asset Management Systems
- Supply Chain and Inventory Management
- Performance Measures and Management
- Asset Management and Maintenance Program Development
- Business/Workflow Process Analysis/Reengineering
- Contracts/Construction Management
- Quality Assurance
- Trained in use of RAM-W™ Security Risk Assessment Methodology

EXPERIENCE OVERVIEW

Over twenty-five years of management consulting for utility industries (electric, water, gas, wastewater) and public works operations (streets, solid waste collection, storm water, watershed management, airport, parks & recreation, facility maintenance, fleet maintenance, traffic engineering). Expertise includes: project management (PM), computerized maintenance management systems (CMMS), enterprise asset management (EAM), bill of materials (BOM) programs, business process analysis & reengineering, supply chain & inventory management (SCM), configuration management (CM), procurement engineering, purchasing, estimating, and quality assurance (QA) program & procedures development.

ACADEMIC BACKGROUND

- Bachelor of Science Degree, Construction Engineering, Iowa State University

EXPERIENCE HIGHLIGHTS

- *Planning Implementation of a CMMS, Tualatin Valley Water District, Project Manager.*
Assisted in developing functional requirements to support RFP issue and procurement of a CMMS. Based on staff interviews, and review of prior assessment reports, the current technical architecture, & existing business rules, operational business process objectives & high-level systems interfaces were defined to support development of an RFP. The CMMS will likely be integrated with the GIS, SCADA, and ERP systems as applicable.
- *Seattle Public Utilities Maximo Re-Implementation, City of Seattle, Consultant.*
Developed detailed design of business processes to establish protocols for conducting

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asset & maintenance management. Providing training on asset & work management best practices. Assisting in developing core data values and functional requirements to support Maximo upgrade to v7.x and subsequent implementation. Maximo will be integrated with multiple systems, including GIS, CCTV, SCADA, and ERP applications.

- *Maximo Implementation for Watershed Protection and Transportation Departments, City of Austin, Consultant.* Performed review & modification of business processes and EAMS usage protocols to establish “to-be” processes, roles, and responsibilities for conducting asset & maintenance management. Assisting in developing core data values and functional requirements to support EAMS implementation.
- *Underground Utilities Asset Management Program, City of Tallahassee, Consultant.* Provided training on asset & work management best practices. Developed detailed design of business processes to establish protocols for conducting asset & maintenance management. Assisted developing core data values to promote “common” Champs usage for all utilities divisions. Coached and assisted developing master equipment lists. Training and coaching to develop maintenance strategies will be provided.
- *Enterprise Asset Management Implementation (Phase 1), City of Roseville, Consultant.* Provided training on asset & work management best practices. Developed detailed design of business processes to establish protocols for conducting asset & maintenance management in five of twelve asset groups. Assisted developing core data values to promote “common” Maximo usage for all project phases. Coached and assisted master equipment lists development. FMEA and/or RCA training will be provided and applied to critical assets as applicable to develop comprehensive maintenance plans.
- *Preparation for Maximo Upgrade to v7.1, Tucson Electric Power, Project Manager.* Performed review & modification of business processes and EAMS usage protocols to establish “to-be” processes, roles, and responsibilities for conducting asset & maintenance management within the power generation division. Assisted in developing functional requirements to support procurement of EAMS upgrade and implementation services. The EAMS will be integrated with the ERP system as applicable.
- *Maximo Implementation for Plant Operations, Honolulu Board of Water Supply, Project Manager.* Assisted in developing asset management program and system configuration requirements to expand the Maximo implementation to envelop operation & maintenance of over 200 remote facilities. Training on asset & work management best practices was provided while developing their asset management and maintenance program. Maximo will be integrated with the GIS, SCADA, and ERP systems as applicable, and made available in the field through mobile computing.
- *Inventory Management Systems Evaluation and Selection, Miami-Dade County Water and Sewer Department, Consultant.* Conducted assessment of inventory management & purchasing work practices to recommend selection of a new inventory management system. Documented “as-is” workflows, provided best practices training for inventory management, and developed a practices gap analysis and recommendations report. Developed process objectives and special needs based functional requirements,

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identified needed systems interfaces (inventory, barcode, EAMS, ERP) and prepared a recommendations memorandum for selection of an inventory management system.

- *Maximo Upgrade Implementation, Palm Beach County Water Utilities Department, Consultant.* Assisted in developing functional requirements and data values for the Maximo upgrade. Provided core concepts training for work order planning & scheduling, and user training on roles & responsibilities and CMMS usage to conduct asset & maintenance management in water & wastewater utilities.
- *Maximo Enterprise Warehouse Management Project, Orange County Public Works Department, Consultant.* Performed redesign of workflows & practices, to establish common protocols and roles & responsibilities for CMMS usage to conduct inventory management in multiple public works divisions' warehouses. Supported user training & implementation for protocols. The CMMS replaced an existing system & extraneous databases, and was integrated with an enterprise financial application to provide single point data entry for all inventory procurement related transactions.
- *RFP Development and Selection of New CMMS, Greater Orlando Aviation Authority, Consultant.* Conducted review and documentation of current & proposed business processes workflows for airport facilities and airfield operations & maintenance as a precursor to developing functional requirements & specifications used to solicit vendor proposals for a new CMMS. The CMMS will replace an existing system & multiple extraneous databases, and be used by a broad spectrum of functional groups to conduct asset management from a more holistic perspective.
- *Citywide Performance Measures Development, City of Corpus Christi, Project Manager.* Facilitated training for City Manager, Assistants, and Department Heads, and worked with core team of consultants to develop Balanced Scorecard performance measures framework and measures at three tiers (City Manager, 3 Assistants, 29 Departments). Performed project administration functions over related activities to develop web-based reporting dashboard dynamically linked to disparate information systems source data tables for metrics calculations. The dashboard provides drilldown capabilities from an upper most tier to an individual metric within a department specific scorecard.
- *Maximo Upgrade Implementation, City of Corpus Christi, Consultant.* Performed review & modification of workflows, practices, and CMMS usage protocols to reconfirm roles & responsibilities for conducting asset & maintenance management in multiple utilities & public works divisions. Supported user training & implementation for protocols. The CMMS is integrated with the GIS for public works & utilities as applicable.
- *Metrics Analysis & Tracking System, City of Phoenix Water Services Department, Technical Support Division, Project Manager.* Performed review and documentation of workflows & exceptions for twenty-two business processes in three operational units primarily involved in document handling and management. Conducted desktop reviews for process improvements, and functional process reviews to identify details of related information systems data capture and reporting needs. Documented functional requirements and designed a tracking system model to evaluate suitability of other applications to replace/consolidate existing tracking tools and meet reporting needs.

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- “One-Utility” Work Management Processes and Planner/Scheduler Training, City of Phoenix Water Services Department, Project Manager. Performed re-definition & design of workflows & practices, to establish protocols and roles & responsibilities for CMMS usage to conduct asset & maintenance management. Primary objective was to establish “common” practices for nine operational units in water & wastewater treatment divisions. Worked with a team of twenty plus Synergen users to document & obtain consensus on practices to operate as “one-utility”. Subsequent training specific for planner/schedulers was provided regarding fundamentals of asset management and planning & scheduling.
 - *Performance Measures Expansion throughout Operations, City of Phoenix Water Services Department, Project Manager.* Provided project administration functions over efforts to expand departmental balanced scorecard framework to include division level performance measures for all divisions of water and wastewater operations.
 - *Maximo Upgrade Implementation, Albuquerque Bernalillo County Water Utility Authority, Consultant.* Performed review & modification of workflows, practices, and CMMS usage protocols to reconfirm roles & responsibilities for conducting asset & maintenance management in water & wastewater utilities. Supported user training & implementation for protocols. The CMMS is integrated with the GIS as applicable, and will be made available in the field through mobile computing.
 - *Maximo Implementation, City of Fort Worth Water Department Field Operations, Consultant.* Performed re-definition & design of workflows & practices, to establish protocols and roles & responsibilities for CMMS usage & conducting maintenance. Supported user training & implementation for protocols. The CMMS was rolled out for water distribution and wastewater collection systems maintenance.
 - *Maximo Implementation, City of Corpus Christi, Consultant.* Performed redesign of workflows & practices, to establish protocols and roles & responsibilities for CMMS usage to conduct asset & maintenance management in multiple public works divisions. Supported user training & implementation for redesigned work practices in customer service, water & gas distribution, and wastewater collections. The CMMS is integrated with the GIS for public works & utilities as applicable.
 - *Synergen Implementation, Tucson Water, Consultant.* Supported user engagement and use of a CMMS that supports redesigned work practices. CMMS functionality is being implemented for all water distribution, will be integrated with the GIS, and made available in the field through mobile computing.
 - *Maximo Implementation, Albuquerque Bernalillo County Water Utility Authority, Consultant.* Performed re-definition and design of workflows & practices, to establish protocols and roles & responsibilities for CMMS usage & conducting maintenance. The CMMS was rolled out for distribution system & wastewater treatment maintenance, is integrated with the GIS, and will be made available in the field through mobile computing.
 - *WERF Performance Measurements, City of Phoenix Water Services Department, Project Manager.* Provided project administration functions for two pilot and five departmental

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project efforts to identify & apply a performance measures program using a Balanced Scorecard framework.

- *Water Utility Emergency Operations/Emergency Response Plan Audits, Multiple Clients, Consultant.* Performed desktop audits of emergency operations and response plans to assess their adequacy for addressing vulnerability assessment outcomes & compliance with EPA mandates for several large water utility clients. Audits were based on criteria from FEMA and EPA guidelines.
- *Water Utility Security Vulnerability Assessments, Multiple Clients, Consultant/Project Manager.* Participated on a core team of consultants conducting security vulnerability & risk assessments to comply with EPA mandates for several large and mid-sized water utility clients. Facilitated resources scheduling, and monitoring progress & budgets for approximately fifteen projects that ran concurrently.
- *Synergen Implementation, City of Winnipeg Water & Waste Department, Consultant.* Facilitated user engagement, and use of a CMMS that supports redesigned work practices. CMMS functionality was implemented for wastewater treatment plants, pumping stations and collection & distribution field crews. It is integrated with GIS, and the combined system will be made available in the field through mobile computing.
- *GIS/CMMS for Collection & Distribution, City of Phoenix Water Services Department, Consultant.* Provided an industry comparison of CMMS products, documented the current situation (practices/workflow, technology used, interfaces, etc.) for Collection & Distribution, and identified functional requirements for a GIS/CMMS interface.
- *Maintenance Program Implementation, City of Phoenix Water Services Department, Project Manager.* Provided project oversight for the department-wide transition from reengineering to developing an enterprise level maintenance program and fully utilizing a CMMS. Developed procedures and coordinated efforts of City staff to establish uniformity in maintenance & CMMS usage practices.
- *Procurement Assessment & Action Plan, Akron Finance Department, Purchasing Division, Consultant.* Project included defining current situation (practices/workflow, technology use, divisional & process interfaces, etc.) and identifying opportunities for improvement in organizational structure, work practices, and technology utilization.
- *Best Practices Benchmarking, City of Mesa Utilities Department, Project Manager.* Provided project oversight for a department-wide benchmarking of business and operations & maintenance practices to assess Department's competitive position and identify opportunities for improvement in structure, practices, and technology utilization.
- *Reengineering Program, City of Phoenix Water Services Department, Project Manager.* Provided project oversight in the last two years of department-wide reengineering initiatives. Assisted City staff in developing maintenance organization structures, practices reengineering, and developing program implementation plans.
- *Synergen Implementation, City of Phoenix Water Services Department, Project Manager.* Provided project oversight of department-wide CMMS installation and initial

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implementation. Coordinated efforts of City staff and CMMS vendor to support multi-phased rollout, while ensuring implementation aligned with parallel maintenance reengineering efforts. Participated in reengineering task force efforts.

- *Bill of Materials (BOM) Project, Enrico Fermi Energy Center, Supervising Engineer.* Provided training and review of mechanical engineering staff. Developed asset-based BOMs based on review & validation of as-built configuration, maintenance requirements, and inventory availability. BOM item inclusion was based on maintenance history, item availability & obsolescence, and operational risk analysis (if item unavailable). Developed procurement specifications and integrated into inventory databases. Developed item description standards and established stocking & reorder policies. Performed functional testing for BOM software that integrated assets, spare parts, and inventory databases.
- *BOM Project (Pilot Effort), Enrico Energy Center, Supervising Engineer.* Provided project and technical management for a staff of two to five engineers. Assessed adequacy of inventory to support operations. Pilot project resulted in award of a total plant inclusive project. Created pilot project methodology and assisted in development of total plant project methodology.
- *Past Procurement Validation Program, Bellefonte Nuclear Plant, Technical Manager.* Provided technical project oversight and management of eleven engineers and two data entry personnel. Developed project procedures & sampling plans. Evaluated samples of historical purchases to assess procurement practices & parts acceptability for intended or installed applications. Co-authored final report which established parameters for continued program activities required to support closure of non-conformance issues.
- *Program for Assurance of Completion and Assurance of Quality, Watts Bar Nuclear Plant, Supervising Engineer.* Provided technical direction and coordinated activities of fifteen engineers & fourteen data entry personnel. Phases I & II identified 19,000 licensing commitments & associated implementing documents/programs comprising the plant design baseline & licensing basis. Designed a tracking database to correlate commitments & implementing programs. Performed programmatic reviews of corrective action programs to assess technical adequacy. Participated in vertical slice reviews to assess plant system adequacy relative to design compliance & functional requirements.
- *Engineered Spare Parts List Project, Davis-Besse Nuclear Power Station, Project Manager.* Provided project and technical management of fifteen engineers and support personnel. Developed BOMs to identify & evaluate inventory necessary for asset maintenance based on design configuration documents. Developed procurement specifications and integrated them into plant databases.
- *Past Procurement Evaluation, Davis-Besse Nuclear Power Station, Lead Engineer.* Technical lead for fifteen engineers. Evaluated a ten year history of procurement practices. Developed sampling plans & procedures for project implementation. Authored the final report used to defend the utility's historical procurement practices.
- *Warehoused Material Compliance Re-verification, Palo Verde Nuclear Generating Station, Project Manager.* Managed five inspectors & three engineers in re-verifying

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inventory compliance with procurement specifications & material control requirements. Engineering evaluations were developed for non-conformance closure and disposition of non-compliant items.

- *Warehouse Material Non-conformance Program, Palo Verde Nuclear Generating Station, Project Manager.* Managed six engineers in evaluation & closure of 650 materials non-conformance reports. Developed engineering evaluations to establish material's acceptance & non-conformance closure requirements. Modified existing procurement specifications/requirements and the materials control database as required.
- *2nd New Business Startup, Purchasing Manager.* Assisted in development of engineering, QA, materials management, purchasing, and financial programs & procedures necessary to operate as a hardware and services supplier. Served dual roles, performed multiple functions, and for a majority of the time operated as a one-man department in implementing the programs and procedures.
- *Contract Closeout & New Business Startup, Procurement Officer and Estimator.* Assisted in development of engineering, QA, materials management, purchasing, and financial programs & procedures necessary to closeout Palo Verde construction contract and transition to operations as a hardware and services supplier.
- *Plant Construction at Palo Verde Nuclear Generating Station, Lead Project Estimator.* Managed up to seven estimators, and performed multiple roles during contract growth from low \$10M to low \$100M. Developed a contract specific estimating program. Prepared & negotiated change orders with client & subcontractors, and administered change orders & funding for two multi-million dollar subcontracts. Prepared contract quarterly overhead & profit projections. Performed completion planning & scheduling.
- *Estimator.* Developed bids for heavy industrial and institutional heating, ventilating & air conditioning projects.

CERTIFICATES, LICENSES, AND MEMBERSHIPS

- Certified Project Management Professional (PMP); PMI PMP Number 505157
- Water Environment Federation, Plant Operations and Maintenance Committee Member
- Water Environment Federation Member; Number 01839276
- Sandia National Laboratories Security Risk Assessment Methodology – Water (RAM-W™)
- EPRI – Plant Support Engineering Procurement Training Course
- Safety Classification of Structures, Systems, Components, and Parts
- American Society for Mechanical Engineers (ASME) Training Technology Experience

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PAPERS AND PRESENTATIONS

Crumpton, J. "Inventory Management", Presentation under Workshop 208 – Optimized Maintenance the Roadmap to Excellence, WEFTEC 2010, New Orleans, Louisiana, October 2010.

Crumpton, J. "Inventory Management", Presentation under Workshop 104 – Advanced Maintenance Practices to Improve O&M Reliability and Cost Effectiveness, WEFTEC 2009, Orlando, Florida, October 2009.

Crumpton, A., J. Crumpton, G. Ramon. "Cost Effective Asset Maintenance Requires GIS & Work Management System Integration", Proceedings of the GITA Conference, Tampa, Florida, March 2002.



EMA PHILIP TIEWATER, P.E.

FIELDS OF SPECIAL COMPETENCE

- Asset Management
- Utility / Public Works Management
- Organizational Development
- Performance Measurement
- Strategic Planning
- Leadership Development
- Project Management
- Pavement Management
- Civil Engineering

EXPERIENCE OVERVIEW

Philip brings over 30 years of experience with public agencies. He was an engineer, planner, project manager and department manager. He helped local governments design, build, and manage a variety of facilities including streets and highways, bridges, culverts and pipelines, pump stations and plants, and buildings. As a management consultant Philip has helped clients improve their organization by asking the right question, at the right time. He guides his clients down the path of self discovery which is vital to lasting organizational improvement.

ACADEMIC BACKGROUND

- Masters Degree, Public Administration, California State University, Stanislaus, Turlock, CA
- Bachelor of Science, Business Administration, California State University, Stanislaus, Turlock, CA
- Engineering Studies, U.S. Military Academy, West Point, NY

EXPERIENCE HIGHLIGHTS

Asset Management

- *Asset Management Program, Lancaster Area Sewer Authority, PA, Principal Consultant.* LASA is facing a large capital investment to comply with the Chesapeake Bay Program. Before taking on these large investments, the Authority needs a more accurate picture of

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the future spending needs, including the replacement and rehabilitation of existing assets. Using a series of capacity building workshops and coaching, EMA is currently assisting LASA through their own asset management program.

- *Asset Management Program, City of Tulsa, OK.* Advise the Water Supply Division in their application of strategic asset management principles and show them how to use the information developed in the plan to optimize the life cycle cost of water supply assets based on the Water Environment Research Foundation (WERF) approach.
- *Asset Management Program, Phase II, City of Bloomington, MN.* Integrating and implementing asset management (AM) concepts and principles into everyday business practices. Mapped workflows for the AM activities to find process efficiencies. Introduced business case evaluation (BCE) for capital projects to improve project selection. Other activities include integration of the CMMS and the GIS and resource loading exercise to understand the AM demands on the current organization.
- *Work Management Study, City of Houston, TX.* Develop a business process review and improvement approach for the Public Works & Engineering Department, Utilities Division. Identify maintenance-centered business process workflows for review and improvement. Define and document streamlined workflows to support better maintenance practices. Present modifications to the Workflow Team to determine if the modifications can be implemented without any negative impact on other divisions.
- *Asset Management Program, City of Tallahassee, FL.* To support the expansion of the ISO14001 certification, developed the maintenance strategy for two more facilities of the utilities division and provide follow-on coaching for the staff at the two facilities.
- *Asset Management Vision & Goals, Department of Transportation, Seattle, WA.* Provided three workshops to build the business case for asset management. The city had just passed a referendum to increase taxes for ten years to pay for transportation improvements. The City wanted to use asset management as a tool to demonstrate to the public how well they managed the funds and to show the improvement to the transportation system. The workshops were presented to the senior staff of the transportation department and the mayor's office. The titles were: *Introduction and Best Practices of AM, Gap Analysis Workshop, Visioning and Goals for AM.*
- *CIP Improvement Program, Division of Sewerage Management, Erie County, NY.* Dissatisfied with the existing process for choosing CIP projects this county based sewer division wanted to use AM as for establishing priorities. Through a series of workshops the existing and proposed capital improvement process was mapped and refined. Some existing CIP projects were re-scheduled based upon the new criteria. Tasks included business process mapping, Delphi polling, workshop facilitation and a pilot project was used to test the new process.
- *Asset Management Assessment, NEORS, OH.* During this first phase asset management project this 260MGD utility had all of its asset management activities rated against best practices. The resulting report established the ground work for subsequent AM. Facilitated knowledge transfer workshops, interviewed staff about policies and

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practices. After the assessment a gap analysis was conducted on the various AM practices and an AM plan was created for the implementation of the district-wide AM program. A pilot program was completed to demonstrate the AM tools.

- *Prioritization & Validation of Facility Issues, NEORS, OH.* After the AM Assessment project, applied asset management best practices to validate and prioritize 600 issues generated by two wastewater plant facility plans. During four workshops the 600 issues were validated for consideration and then prioritized and schedule for repair as necessary. The AM principles and tools reduce this overwhelming task to a few hours. The exercise further demonstrated the benefit of the AM program.
- *2004 Update to the International Infrastructure Management Manual.* Authored the North America section of international practices based on knowledge and experience with asset management in the United States, for GHD, the large Australian engineering firm. This section of the IIMM comments upon the state of the asset management practice in various regions of the world.
- *Budget Rationalization, Department of Transportation, Portland, OR.* Assisted with \$8 million dollar operating budget reduction by identifying low impact cuts on program and services. Using asset management concepts, community consultation, decision tools, and focus groups, focused on specific areas that the public and the staff identified as least negative impact. Applying AM principles allowed the city to use a scalpel instead of a machete to make cuts and to preserve programs until funding became available. The City used the tool to make a second round of cuts the following year.
- *EPA Advancing Asset Management Course.* Instructor for this popular two-day traveling workshop introducing asset management principles to the United States wastewater and water utilities.
- *Asset Management Pilot Project, Allentown, PA.* This city department sought to make better decisions about water system assets in a financially constrained environment. Working facilitated workshops the water department staff chose asset management protocols and tested the information system for its ability to provide the management information necessary to improve decisions about assets. While GIS information about linear assets was very good, the information was not available to staff using the CMMS.
- *CMMS Software Selection, LASA, PA.* Facilitated staff of this 30 MGD system through requirements phase and selection process for CMMS and asset management software. GBA Master Series was chosen for the linear assets.
- *Transportation Asset Management, Polk County, FL.* Managed asset management implementation for this rural county. Tasks included organizational consulting, position descriptions and re-organization study, process design, software selection, building capacity of County staff trained staff on pavement management, field inventory of all transportation assets, including culverts, signs, guardrails, etc.
- *Implemented Water System Asset Management Software, Lewistown, PA.* Installed network software for work order system and asset management, trained users, troubleshoot implementation, converted legacy data for a rural water district.

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- *Criticality Exercise for Incinerator Operation, DELCORA, PA.* Facilitated staff through criticality definition, problem identification, and action planning using asset management techniques for incinerator operation. Result was a maintenance plan, inventory procedure for hard to find parts, and improved operations procedures to reduce future failures.

Management Consulting

- *Operations Department Organizational Development Project, Hampton Roads Sanitation District, VA, Principal Consultant.* Evaluating the recently combined operations department for opportunities to improve effectiveness and efficiencies. Philip facilitated two teams through a series of workshops, interviews, and homework to make findings on the existing conditions and make recommendations for future investigation. Organizational structure, communications, and overlaps were evaluated.
- *Strategic Operating Plan, DELCORA, PA.* Continuing the strategic planning effort of 2003, this 100 MGD wastewater organization set new goals and vision for the next five years. This plan incorporates a more robust implementation plan and performance measurement. I organized the effort and facilitated the working sessions, designed and assigned preparatory work.
- *Rate Study, City of Camden, Public Works, NJ.* Performed operational evaluation for costs supporting information. This agency has both water and sewer system and operates within the public works agency. Benchmarked costs and applied best practices review of operation.
- *Rate Study, Pittsburgh Water & Sewer, PA.* Performed operational evaluation for costs supporting information. Conducted interviews with senior staff, and applied best practices review of operation.
- *SAP Computerized Maintenance Management System, Erie County, NY.* Project Manager for evaluation of SAP Plant Maintenance for use in Wastewater Division, Public Works Department, Parks Maintenance Department, Fleet Department.
- *Leadership Boot Camp Facilitator, Academy Leadership, PA.* Facilitated a three-day leadership boot camps for this leadership development firm over the past two years.
- *Strategic Plan Assessment, DELCORA, PA.* In 2008, facilitated an assessment of the 2003 Strategic Plan for results and progress. Established rating criteria and facilitated senior staff through assessment of the Balanced Scorecard approach.
- *Performance Improvement Project, Union County, NC.* Conducted assessment, interviewed senior staff, benchmark, and recommend performance improvements in the water and wastewater operations for rapidly growing county adjacent to Charlotte.
- *Strategic Plan Implementation, Delaware County Regional Water Quality Authority, PA.* This project launched the components of the Strategic Plan by converting its initiatives into "business tactics". This project consisted of planning, training, and installing management tools that enabled DELCORA staff to succeed with the Strategic Initiatives,

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thereby helping the Authority evolve into the business the Strategic Plan envisioned. The infrastructure knowledge initiative was implemented by developing an improved understanding of the infrastructure, its condition, cost to operate, and performance. This improved information management system will assist DELCORA operate more efficiently by making better informed business decisions. Developed metrics for organizational progress in implemented strategic plan goals. Facilitated three focus groups through metrics choices and testing the ability to collect information. Using Balanced Scorecard approach we developed performance measures and action plans.

- *Strategic Plan Exercise, Confidential client.* Knowledge worker for three-day exercise with Fortune 100 firm, including CEO, to map 20 year direction. Used the DesignShop concept from MGTaylor.
- *Data Gap Analysis for GIS and Modeling Software, Town of Colonie, NY.* Evaluated existing GIS geo-database and proposed water system modeling application for data conformity and data gaps.
- *1999 Pavement Management Project, Citrus Heights, CA.* Prepared Pavement Management study, installed software, populated database, trained staff, and prepared project report. (Used Cartegraph and MTC PMS software)
- *1998 Pavement Management Update, Daly City, CA.* Updated five-year Pavement Management Plan for city of 100,000, integrated it with GIS, trained staff, and prepared project report.
- *1999 Pavement Management Project, Millbrae, CA.* Project manager for street rehabilitation project. Performed condition assessment and rating of candidate streets, recommended rehabilitation strategies, prepared estimates and contract documents.
- *City-wide GIS Implementation, Daly City, CA.* Managed in-house GIS project, including mapping, field verification, new ortho-photo and integration with legacy database for maintenance and pavement management. Also managed GIS sub-consultants.
- *Contract Public Works Director/City Engineer, Suisun City, CA.* Completed pavement management update, successfully applied for transportation grants in excess of \$2.5 million dollars. Oversaw street and storm water operations, engineering and development.
- *Acting Public Works Director, Daly City, CA.* Managed department for 16 months including streets, storm water system, engineering and GIS. Managed \$25 million capital program including flood control projects, FEMA response and recovery, collection system rehabilitation projects, water system replacement projects, and roadway projects.

CERTIFICATES, LICENSES, AND MEMBERSHIPS

- Licensed Civil Engineer, California
- Green Belt, Six Sigma, Drexel University
- Risk Assessment Methodology for Water (RAM-W), AWWA-Sandia Labs

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- Water Environment Federation:
 - Member, *Utility Management Committee* for this national wastewater organization
 - Pennsylvania Water Environment Association:
 - Chairman, *Utility Management Committee* for this state-wide wastewater organization
 - Transportation Research Board:
 - Member *Management and Productivity Committee* for this member organization of the National Academies of Science
 - American Society of Civil Engineers

PAPERS AND PRESENTATIONS

Public Works, Using Systems Analysis to Enhance CMMS Software Implementation

Contributor – *Handbook on Wastewater Management for Local Representatives*, New York State Department Environmental Conservation

Contributor – International Infrastructure Management Manual, 2005 revision

Reviewer – *MOP 7 Wastewater Collection Systems Management*, Sixth Edition, Water Environment Federation

Reviewer – *Implementing Asset Management*, A Practical Guide, Water Environment Federation

Reviewer – *Wastewater Collection System Management (MOP 7)*, Sixth Edition, Water Environment Federation

Contributor - *Fundamentals of Utility Management Training Manual*, Water Environment Federation



FIELDS OF SPECIAL COMPETENCE

- Business Process Modeling and Optimization
- Data Modeling
- Strategic Information Planning
- Database Design and Implementation
- Application Training
- Project Management
- Cross-Departmental Communications Facilitation
- Citizen Relationship Management

EXPERIENCE OVERVIEW

Fifteen years of experience in local government and utility consulting. Particular focus on software applications, including system design and integration, data modeling, project management, application design and development, database design, and application training.

ACADEMIC BACKGROUND

- Master of Science Degree, Geography, St. Cloud State University, 1995
- Bachelor of Science Degree, Biology, St. Cloud State University, 1994

EXPERIENCE HIGHLIGHTS

- *Business Process Redesign, City of Grand Rapids, MI, Lead Facilitator.* Lead Facilitator of a cross Divisional Lean A3 initiative to capture business process improvements. Key goals are to help Enterprise Services Divisions (streets, parking, water, and wastewater) make more effective use of technology assets and integrate them with improved business practices. This work is largely focused on Computerized Maintenance Management System (CMMS) integration with GIS and related processes. Key project deliverables include Lean A3 documentation, detailed cross functional workflows, public customer interface, and performance reporting.
- *Information Technology Reformation, City of Grand Rapids, MI, Program Manager.* Serve as lead consultant to the City's Information Technology Director in the reformation of the City's IT Department. Key elements include developing accountability and performance measures, business process reengineering, leveraging technology for citizen outreach and transparency, and managing communications between IT, City

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Departments, the Elected Body, and Citizens of Grand Rapids. Manages full-time, on-site consultants in GIS, CMMS, SharePoint, Enterprise Content Management, Automated Vehicle Location, and Systems and Database Administration.

- *Information Technology Strategic Planning, City of Grand Rapids, MI, Subject Matter Expert.* Provided key input into the City's Information Technology Strategic Plan (ITSP). The ITSP development placed emphasis on the organization's ability to implement the plan, and cultural constraints that may be obstacles to its implementation. The plan included recommendations to overcome identified cultural constraints and risks.
- *CRM Implementation Planning, City of Long Beach, CA, Project Manager.* Primarily responsible for management of the EMA project team in the development of an implementation plan and recommendations for a citywide 311 CRM system. The recommendations encompassed call center facilities, technology, and estimated costs for initial implementation and ongoing support for the CRM. Performed detailed analysis of City's needs for citizen relationship management and provided recommendations for targeted initiatives to address issues and needs related to citizen interactions.
- *ERP Hosting Analysis and Recommendation, Greater Cincinnati Water Works, OH, Lead Analyst.* Responsible for the analysis and recommendation of a deployment model for the organization's Enterprise Resource Planning (ERP) system. GCWW's need was to better understand the dynamics of deploying ERP in the cloud versus a traditional onsite implementation. Performed a thorough analysis of GCWW needs, goals, and constraints, and then investigated current technology capabilities and vendor qualifications. The key deliverable was a recommendation to GCWW's steering team on their implementation strategy for ERP.
- *311 Design and Implementation, City of Yonkers, NY, Lead Business Analyst.* Provided guidance to the City in the development of their 311 Customer Relationship Management (CRM) System. Advised the City on the migration of business processes from their legacy call center application to Lagan Frontlink CRM. Developed 32 Frontlink processes that originated from the City's existing call center application.
- *311 System Design and Implementation, City of Hartford, CT, Lead Business Analyst.* Captured business requirements for implementation of Lagan's Frontlink Customer Relationship Management (CRM) software. Configured business requirements into the CRM used in the City's 311 Call Center. Provided ongoing support to Call Center management as well as the City's Information Services department.
- *311 Business Analysis, Design, and Implementation, City of Corpus Christi, TX, Technical Lead.* Facilitated 15 workshops with key City departments including Planning and Development, Animal Control, Airport, Utilities, Street Maintenance, Solid Waste Collection, Parks and Recreation for use in 311. The outcomes were used to design and configure the City's 311 system. Wrote use cases for 311 call center.
- *Organizational Coordination and Communications Improvement, Hampton Roads Sanitation District, VA, Lead Facilitator.* Lead Facilitator of an initiative to identify communications gaps and overlaps between various functional areas within the District.

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Provided HRSD with documentation of key issues related to miscommunications, impacts on the organization, and recommendations for mitigating confusion and inefficiencies caused by ineffective communications and unclear assignment of responsibilities.

- *Emergency Management Geodatabase Design, City and County of Honolulu, HI, Project Manager.* Responsible for creating ESRI geodatabase designs for the City and County's Emergency Management geodatabase. Worked with City and County staff to perform a data assessment, geodatabase design requirements, and eventual implementation of the geodatabase. Responsible for managing overall project scope, schedule, and budget.
- *Homeland Security GIS Practices Implementation, City and County of Honolulu, HI, Project Manager.* Managed project to analyze and redesign the City and County's processes for creation, maintenance, and distribution of address data. The project also developed a dynamic transportation model to support emergency evacuation procedures, and developing agreements between the City and County and external agencies to facilitate data sharing during emergency events.
- *Utility GIS Implementation, Richmond Department of Public Utilities, VA, Project Manager.* Developed GIS database design for the Department's water, wastewater, gas, and street light utilities. Worked with Department staff to develop standard operating procedures for creating and maintaining GIS data. Captured application functional requirements and led development team in design and implementation of the applications.
- *GIS and Computerized Maintenance Management System Integration, City of Wilmington Water Department, NC, Technical Advisor.* Primarily responsible for advising Water Department staff in the integration of ESRI ArcGIS with Datastream Computerized Maintenance Management System (CMMS).
- *GIS and Computerized Maintenance Management System Integration, City of Akron Public Utilities Bureau, OH, Track Lead.* Primarily responsible for integration of ESRI ArcGIS with Datastream Computerized Maintenance Management System (CMMS). Designed and implemented Geodatabase design for management of water and sewer assets. Developed integration procedures between GIS and the CWMS.
- *GIS Implementation, Charlotte Mecklenburg Utilities (CMU), NC, Business Analyst.* Provided support to CMU staff in the development of a Geodatabase to support water and wastewater assets. Worked with CMU staff to identify existing work flows, and provided assistance in the development of improved work practices for management of water and wastewater data.
- *Geodatabase Design and Implementation, San Diego County Water Authority, CA, Project Manager.* Performed a thorough analysis of the Authority's existing GIS datasets, technologies, and business practices. Managed a team of EMA GIS staff in the migration from the Authority's existing GIS environment to a more robust, integrated system. Primarily responsible for managing overall project scope, schedule, and budget.
- *Database Design, Ocean County Utilities Authority (OCUA), NJ, Senior Consultant.* Responsible for creating the ESRI geodatabase design using UML CASE tools. Provided

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support and expertise for integration of geodatabase with other enterprise system data, custom application development with Visual Basic and ArcObjects, and ensuring geodatabase supports functionality required by proposed ArcIMS applications.

- *Database Implementation, City of Tucson Water Department, AZ, Technical Lead.* Provided direction for the implementation of ArcGIS 8.x geodatabase and applications, including planning, documentation, scheduling, and resource management. Assisted in development of methodology for integration of GIS with Maintenance Management System, Customer Billing, and other external systems.
- *Database Design and Data Migration, City of Honolulu, Board of Water Supply (BWS), HI, Senior Consultant.* Educated BWS staff in the procedures for creating a geodatabase schema using UML CASE tools. Responsible for leading the BWS team in the development of the final geodatabase design, final data migration, and creation of additional custom maintenance tools using Visual Basic and ArcObjects.
- *Data Conversion and Data Migration, JEA, FL, Senior Consultant.* Developed data migration routines for conversion of data from shapefiles to an ArcGIS 8.x geodatabase. Assisted in the development of QA/QC procedures to ensure data quality as it was migrated to the geodatabase. Developed procedures for correcting data errors exposed by the QA/QC process.
- *Database Modeling, City of Allentown, Water Resources Department, PA, Senior Consultant.* Developed geodatabase models for the City's water, wastewater, and storm distribution systems. Assisted in the integration of geodatabase with enterprise-wide data warehouse. Responsible for assisting the City in the migration of existing data into the geodatabase and creating custom maintenance tools with Visual Basic and ArcObjects.
- *Software Implementation, Miner & Miner, Inc., Fort Collins, CO, Project Manager.* Managed large- and small-scale implementations of ArcFM software. Created logical and physical geo-object models using UML CASE tools. Generated ArcInfo 8.x geodatabases for ArcFM 8.x. Used ArcCatalog to configure connectivity, symbolization, annotation, and other functional aspects of the ArcFM environment, trained end users in the functionality of ArcFM in the ArcMap environment, implemented ArcFM 7.2 for large- and small-scale projects, and designed and administered relational database management systems including Oracle and SQL server for use with ArcFM products.
- *Programming, Washington County, Stillwater, MN, GIS Programmer/Analyst.* Converted Legacy AML programs into a modern, integrated Windows-based application utilizing Visual Basic, and designed and implemented a database for the Washington County Surveyor's GIS parcel database.

-
- *GIS Implementation, Northern States Power Company, Minneapolis, MN, Senior Systems Analyst.* Managed a group of three analysts comprising the GIS Applications Team, worked with management and users on the ongoing maintenance and support of all GIS applications, and presented GIS topics and status to senior management to increase visibility of NSP's GIS applications.

CERTIFICATES, LICENSES, AND MEMBERSHIPS

Project Management Professional

TECHNOLOGY EXPERIENCE

Software

- Lagan Frontlink
- Infor EAM (Datastream)
- ESRI ArcGIS
- Visio Process Modeling

Databases

- Oracle
- MS SQL Server



FIELDS OF SPECIAL COMPETENCE

- Database Design and Management
- Network Management
- Software Installation
- Application Design and Development
- User Support and Training
- Project Coordination
- Geographic Information Systems (GIS) Applications
- GIS/Work Management Systems Integration
- Internet/Web-based GIS Systems

EXPERIENCE OVERVIEW

Seven years of experience in utility GIS database design, maintenance, and analysis. Experience also includes software installation, user support, application design & development, quality control/quality assurance (QA/QC), and project coordination.

ACADEMIC BACKGROUND

- Bachelor of Science Degree, Geography and Planning Major, Grand Valley State University

EXPERIENCE HIGHLIGHTS

- *Support Services, City of Grand Rapids, MI, Developer and Trainer.* Providing support services to the City's IT Department in several areas including GIS software installations, utility database maintenance/conversion, map production, analysis and reporting, and user support and training. Also providing database maintenance, installation, testing and configuration, and user support and training for the Cityworks CMMS.
- *Sewer Survey Assessment, City of Grand Rapids, MI, IT Coordinator.* Serves as IT Coordinator working with the Hydraulic Engineer and NASSCO-certified pipeline inspectors as part of the Sewer Assessment project. Assists in determining inspection sites and updates GIS database features and attributes based on the assessment findings. Provides GIS updated information for quarterly reports to City Management.

-
- *Field Technology Support, City of Grand Rapids, MI, IT Coordinator.* Serves as IT Coordinator working with the Sewer Maintenance Division to provide solution-based technology in the field. Sewer maintenance utilizes 12 laptops, which include electronic GIS maps and live Cityworks applications. Updates to GIS are reported back daily, based on field findings. Recently deployed Cityworks Server MMS to office staff and field crews.
 - *Grand Valley Metropolitan Council/REGIS, Grand Rapids, MI, GIS Technician.* Coordinated specific projects and managed GIS interns. Ensured a high level of user support and communication with staff including conducting on-site training and one-on-one user support as needed. Also created maps, including zoning, planned land use, municipal utility, and voting precincts for a variety of municipal departments. Entered updates of all data layers for a variety of end users in a versioned enterprise geodatabase environment.
 - *Grand Valley Metropolitan Council/REGIS, Grand Rapids, MI, Administrative Aid/GIS Intern.* Worked closely with REGIS and GVMC Transportation staff to enter sidewalk data for the non-motorized Transportation Plan. Performed administrative duties including meeting minutes, Freedom of Information Act requests, Direct Access Agreements, and user account administration.
 - *Plainfield Charter Township, Belmont, MI, Planning Department Intern.* Utilized geographic information systems and created maps to assist planners in Planning Commission meetings and for site review processes. Assisted Fire, Clerk, Assessing, and Utility Billing department staff with a range of GIS projects. Coordinated data updates for REGIS with the Planning and Water departments.

CERTIFICATES, LICENSES, AND MEMBERSHIPS

- NASSCO (National Association of Sewer Service Companies) Certification

TECHNOLOGY EXPERIENCE

Software

- ESRI ArcGIS Desktop
- ESRI ArcGIS Server
- ESRI Mobile Solutions including ArcPad and ArcReader
- Cityworks Desktop CMMS
- Cityworks Server MMS
- Geocortex Essentials
- Oracle Application Express
- Oracle SQL Developer
- Familiar with Citrix Environments

Languages

- SQL

Databases

- Oracle
- MS Access

IRVINE RANCH WATER DISTRICT

Expenditure Authorization

Project Name: ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL

Project No: 11619 EA No: 1

ID Split: Miscellaneous

Improvement District (ID) Allocations

Project Manager: MOSSBARGER, ANTHONY

Project Engineer: MOSSBARGER, ANTHONY

Request Date: September 20, 2011

ID No. Allocation % Source of Funds

101	100.0	REPLACEMENT FUND**
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$0
This Request:	\$125,000
Total EA Requests:	\$125,000
Previously Approved Budget:	\$0
Budget Adjustment Requested this EA:	\$125,000
Updated Budget:	\$125,000
Budget Remaining After This EA	\$0

Comments:

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING - PLANNING IRWD	25,000	0	25,000	25,000	0	25,000	10/11	6/12
ENGINEERING DESIGN - OUTSIDE	100,000	0	100,000	100,000	0	100,000	10/11	6/12
Contingency - % Subtotal	\$0	\$0	\$0	\$0	\$0	\$0		
Subtotal (Direct Costs)	\$125,000	\$0	\$125,000	\$125,000	\$0	\$125,000		
Estimated G/A - 180.00% of direct labor*	\$45,000	\$0	\$45,000	\$45,000	\$0	\$45,000		
Total	\$170,000	\$0	\$170,000	\$170,000	\$0	\$170,000		
Direct Labor	\$25,000	\$0	\$25,000	\$25,000	\$0	\$25,000		

*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: _____

9-20-11

Department Director: _____

9-20-11

Finance: _____

Board/General Manager: _____

** IRWD hereby declares that it reasonably expects those expenditures marked with two asterisks to be reimbursed with proceeds of future debt to be incurred by IRWD in a maximum principal amount of \$174,000. 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.

IRVINE RANCH WATER DISTRICT

Expenditure Authorization

Project Name: ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL
 Project No: 21619 EA No: 1

ID Split: Miscellaneous

Project Manager: MOSSBARGER, ANTHONY
 Project Engineer: MOSSBARGER, ANTHONY
 Request Date: September 20, 2011

Improvement District (ID) Allocations

ID No.	Allocation %	Source of Funds
210	100.0	REPLACEMENT FUND**
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$0
This Request:	\$125,000
Total EA Requests:	\$125,000
Previously Approved Budget:	\$0
Budget Adjustment Requested this EA:	\$125,000
Updated Budget:	\$125,000
Budget Remaining After This EA	\$0

Comments:

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING - PLANNING IRWD	25,000	0	25,000	25,000	0	25,000	10/11	6/12
ENGINEERING - PLANNING OUTSIDE	100,000	0	100,000	100,000	0	100,000	10/11	6/12
Contingency - % Subtotal	\$0	\$0	\$0	\$0	\$0	\$0		
Subtotal (Direct Costs)	\$125,000	\$0	\$125,000	\$125,000	\$0	\$125,000		
Estimated G/A - 180.00% of direct labor*	\$45,000	\$0	\$45,000	\$45,000	\$0	\$45,000		
Total	\$170,000	\$0	\$170,000	\$170,000	\$0	\$170,000		
Direct Labor	\$25,000	\$0	\$25,000	\$25,000	\$0	\$25,000		

*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: _____

9-20-11

Department Director: _____

9-20-11

Finance: _____

Board/General Manager: _____

** IRWD hereby declares that it reasonably expects those expenditures marked with two asterisks to be reimbursed with proceeds of future debt to be incurred by IRWD in a maximum principal amount of \$174,000. 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.

September 26, 2011
Prepared by: J. McGehee
Submitted by: K. Burton
Approved by: Paul Cook

ACTION CALENDAR

ORANGE PARK ACRES DOMESTIC WATER PRESSURE REGULATING STATIONS AND FIRE FLOW IMPROVEMENTS CONSTRUCTION AWARD

SUMMARY:

The Orange Park Acres (OPA) Domestic Water Pressure Regulating Stations and Fire Flow Improvement Project will provide the final essential improvements before the existing OPA system can be raised to Zone 5 pressure. Staff recommends the Board:

- Approve a budget increase in the amount \$312,000, from \$886,600 to \$1,198,600 for the OPA Domestic Water Fire Flow Improvements Project;
- Approve an Expenditure Authorization in the amount of \$852,700 for the OPA Domestic Water Fire Flow Improvements Project;
- Approve an Expenditure Authorization in the amount of \$599,600 for the OPA Domestic Water Pressure Regulating Stations Project; and
- Authorize the General Manager to execute a construction contract with Paulus Engineering, Inc. in the amount of \$1,143,821.

BACKGROUND:

The project is located in the OPA Service Area within the boundaries of the City of Orange and unincorporated areas of the County of Orange. The scope of work for the domestic water pressure regulating stations consists of the construction of three new pressure regulating stations including all concrete, piping, telemetry, SCE coordination, paving, traffic control, and appurtenances. Two of the three stations will require communication and power. The fire flow improvements portion of the project consists of the construction of approximately 3,500 linear feet of PVC pipeline, pavement removal and replacement, traffic control, and appurtenances. A Location Map is included as Exhibit "A".

Construction Award:

The project was advertised to eight contractors on August 30, 2011. On September 20, 2011, the bid opening was held with four of the eight contractors submitting bids: Paulus Engineering, Inc., GCI, L&S Construction, Inc., and E.J. Meyer Company. Bebek Company, CCL Contracting, Inc., Doty Brothers Construction Co., and Kennedy Pipeline Company did not submit a bid. The apparent low bidder was Paulus Engineering, Inc. with a bid of \$1,143,821. In accordance with the Instructions To Bidders in the contract documents, which provide that a bidder's unit prices shall be deemed controlling in the event of an error in extension or addition, staff corrected Paulus' listed total bid amount of \$1,147,251 as the sum of the unit prices and total bid amount were not in agreement. The engineer's estimate was \$1,214,802, which factored in various work conditions (narrow street sections and coordination with residents). The Bid Summary is attached as Exhibit "B". Paulus Engineering Inc. has successfully completed several projects in

Action Calendar: Orange Park Acres Domestic Water Pressure Regulating Stations and Fire Flow Improvements Construction Award

September 26, 2011

Page 2

the OPA area, including narrow driveway work on Old Rancho Santiago Alley and Adams Way, which consisted of waterline improvements, paving, and customer coordination.

FISCAL IMPACTS:

Projects 11409 (1287) and 11410 (1297) are included in the FY 2011-12 Capital Budget. A Budget Increase and Expenditure Authorizations to fund the construction, engineering support, and staff time are requested 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
11409 (1287)	\$1,132,600	\$0	\$1,132,600	\$225,700	\$ 599,600	\$ 825,300
11410 (1297)	\$ 886,600	\$312,000	\$1,198,600	\$292,000	\$ 852,700	\$1,144,700
Total	\$2,019,200	\$312,000	\$2,331,200	\$517,700	\$1,452,300	\$1,970,000

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

RECOMMENDATION:

THAT THE BOARD APPROVE A BUDGET INCREASE OF \$312,000 FROM \$886,000 TO \$1,198,600 FOR THE ORANGE PARK ACRES DOMESTIC WATER FIRE FLOW IMPROVEMENTS, PROJECT 11410 (1297); APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$852,700 FOR THE ORANGE PARK ACRES DOMESTIC WATER FIRE FLOW IMPROVEMENTS, PROJECT 11410 (1297); APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$599,600 FOR THE ORANGE PARK ACRES DOMESTIC WATER PRESSURE REGULATING STATIONS, PROJECT 11409 (1287); AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH PAULUS ENGINEERING, INC. IN THE AMOUNT OF \$1,143,821 FOR THE ORANGE PARK ACRES DOMESTIC WATER PRESSURE REGULATING STATIONS AND FIRE FLOW IMPROVEMENTS, PROJECTS 11409 (1287) AND 11410 (1297).

LIST OF EXHIBITS:

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

Exhibit "B"

Entered By: R. Shum

Irvine Ranch Water District Bid Summary For
Orange Park Acres Domestic Water Pressure Regulating Stations and
Fire Flow Improvements
Project Number 11409 and 11410

Bid Opening: September 20, 2011, 2:00 p.m.

Item No.	Description	Qty	Unit	Engineer's Estimate			1 Paulus Engineering Inc. Anaheim, CA			2 L&S Construction Inc Orange, CA			3 E.J. Meyer Highland, CA			4 GCI Construction Inc Costa Mesa, CA		
				Total		Unit Price	Total		Unit Price	Total		Unit Price	Total		Unit Price	Total		Unit Price
				Amount	Price		Amount	Price		Amount	Price		Amount	Price				
Bid Schedule A - OPA Domestic Water Pressure Regulating Stations																		
1	Mobilization, demobilization & misc. work		1	LS	\$23,531.00	\$23,531.00	\$23,531.00	\$23,531.00	\$18,000.00	\$18,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$32,000.00	\$32,000.00	\$32,000.00	
2	Traffic Control		1	LS	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$13,000.00	\$13,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$500.00	\$500.00	\$500.00	
3	PRV Stations		3	EA	\$35,000.00	\$105,000.00	\$35,000.00	\$75,000.00	\$90,000.00	\$90,000.00	\$80,000.00	\$80,000.00	\$80,000.00	\$80,000.00	\$186,000.00	\$186,000.00	\$186,000.00	
4	2" PRV		1	EA	\$5,000.00	\$5,000.00	\$2,019.00	\$2,019.00	\$2,625.00	\$2,625.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,400.00	\$2,400.00	\$2,400.00	
5	3" PRV		2	EA	\$7,500.00	\$15,000.00	\$4,916.00	\$4,916.00	\$3,200.00	\$3,200.00	\$4,300.00	\$4,300.00	\$4,300.00	\$4,300.00	\$5,200.00	\$5,200.00	\$5,200.00	
6	6" PRV		1	EA	\$11,000.00	\$11,000.00	\$4,300.00	\$4,300.00	\$5,200.00	\$5,200.00	\$4,400.00	\$4,400.00	\$4,400.00	\$4,400.00	\$5,000.00	\$5,000.00	\$5,000.00	
7	8" PRV		2	EA	\$14,000.00	\$28,000.00	\$6,800.00	\$6,800.00	\$7,800.00	\$7,800.00	\$7,100.00	\$7,100.00	\$7,100.00	\$7,100.00	\$7,000.00	\$7,000.00	\$7,000.00	
8	2" Type "K" Rigid Copper pipe		17	LF	\$30.00	\$510.00	\$61.00	\$1,037.00	\$55.00	\$935.00	\$41.00	\$41.00	\$41.00	\$41.00	\$170.00	\$170.00	\$2,890.00	
9	4" DI pipe AWWA C-115, CL 150 w/ fittings		62	LF	\$80.00	\$4,960.00	\$82.00	\$5,084.00	\$70.00	\$4,340.00	\$67.00	\$67.00	\$67.00	\$67.00	\$2,000.00	\$2,000.00	\$10,000.00	
10	6" DI pipe AWWA C-115, CL 150 w/ fittings		116	LF	\$105.00	\$12,180.00	\$90.00	\$10,440.00	\$65.00	\$7,545.00	\$72.00	\$72.00	\$72.00	\$72.00	\$115.00	\$115.00	\$13,340.00	
11	8" DI pipe AWWA C-115, CL 150 w/ fittings		4	EA	\$400.00	\$1,600.00	\$390.00	\$1,560.00	\$750.00	\$3,000.00	\$430.00	\$430.00	\$430.00	\$430.00	\$400.00	\$400.00	\$1,600.00	
12	2" ball corp stop and nut		4	EA	\$1,500.00	\$6,000.00	\$1,230.00	\$4,920.00	\$1,130.00	\$4,520.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,300.00	\$1,300.00	\$5,200.00	
13	4" Resilient Wedge Gate Valve & appurt.		14	EA	\$1,500.00	\$21,000.00	\$1,805.00	\$25,270.00	\$2,100.00	\$29,400.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$2,600.00	\$2,600.00	\$15,600.00	
14	6" BFRV CL 150 & appurt.		10	EA	\$3,500.00	\$35,000.00	\$2,280.00	\$22,800.00	\$2,100.00	\$21,000.00	\$2,010.00	\$2,010.00	\$2,010.00	\$2,010.00	\$2,600.00	\$2,600.00	\$26,000.00	
15	8" BFRV CL 150 & appurt.		5	EA	\$500.00	\$2,500.00	\$520.00	\$2,600.00	\$340.00	\$1,700.00	\$350.00	\$350.00	\$350.00	\$350.00	\$500.00	\$500.00	\$2,500.00	
16	4" DI fittings & appurt.		13	EA	\$70.00	\$910.00	\$91.00	\$1,183.00	\$70.00	\$910.00	\$68.25	\$887.25	\$340.00	\$340.00	\$4,420.00	\$4,420.00	\$7,800.00	
17	6" DI fittings & appurt.		37	EA	\$50.00	\$1,850.00	\$63.00	\$2,331.00	\$53.00	\$1,961.00	\$70.00	\$70.00	\$70.00	\$70.00	\$10,730.00	\$10,730.00	\$25,900.00	
18	8" DI fittings & appurt.		2	EA	\$60.00	\$1,200.00	\$74.00	\$1,488.00	\$110.00	\$2,200.00	\$80.00	\$80.00	\$80.00	\$80.00	\$1,600.00	\$1,600.00	\$2,000.00	
19	6"x2" FIPIT companion flange w/ 2" insulation ball corp and nut		43	LF	\$60.00	\$2,580.00	\$198.00	\$8,514.00	\$160.00	\$6,880.00	\$370.00	\$370.00	\$370.00	\$370.00	\$15,910.00	\$15,910.00	\$21,500.00	
20	12" Sch. 80 PVC air vent & appurt.		6	EA	\$2,000.00	\$12,000.00	\$2,450.00	\$14,700.00	\$2,550.00	\$15,300.00	\$4,500.00	\$4,500.00	\$4,500.00	\$4,500.00	\$2,500.00	\$2,500.00	\$15,000.00	
21	1" air release and vacuum valve		2	EA	\$5,000.00	\$10,000.00	\$25,830.00	\$51,660.00	\$36,600.00	\$72,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$32,000.00	\$32,000.00	\$64,000.00	
22	Telemetry cabinet & equipment w/ wiring & appurt.		2	EA	\$10,000.00	\$20,000.00	\$2,850.00	\$5,700.00	\$4,000.00	\$8,000.00	\$3,300.00	\$3,300.00	\$3,300.00	\$3,300.00	\$4,600.00	\$4,600.00	\$9,200.00	
23	Electrical service & metering cabinet & appurt.		1	EA	\$2,000.00	\$2,000.00	\$900.00	\$900.00	\$750.00	\$750.00	\$430.00	\$430.00	\$430.00	\$430.00	\$1,900.00	\$1,900.00	\$3,300.00	
24	Install removable guard post		66	LF	\$30.00	\$1,980.00	\$37.00	\$2,442.00	\$40.00	\$2,640.00	\$13.00	\$13.00	\$13.00	\$13.00	\$50.00	\$50.00	\$3,300.00	
25	1" Type "K" Rigid copper pipe		12	EA	\$2,000.00	\$24,000.00	\$1,458.00	\$17,496.00	\$475.00	\$5,700.00	\$380.00	\$380.00	\$380.00	\$380.00	\$260.00	\$260.00	\$3,120.00	
26	1" service saddle		2	EA	\$500.00	\$1,000.00	\$131.00	\$262.00	\$170.00	\$340.00	\$115.00	\$115.00	\$115.00	\$115.00	\$200.00	\$200.00	\$400.00	
27	2" bass union, FIPIT x FIPIT		4	EA	\$800.00	\$3,200.00	\$88.00	\$352.00	\$185.00	\$740.00	\$74.00	\$74.00	\$74.00	\$74.00	\$460.00	\$460.00	\$1,600.00	
28	4" Victaulic coupling heavy duty style 77 w/ SS hardware		2	EA	\$1,500.00	\$3,000.00	\$162.00	\$324.00	\$230.00	\$460.00	\$230.00	\$230.00	\$230.00	\$230.00	\$450.00	\$450.00	\$900.00	
29	6" Victaulic coupling heavy duty style 77 w/ SS hardware		4	EA	\$2,200.00	\$8,800.00	\$173.00	\$692.00	\$305.00	\$1,220.00	\$300.00	\$300.00	\$300.00	\$300.00	\$600.00	\$600.00	\$2,400.00	
30	8" Victaulic coupling heavy duty style 77 w/ SS hardware		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		
31	Recond drawing preparation		1	LS	\$5,000.00	\$5,000.00	\$280.00	\$280.00	\$3,200.00	\$3,200.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$6,400.00	\$6,400.00	\$6,400.00	
32	Safety measures		1	LS	\$10,000.00	\$10,000.00	\$1,000.00	\$1,000.00	\$3,600.00	\$3,600.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$4,200.00	\$4,200.00	\$4,200.00	
33	Erosion control		1	LS	\$15,000.00	\$15,000.00	\$1,000.00	\$1,000.00	\$3,000.00	\$3,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$1,000.00	\$1,000.00	\$1,000.00	
34	Dewatering		1	LS	\$425,721.00	\$425,721.00	\$480,705.00	\$480,705.00	\$452,770.00	\$452,770.00	\$527,569.00	\$527,569.00	\$527,569.00	\$527,569.00	\$503,430.00	\$503,430.00	\$503,430.00	
Bid Schedule B - OPA Fire Flow Improvements																		
1	Mobilization, demobilization & misc. work		1	LS	\$33,605.00	\$33,605.00	\$25,000.00	\$25,000.00	\$29,000.00	\$29,000.00	\$29,000.00	\$29,000.00	\$29,000.00	\$29,000.00	\$40,000.00	\$40,000.00	\$40,000.00	
2	Traffic Control		1	LS	\$15,000.00	\$15,000.00	\$2,800.00	\$2,800.00	\$16,000.00	\$16,000.00	\$16,000.00	\$16,000.00	\$16,000.00	\$16,000.00	\$10,000.00	\$10,000.00	\$10,000.00	
3	6" C-900 Class 200 PVC pipe		28	LF	\$125.00	\$3,500.00	\$107.00	\$2,996.00	\$60.00	\$1,680.00	\$50.00	\$50.00	\$50.00	\$50.00	\$280.00	\$280.00	\$7,840.00	
4	8" C-900 Class 200 PVC pipe		2,937	LF	\$95.00	\$279,915.00	\$85.00	\$249,645.00	\$55.00	\$161,535.00	\$95.00	\$95.00	\$95.00	\$95.00	\$105.00	\$105.00	\$308,385.00	
5	6" DI tee		1	EA	\$750.00	\$750.00	\$455.00	\$455.00	\$470.00	\$470.00	\$580.00	\$580.00	\$580.00	\$580.00	\$800.00	\$800.00	\$800.00	
6	8" DI tee		4	EA	\$1,000.00	\$4,000.00	\$649.00	\$2,596.00	\$680.00	\$2,720.00	\$660.00	\$660.00	\$660.00	\$660.00	\$1,050.00	\$1,050.00	\$4,200.00	
7	8"x6"x8" DI tee, flanged-end		3	EA	\$900.00	\$2,700.00	\$796.00	\$2,388.00	\$600.00	\$1,800.00	\$605.00	\$605.00	\$605.00	\$605.00	\$4,700.00	\$4,700.00	\$14,100.00	
8	10"x8"x10" DI tee		2	EA	\$1,600.00	\$3,200.00	\$906.00	\$1,812.00	\$1,100.00	\$2,200.00	\$1,050.00	\$1,050.00	\$1,050.00	\$1,050.00	\$1,500.00	\$1,500.00	\$3,000.00	
9	8"x6"x8" DI tee, push-on by flanged		1	EA	\$900.00	\$900.00	\$423.00	\$423.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$1,000.00	\$1,000.00	\$1,000.00	
10	8"x6" reducer, flanged end		1	EA	\$600.00	\$600.00	\$559.00	\$559.00	\$600.00	\$600.00	\$350.00	\$350.00	\$350.00	\$350.00	\$500.00	\$500.00	\$500.00	
11	6" BFRV C-304 Class 150		1	EA	\$2,500.00	\$2,500.00	\$1,805.00	\$1,805.00	\$1,900.00	\$1,900.00	\$1,900.00	\$1,900.00	\$1,900.00	\$1,900.00	\$2,500.00	\$2,500.00	\$2,500.00	

Item No.	Description	Engineer's Estimate			1 Paulus Engineering Inc. Anahelm, CA			2 L&S Construction Inc. Orange, Ca			3 E.J. Meyer Highland, CA			4 GCI Construction Inc Costa Mesa, CA		
		Qty	Unit	Total Amount	Unit Price	Amount	Unit Price	Total Amount	Unit Price	Amount	Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
12	8" BF valve C-504 Class 150	7	EA	\$3,000.00	\$21,000.00	\$2,040.00	\$14,280.00	\$2,100.00	\$14,700.00	\$2,100.00	\$14,700.00	\$2,700.00	\$18,900.00	\$2,700.00	\$18,900.00	
13	10" BF valve C-504 Class 150	4	EA	\$4,000.00	\$16,000.00	\$2,650.00	\$10,600.00	\$2,750.00	\$11,000.00	\$2,700.00	\$10,800.00	\$3,400.00	\$13,600.00	\$3,400.00	\$13,600.00	
14	6" RW Gate Valve, C-509 Class 100	3	EA	\$2,000.00	\$6,000.00	\$1,500.00	\$4,500.00	\$1,800.00	\$5,400.00	\$1,800.00	\$5,400.00	\$2,200.00	\$6,600.00	\$2,200.00	\$6,600.00	
15	8" RW Gate Valve, C-509 Class 100	5	EA	\$2,000.00	\$10,000.00	\$1,900.00	\$9,500.00	\$2,200.00	\$11,000.00	\$2,200.00	\$11,000.00	\$2,800.00	\$14,000.00	\$2,800.00	\$14,000.00	
16	6" DI flanged coupling	6	EA	\$900.00	\$5,400.00	\$617.00	\$3,702.00	\$525.00	\$3,150.00	\$525.00	\$3,150.00	\$350.00	\$2,100.00	\$350.00	\$2,100.00	
17	8" DI flanged coupling	8	EA	\$900.00	\$7,200.00	\$698.00	\$5,584.00	\$610.00	\$4,880.00	\$610.00	\$4,880.00	\$420.00	\$3,360.00	\$420.00	\$3,360.00	
18	10" DI flanged coupling	4	EA	\$1,200.00	\$4,800.00	\$2,483.00	\$9,932.00	\$1,700.00	\$6,800.00	\$1,700.00	\$6,800.00	\$3,320.00	\$12,080.00	\$3,320.00	\$12,080.00	
19	6" 90-degree DI bend, fig x push on	1	EA	\$750.00	\$750.00	\$442.00	\$442.00	\$250.00	\$250.00	\$250.00	\$250.00	\$300.00	\$300.00	\$300.00	\$300.00	
20	8" 90-degree DI bend, push on	2	EA	\$800.00	\$1,600.00	\$434.00	\$868.00	\$200.00	\$400.00	\$200.00	\$400.00	\$400.00	\$800.00	\$400.00	\$800.00	
21	10" 11-1/4 degree DI bend, fig-end by push on	1	EA	\$800.00	\$800.00	\$419.00	\$419.00	\$290.00	\$290.00	\$290.00	\$290.00	\$460.00	\$460.00	\$460.00	\$460.00	
22	6" 22-1/2 degree DI bend, fig-end	1	EA	\$800.00	\$800.00	\$328.00	\$328.00	\$180.00	\$180.00	\$180.00	\$180.00	\$230.00	\$230.00	\$230.00	\$230.00	
23	8" 22-1/2 degree DI bend, fig-end by push on	2	EA	\$800.00	\$1,600.00	\$384.00	\$768.00	\$300.00	\$600.00	\$300.00	\$600.00	\$400.00	\$800.00	\$400.00	\$800.00	
24	8" 45-degree DI bend, push on	4	EA	\$900.00	\$3,600.00	\$367.00	\$1,468.00	\$240.00	\$960.00	\$240.00	\$960.00	\$200.00	\$800.00	\$200.00	\$800.00	
25	Remove existing fire hydrant	7	EA	\$1,000.00	\$7,000.00	\$697.00	\$4,879.00	\$1,150.00	\$8,050.00	\$1,150.00	\$8,050.00	\$780.00	\$5,460.00	\$780.00	\$5,460.00	
26	Remove and dispose existing pipelines & appur.	1	LS	\$5,000.00	\$5,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	
27	6" DI adapter, flange by push on	3	EA	\$300.00	\$900.00	\$345.00	\$1,035.00	\$210.00	\$630.00	\$210.00	\$630.00	\$155.00	\$465.00	\$155.00	\$465.00	
28	8" DI adapter, flange by push on	8	EA	\$600.00	\$4,800.00	\$404.00	\$3,232.00	\$250.00	\$2,000.00	\$250.00	\$2,000.00	\$175.00	\$1,400.00	\$175.00	\$1,400.00	
29	8" blind flange	1	EA	\$300.00	\$300.00	\$392.00	\$392.00	\$360.00	\$360.00	\$360.00	\$360.00	\$230.00	\$230.00	\$230.00	\$230.00	
30	Temporary end of line flush out	1	EA	\$2,500.00	\$2,500.00	\$1,075.00	\$1,075.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$2,200.00	\$2,200.00	\$2,200.00	\$2,200.00	
31	1" Air Release and Vacuum valve	3	EA	\$1,000.00	\$3,000.00	\$2,747.00	\$8,241.00	\$1,250.00	\$3,750.00	\$1,250.00	\$3,750.00	\$1,500.00	\$4,500.00	\$1,500.00	\$4,500.00	
32	Remove existing air release and vacuum valve	1	EA	\$1,000.00	\$1,000.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$800.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	
33	18" x 6" reducer, fig x push	1	EA	\$1,200.00	\$1,200.00	\$357.00	\$357.00	\$205.00	\$205.00	\$205.00	\$205.00	\$465.00	\$465.00	\$465.00	\$465.00	
34	1" service and reconnect meter	12	EA	\$2,500.00	\$30,000.00	\$1,280.00	\$15,360.00	\$1,700.00	\$20,400.00	\$1,700.00	\$20,400.00	\$1,800.00	\$21,600.00	\$1,800.00	\$21,600.00	
35	1-1/2" service and reconnect meter	11	EA	\$2,000.00	\$22,000.00	\$1,530.00	\$16,830.00	\$2,300.00	\$25,300.00	\$2,300.00	\$25,300.00	\$3,500.00	\$38,500.00	\$3,500.00	\$38,500.00	
36	8" x 4" reducer, fig.	3	EA	\$1,000.00	\$3,000.00	\$466.00	\$1,398.00	\$240.00	\$720.00	\$240.00	\$720.00	\$230.00	\$690.00	\$230.00	\$690.00	
37	4" PVC pipe C-900 Class 200	134	LF	\$90.00	\$12,060.00	\$91.00	\$12,194.00	\$60.00	\$8,040.00	\$60.00	\$8,040.00	\$80.00	\$10,720.00	\$80.00	\$10,720.00	
38	Plug and abandon existing pipe	3	EA	\$1,000.00	\$3,000.00	\$400.00	\$1,200.00	\$900.00	\$2,700.00	\$900.00	\$2,700.00	\$1,420.00	\$4,260.00	\$1,420.00	\$4,260.00	
39	Install thrust block	12	EA	\$500.00	\$6,000.00	\$200.00	\$2,400.00	\$130.00	\$1,560.00	\$130.00	\$1,560.00	\$330.00	\$3,960.00	\$330.00	\$3,960.00	
40	Install fire hydrant	7	EA	\$3,000.00	\$21,000.00	\$6,168.00	\$43,176.00	\$5,100.00	\$35,700.00	\$5,100.00	\$35,700.00	\$4,800.00	\$33,600.00	\$4,800.00	\$33,600.00	
41	4" DI adaptor, fig x push on	1	EA	\$600.00	\$600.00	\$290.00	\$290.00	\$160.00	\$160.00	\$160.00	\$160.00	\$230.00	\$230.00	\$230.00	\$230.00	
42	8" 22-1/2 degree DI bend, push on	2	EA	\$900.00	\$1,800.00	\$343.00	\$686.00	\$300.00	\$600.00	\$300.00	\$600.00	\$180.00	\$360.00	\$180.00	\$360.00	
43	Install Water Sampling Station	1	EA	\$3,000.00	\$3,000.00	\$2,430.00	\$7,290.00	\$4,100.00	\$12,300.00	\$4,100.00	\$12,300.00	\$3,300.00	\$9,900.00	\$3,300.00	\$9,900.00	
44	Pavement removal and replacement for T-section only	9,944	SF	\$1.80	\$17,899.20	\$2.75	\$27,346.00	\$6.00	\$59,664.00	\$6.00	\$59,664.00	\$3.50	\$34,804.00	\$3.50	\$34,804.00	
45	Pavement removal and replacement for unfinished road only	5,799	SF	\$1.00	\$5,799.00	\$1.40	\$8,118.60	\$6.00	\$34,794.00	\$6.00	\$34,794.00	\$5.00	\$28,995.00	\$5.00	\$28,995.00	
46	Pavement removal and replacement for T-section plus AC from pavement	24,420	SF	\$2.50	\$61,050.00	\$3.30	\$80,386.00	\$4.00	\$97,680.00	\$4.00	\$97,680.00	\$2.20	\$53,724.00	\$2.20	\$53,724.00	
47	Pavement removal and replacement for T-section and 2" Grind and AC	1,439	SF	\$3.00	\$4,317.00	\$3.10	\$4,460.90	\$11.00	\$15,829.00	\$11.00	\$15,829.00	\$2.00	\$2,878.00	\$2.00	\$2,878.00	
48	Surface removal and replacement for unfinished dirt only	2,580	SF	\$0.50	\$1,290.00	\$0.80	\$2,064.00	\$2.00	\$5,160.00	\$2.00	\$5,160.00	\$2.30	\$5,934.00	\$2.30	\$5,934.00	
49	Record drawing	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	
50	Safety Measures	1	LS	\$15,000.00	\$15,000.00	\$560.00	\$560.00	\$3,300.00	\$3,300.00	\$3,300.00	\$3,300.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	
51	Erosion Control	1	LS	\$10,000.00	\$10,000.00	\$2,000.00	\$2,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$2,363.00	\$2,363.00	\$2,363.00	\$2,363.00	
52	Relocate meter box, install 3" PVC sleeve, replace driveway	1	LS	\$15,950.00	\$15,950.00	\$3,800.00	\$3,800.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	
53	Remove and dispose of existing vault	1	LS	\$19,950.30	\$19,950.30	\$1,350.00	\$1,350.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$1,000.00	\$1,000.00	\$1,000.00	\$1,000.00	
	Base Bid Subtotal- Schedule B				\$714,035.50		\$605,198.50		\$660,107.00		\$660,107.00		\$694,988.00		\$810,066.50	
	Base Bid Subtotal- Schedule C (Deletable)				\$30,712.50		\$45,234.00		\$25,956.00		\$25,956.00		\$32,067.00		\$42,512.40	
	Base Bid Subtotal- OPA Fire Flow Improvements				\$23,940.00		\$28,980.00		\$15,120.00		\$15,120.00		\$23,940.00		\$27,760.00	
1	8" PVC Pipe, C-900 Class 200	252	LF	\$95.00	\$23,940.00	\$115.00	\$28,980.00	\$60.00	\$15,120.00	\$95.00	\$23,940.00	\$130.00	\$32,760.00	\$130.00	\$32,760.00	
2	Pavement removal for T-Section plus AC	2709	LF	\$2.50	\$6,772.50	\$6.00	\$16,254.00	\$4.00	\$10,836.00	\$3.00	\$8,127.00	\$3.60	\$9,752.40	\$3.60	\$9,752.40	
	Base Bid Subtotal- Schedule C (Deletable)				\$30,712.50		\$45,234.00		\$25,956.00		\$25,956.00		\$32,067.00		\$42,512.40	

IRVINE RANCH WATER DISTRICT **Exhibit "C"**

Expenditure Authorization

Project Name: OPA - MECHANICAL - PACKAGE 2 (OPA SHARE)

Project No: 11409 EA No: 5

ID Split: Miscellaneous

Project Manager: UEMATSU, PATRICIA

Project Engineer: MCGEHEE, JOSEPH

Request Date: September 20, 2011

Improvement District (ID) Allocations

ID No. Allocation % Source of Funds

156	100.0	CAPITAL FUND
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$225,700
This Request:	\$599,600
Total EA Requests:	\$825,300
Previously Approved Budget:	\$1,132,600
Budget Adjustment Requested this EA:	\$0
Updated Budget:	\$1,132,600
Budget Remaining After This EA	\$307,300

Comments: Oracle PR 1287

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING - PLANNING IRWD	0	10,000	10,000	0	10,000	10,000	11/09	6/11
ENGINEERING - PLANNING OUTSIDE	0	10,000	10,000	0	10,000	10,000	11/09	6/11
ENGINEERING DESIGN - IRWD	0	20,000	20,000	0	20,000	20,000	11/08	6/11
ENGINEERING DESIGN - OUTSIDE	0	165,200	165,200	0	165,200	165,200	11/08	6/11
DESIGN STAFF FIELD SUPPORT	5,000	0	5,000	0	5,000	5,000	4/10	6/11
ENGINEERING - CA&I IRWD	20,200	0	20,200	0	20,200	20,200	9/11	6/13
ENGINEERING - CA&I OUTSIDE	26,900	0	26,900	0	26,900	26,900	9/11	6/13
CONSTRUCTION FIELD SUPPORT	10,000	0	10,000	0	10,000	10,000	9/11	6/13
CONSTRUCTION	481,000	0	481,000	0	760,400	760,400	9/11	6/13
LEGAL	2,000	0	2,000	0	2,000	2,000	4/10	6/12
Contingency - 10.00% Subtotal	\$54,500	\$20,500	\$75,000	\$0	\$102,900	\$102,900		
Subtotal (Direct Costs)	\$599,600	\$225,700	\$825,300	\$0	\$1,132,600	\$1,132,600		
Estimated G/A - 180.00% of direct labor*	\$58,900	\$58,500	\$117,400	\$0	\$117,400	\$117,400		
Total	\$658,500	\$284,200	\$942,700	\$0	\$1,250,000	\$1,250,000		
Direct Labor	\$35,200	\$30,000	\$65,200	\$0	\$65,200	\$65,200		

*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: _____ 9/21/11

Department Director: *PAW* Kevin L. Burt _____ 9/21/11

Finance: _____

Board/General Manager: _____

** IRWD hereby declares that it reasonably expects those expenditures incurred by IRWD in a maximum principal amount of \$1,275,000. The additional documents, if any, which are hereby incorporated by reference project is made under Treasury Regulation Section 1.150-2.

IRVINE RANCH WATER DISTRICT

Expenditure Authorization

Project Name: OPA - FINAL PRESSURE - PACKAGE 3 (OPA SHARE)

Project No: 11410 EA No: 5

ID Split: Miscellaneous

Improvement District (ID) Allocations

Project Manager: UEMATSU, PATRICIA

Project Engineer: MCGEHEE, JOSEPH

Request Date: September 20, 2011

ID No. Allocation % Source of Funds

156	100.0	CAPITAL FUND
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$292,000
This Request:	\$852,700
Total EA Requests:	\$1,144,700
Previously Approved Budget:	\$886,600
Budget Adjustment Requested this EA:	\$312,000
Updated Budget:	\$1,198,600
Budget Remaining After This EA	\$53,900

Comments:

Oracle PR 1297

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING - PLANNING IRWD	0	10,000	10,000	0	10,000	10,000	11/09	6/11
ENGINEERING - PLANNING OUTSIDE	0	10,000	10,000	0	10,000	10,000	11/09	6/11
ENGINEERING DESIGN - IRWD	0	20,000	20,000	0	20,000	20,000	11/08	6/11
ENGINEERING DESIGN - OUTSIDE	0	156,700	156,700	0	208,000	208,000	11/08	6/11
DESIGN STAFF FIELD SUPPORT	0	5,000	5,000	0	5,000	5,000	4/10	6/11
ENGINEERING - CA&I IRWD	22,100	16,400	38,500	22,100	16,400	38,500	9/11	2/12
ENGINEERING - CA&I OUTSIDE	80,000	0	80,000	58,200	21,800	80,000	9/11	2/12
CONSTRUCTION FIELD SUPPORT	0	10,000	10,000	0	10,000	10,000	9/11	2/12
CONSTRUCTION	708,000	50,000	758,000	216,900	541,100	758,000	9/11	2/13
LEGAL	2,000	0	2,000	0	2,000	2,000	4/10	2/12
Contingency - 5.00% Subtotal	\$40,600	\$13,900	\$54,500	\$14,800	\$42,300	\$57,100		
Subtotal (Direct Costs)	\$852,700	\$292,000	\$1,144,700	\$312,000	\$886,600	\$1,198,600		
Estimated G/A - 180.00% of direct labor*	\$30,500	\$119,800	\$150,300	\$39,800	\$110,500	\$150,300		
Total	\$883,200	\$411,800	\$1,295,000	\$351,800	\$997,100	\$1,348,900		
Direct Labor	\$22,100	\$61,400	\$83,500	\$22,100	\$61,400	\$83,500		

*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:

 9/21/11

Department Director:

 9/21/11

Finance:

Board/General Manager:

** IRWD hereby declares that it reasonably expects those expenditures incurred by IRWD in a maximum principal amount of \$1,376,000 additional documents, if any, which are hereby incorporated by reference into this project is made under Treasury Regulation Section 1.150-2.

C-2

to be reimbursed with proceeds of future debt to be further described in the attached staff report and intent to reimburse costs of the above-captioned

September 26, 2011

Prepared by: J. McGehee/P. Uematsu

Submitted by: K. Burton

Approved by: Paul Cook

ACTION CALENDAR

ORANGE PARK ACRES CHAPMAN AVENUE ON-SITE PIPING RELOCATION CONSTRUCTION AWARD

SUMMARY:

The Orange Park Acres (OPA) Chapman Avenue On-Site Piping Relocation Project will relocate customer meters connected to a deteriorating 6-inch asbestos-cement pipe that is routed through the middle of eight properties on Chapman Avenue. At completion, the 6-inch pipe along with the 16-inch riveted steel main connected to the existing OPA reservoir at Calle Grande will be abandoned. Staff recommends the Board:

- Approve a budget increase in the amount \$275,000, from \$10,713,900 to \$10,988,900 for the OPA Chapman Avenue On-Site Piping Relocation Project;
- Approve an Expenditure Authorization in the amount of \$275,000 for the OPA Chapman Avenue On-site Piping Relocation Project; and
- Authorize the General Manager to execute a construction contract with L & S Construction, Inc. in the amount of \$154,751.

BACKGROUND:

The project is located in the OPA service area within the boundaries of the County of Orange on Chapman Avenue near Calle Grande. During the creation of the OPA SAMP, the existing 6-inch asbestos-cement distribution pipe was found to be connected to the existing 16-inch riveted steel main and required abandonment to be able to take the main out of service. The OPA Domestic Water Transmission Main Project finished construction of a new 6-inch PVC distribution main in Chapman Avenue and set the new meter locations in the parkway.

The OPA Chapman Avenue On-site Piping Relocation Project consists of the construction of 2-inch pipelines at each property. Each service will be constructed with PVC pipe and fittings from the new water meter to a point of connection downstream of the existing water meter. All on-site private booster pumps will be protected in place. A site walk was held with each resident at their property to help determine the least impactful way to relocate the piping. A Location Map is included as Exhibit "A".

Construction Award:

The project was advertised to seven contractors on September 9, 2011. On September 22, 2011, the bid opening was held with four of the seven contractors submitting bids; Paulus Engineering, Inc., L & S Construction, Inc., Leatherwood Construction Inc., and Bebek Company. E.J. Meyer Company, GCI, and Kennedy Pipeline Co. did not submit a bid. The apparent low bidder was L & S Construction, Inc. with a bid of \$154,751. The engineer's estimate was \$223,865. The Bid Summary is attached as Exhibit "B". L & S Construction, Inc.

recently successfully completed the Commercentre Drive Recycled Water Pipeline Upsizing Project in the City of Lake Forest for the District.

FISCAL IMPACTS:

Project 11408 (1279) is included in the FY 2011-12 Capital Budget. A Budget Increase and Expenditure Authorization to fund the construction and engineering support are 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
11408 (1279)	\$10,713,900	\$275,000	\$10,988,900	\$8,874,100	\$275,000	\$9,149,100

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

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

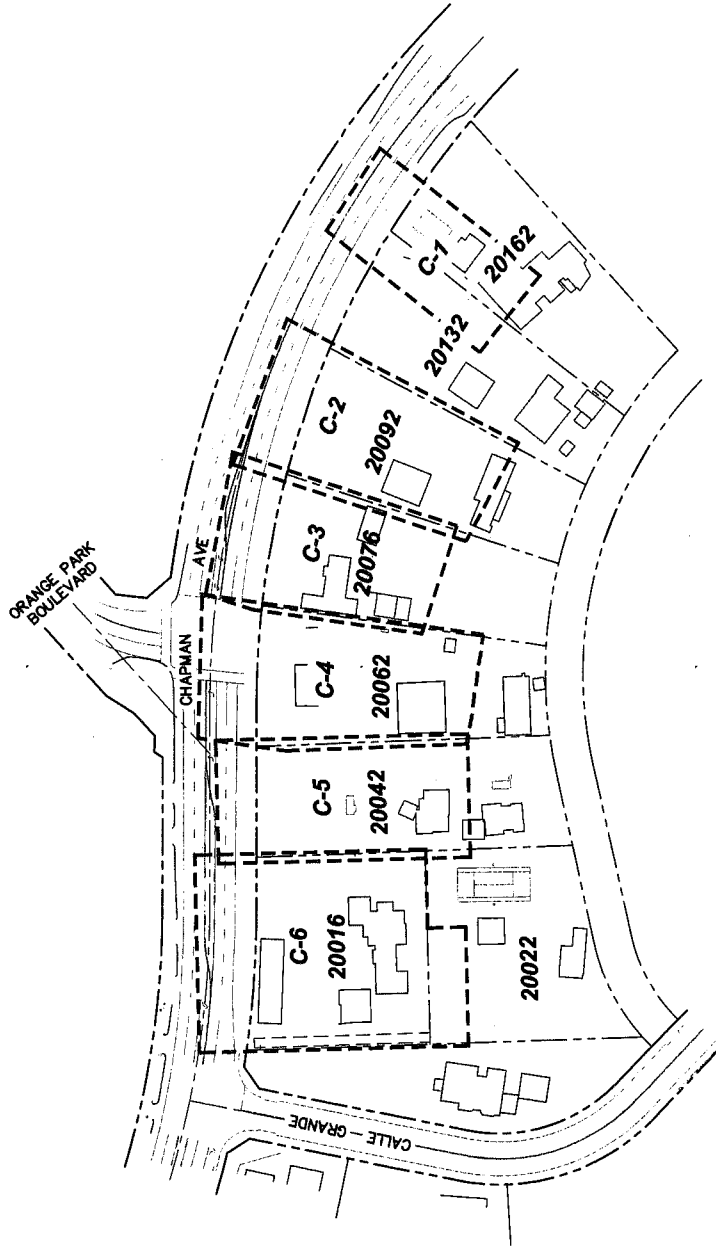
RECOMMENDATION:

THAT THE BOARD APPROVE A BUDGET INCREASE OF \$275,000, FROM \$10,713,900 TO \$10,988,900 FOR THE ORANGE PARK ACRES CHAPMAN AVENUE ON-SITE PIPING RELOCATION CONSTRUCTION AWARD, PROJECT 11408 (1279); APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$275,000 FOR THE ORANGE PARK ACRES CHAPMAN AVENUE ON-SITE PIPING RELOCATION CONSTRUCTION AWARD PROJECT 11408 (1279); AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH L & S CONSTRUCTION, INC. IN THE AMOUNT OF \$154,751 FOR THE ORANGE PARK ACRES CHAPMAN AVENUE ON-SITE PIPING RELOCATION, PROJECT 11408 (1279).





LIST OF EXHIBITS:

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

Exhibit "A"





LEGEND

-  OUTLINE OF DRAWING
-  C-1
-  20162
-  STREET ADDRESS ON CHAPMAN AVENUE



GRAPHIC SCALE
SCALE: 1" = 60'

KEY MAP INDEX
SCALE: 1" = 60'

NO. DATE REVISIONS APPROVED REVISIONS DRAWN: CS CHECKED: RLB, RB		RESION RE: NH DRAWING: CS CHECKED: RLB, RB		DUDEK 11878 Camino Capistrano, Suite 200 San Juan Capistrano, CA 92675 PH: (949) 231-1111		 		IRVINE RANCH WATER DISTRICT ORANGE PARK ACRES CHAPMAN AVENUE ON-SITE PIPING RELOCATION PROJECT PROJECT NUMBER 11408		KEY MAP INDEX		DRAWING G-4 4 OF 12 SHEETS	
RWD PROJECT MANAGER RICE: 0208 RICE: 0108		DATE 7/8/11		RWD PROJECT MANAGER RICE: 0208 RICE: 0108		RWD PROJECT MANAGER RICE: 0208 RICE: 0108		RWD PROJECT MANAGER RICE: 0208 RICE: 0108		RWD PROJECT MANAGER RICE: 0208 RICE: 0108		RWD PROJECT MANAGER RICE: 0208 RICE: 0108	

IRVINE RANCH WATER DISTRICT

Exhibit "C"

Expenditure Authorization

Project Name: EAST ORANGE REGIONAL TRANSMISSION MAIN

Project No: 11408 EA No: 7

ID Split: Miscellaneous

Project Manager: UEMATSU, PATRICIA

Project Engineer: MCGEHEE, JOSEPH

Request Date: September 22, 2011

Improvement District (ID) Allocations

ID No.	Allocation %	Source of Funds
112	3.2	BONDS YET TO BE SOLD**
113	3.9	BONDS YET TO BE SOLD**
115	5.5	CAPITAL FUND
121	11.4	BONDS YET TO BE SOLD**
130	8.9	BONDS YET TO BE SOLD**
140	3.2	BONDS YET TO BE SOLD**
150	23.2	BONDS YET TO BE SOLD**
153	2.6	BONDS YET TO BE SOLD**
154	1.1	BONDS YET TO BE SOLD**
156	25.0	CAPITAL FUND
161	6.0	BONDS YET TO BE SOLD**
182	2.3	BONDS YET TO BE SOLD**
184	2.1	BONDS YET TO BE SOLD**
186	.8	BONDS YET TO BE SOLD**
188	.8	BONDS YET TO BE SOLD**
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$8,874,100
This Request:	\$275,000
Total EA Requests:	\$9,149,100
Previously Approved Budget:	\$10,713,900
Budget Adjustment Requested this EA:	\$275,000
Updated Budget:	\$10,988,900
Budget Remaining After This EA	\$1,839,800

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	10,000	10,000	0	10,000	10,000	11/09	7/10
ENGINEERING - PLANNING OUTSIDE	0	10,000	10,000	0	15,000	15,000	11/09	7/10
ENGINEERING DESIGN - IRWD	0	30,000	30,000	0	30,000	30,000	11/08	7/10
ENGINEERING DESIGN - OUTSIDE	0	400,000	400,000	0	443,600	443,600	11/08	7/10
DESIGN STAFF FIELD SUPPORT	0	10,000	10,000	0	10,000	10,000	4/10	11/10
ENGINEERING - CA&I IRWD	0	250,000	250,000	0	250,000	250,000	3/11	1/13
ENGINEERING - CA&I OUTSIDE	0	414,000	414,000	0	414,000	414,000	3/11	1/13
CONSTRUCTION FIELD SUPPORT	0	20,000	20,000	0	20,000	20,000	3/11	1/13
CONSTRUCTION	250,000	6,921,400	7,171,400	250,000	8,545,300	8,795,300	3/11	1/13
LEGAL	0	2,000	2,000	0	2,000	2,000	1/11	10/12
LAND	0	0	0	0	0	0	10/10	11/11
ENGINEERING ENVIRONMENTAL-OUTS	0	0	0	0	0	0	3/11	1/13
Contingency - 10.00% Subtotal	\$25,000	\$806,700	\$831,700	\$25,000	\$974,000	\$999,000		
Subtotal (Direct Costs)	\$275,000	\$8,874,100	\$9,149,100	\$275,000	\$10,713,900	\$10,988,900		
Estimated G/A - 180.00% of direct labor*	(\$48,000)	\$624,000	\$576,000	\$0	\$576,000	\$576,000		
Total	\$227,000	\$9,498,100	\$9,725,100	\$275,000	\$11,289,900	\$11,564,900		
Direct Labor	\$0	\$320,000	\$320,000	\$0	\$320,000	\$320,000		

*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: J-M 9/22/11

Department Director: Kevin L. Burton 9/22/11

Finance: _____

Board/General Manager: _____

** IRWD hereby declares that it reasonably expects those expenditures marked with two asterisks to be reimbursed with proceeds of future debt to be incurred by IRWD in a maximum principal amount of \$11,797,000. 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.

September 26, 2011 ^{DS}
Prepared by: W. Stewart/S. Malloy
Submitted by: K. Burton
Approved by: Paul Cook

ACTION CALENDAR

MICHELSON WATER RECYCLING PLANT PHASE 2 EXPANSION AND FLOOD PROTECTION IMPROVEMENTS – BUDGET INCREASE, EXPENDITURE AUTHORIZATION, CONTRACT CHANGE ORDER, AND VARIANCE

SUMMARY:

The Michelson Water Recycling Plant (MWRP) Phase 2 Expansion and Flood Protection Improvements are currently being constructed by J. R. Filanc Construction Company. Staff recommends that the Board:

- Authorize an increase to the FY 2011-12 Capital Budget for the MWRP Sand Canyon Zone A Strainer Replacement Project in the amount of \$112,200, from \$733,200 to \$845,400;
- Approve an Expenditure Authorization in the amount of \$377,900 for the MWRP Sand Canyon Zone A Strainer Replacement Project;
- Approve Contract Change Order (CCO) No. 46 with J. R. Filanc Construction Co. for the construction of the MWRP Sand Canyon Zone A Strainer Replacement, in the amount of \$476,789; and
- Authorize the General Manager to execute Variance No. 1, in the amount of \$121,595, with Ninyo and Moore for supplemental construction phase pile foundation services for the MWRP Flood Protection Improvements Project.

BACKGROUND:

Construction of the MWRP Phase 2 Expansion and Flood Protection Improvements project was awarded to J. R. Filanc Construction, Co. in July 2009 in the amount of \$87,479,450. This project will expand the recycled water production capacity of MWRP to 28 million gallons per day and protect MWRP from flooding of San Diego Creek. A Project Overview Diagram of the MWRP Phase 2 Expansion is attached as Exhibit "A".

Contract Change Order No. 46:

The Sand Canyon Zone A Reservoir is drained each year as part of the seasonal reservoir operation. The operation usually takes two to three months to complete. The current procedure for draining the reservoir requires the installation of temporary flexible aboveground piping from the Adams strainer on the west side of MWRP to the MWRP effluent pump station. This arrangement has proven to be labor intensive and also disruptive to normal MWRP traffic flow since the piping crosses a well traveled road within the plant. A more permanent pipe installation is necessary. Additionally, the Adams strainer is old and needs to be replaced.

The Sand Canyon Zone A Strainer Replacement Project includes the replacement of the strainer, construction of approximately 1,800 feet of 16-inch polyvinyl chloride pressure pipe, two

Action Calendar: Michelson Water Recycling Plant Phase 2 Expansion and Flood Protection Improvements – Budget Increase, Expenditure Authorization, Contract Change Order and Variance

September 26, 2011

Page 2

butterfly valves, pipes of various sizes, and associated demolition, electrical and instrumentation, and start-up activities. Construction of the strainer project would be more efficient and more cost effective if performed as part of the MWRP Phase 2 Expansion rather than as a separate construction project. By Filanc performing the work, coordination efforts would be minimized and streamlined. More coordination would be required if another contractor performed the work. The pipeline associated with the strainer shares the great majority of its alignment with the new south influent sewer. Since Filanc is excavating for the influent sewer lines, the area where the pipelines would be located would only be excavated and backfilled once, instead of twice.

A staff report, which is attached as Exhibit “B”, provides more details on CCO No. 46. CCO No. 46 in the amount of \$476,789 is attached as Exhibit “C”. The engineer’s estimate was \$320,000 in the Preliminary Design Report (PDR) prepared by Stantec Consulting in December 2009. The final strainer replacement project includes additional piping, motorized control valves and SCADA integration which increased the cost from the PDR estimate. Staff reviewed Filanc’s cost proposal, negotiated changes, and agreed with Filanc on the final cost. The Change Order summary for the entire project is attached as Exhibit “D”.

Variance No. 1:

Ninyo and Moore has been providing construction phase pile foundation services since the start of the project. In its original proposal, Ninyo and Moore assumed a pile installation rate faster than the actual pile installation. Concern with the effects of the vibration from the pile installation to adjacent structures and bird nesting, which limited the work area, resulted in the slower installation. Furthermore, Ninyo and Moore performed out-of-scope items. These items include (1) lateral capacity analysis due to site conditions; (2) pavement design for temporary access road off Campus Drive; (3) testing and inspection during pipeline installation along the creek; and (4) keyway inspection for Pond D. Variance No. 1 in the amount of \$121,595, which is attached as Exhibit “E”, provides construction phase pile foundation services for the remaining 872 piles. Staff reviewed Ninyo and Moore’s variance request and recommends approval.

FISCAL IMPACTS:

The Sand Canyon Zone A Strainer Replacement, Project 30038 (1643), is included in the FY 2011-12 Capital Budget. An increase to the Budget and Expenditure Authorization are requested as shown in the table below and in the Expenditure Authorization, which is attached as Exhibit “F”, to fund Contract Change Order No. 46.

Project No.	Current Budget	Addition <Reduction>	Total Budget	Existing EA	This EA Request	Total EA Request
30038 (1643)	\$733,200	\$112,200	\$845,400	\$467,500	\$377,900	\$845,400

The MWRP Flood Protection Improvements, Projects 20542 (1150) and 30542 (1118) are included in the FY 2011-12 Capital Budget. The existing budget and Expenditure Authorizations are sufficient to fund Variance 1.

ENVIRONMENTAL COMPLIANCE:

The Michelson Water Recycling Plant Phase 2 Expansion and Flood Protection Improvements, Projects are subject to the California Environmental Quality Act (CEQA) and in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7, an Environmental Impact Report, SCH # 2005051174, was certified by the lead agency on February 27, 2006.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on September 20, 2011.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE AN INCREASE TO THE FY 2011-12 CAPITAL BUDGET IN THE AMOUNT OF \$112,200, FROM \$733,200 TO \$845,400, FOR THE MWRP SAND CANYON ZONE A STRAINER REPLACEMENT, PROJECT 30038 (1643); APPROVE AN EXPENDITURE AUTHORIZATION IN THE AMOUNT OF \$377,900 FOR THE MWRP SAND CANYON ZONE A STRAINER REPLACEMENT, PROJECT 30038 (1643); APPROVE CONTRACT CHANGE ORDER (CCO) NO. 46 IN THE AMOUNT OF \$476,789 WITH J. R. FILANC CONSTRUCTION CO. FOR THE CONSTRUCTION OF THE SAND CANYON ZONE A STRAINER REPLACEMENT; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 1 IN THE AMOUNT OF \$121,595 WITH NINYO AND MOORE FOR SUPPLEMENTAL CONSTRUCTION PHASE PILE FOUNDATION SERVICES FOR THE MWRP FLOOD PROTECTION IMPROVEMENTS, PROJECTS 20542 (1150) AND 30542 (1118).

LIST OF EXHIBITS:

- Exhibit "A" – Location Map
- Exhibit "B" – Staff Report - Contract Change Order No. 46
- Exhibit "C" – Contract Change Order No. 46
- Exhibit "D" – Construction Change Order Summary
- Exhibit "E" – Variance 1 – Ninyo and Moore
- Exhibit "F" – Budget Increase and Expenditure Authorization for Project 30542 (1643)

EXHIBIT "B"

Staff Report for Michelson Water Recycling Plant Phase 2 Expansion and Flood Protection Improvements

Michelson Water Recycling Plant Phase 2 Expansion and Flood Protection Improvements is currently being constructed by J. R. Filanc Construction Co. The purpose of this staff report is to summarize Change Order No. 46.

Contract Change Order No. 46 for Project 30038 (1643):

Contract Change Order No. 46 includes the replacement of the Sand Canyon Reservoir Drain Strainer and additions and modifications to the existing strainer drain and backwash piping. CCO No. 46 includes:

1. Installation of 12" Hellan Strainer;
2. Installation of strainer piping, yard piping, valves and appurtenances:
 - a. Approximately 1,800 feet of 16-inch AWWA C-905 DR-41 PVC pressure pipe with cast iron outside diameter.
 - b. Fill existing 30-inch asbestos cement pipe with non-shrink grout for installation of 16-inch piping near chlorine contact chamber. Extent of grout fill shall be limited to portion of existing pipe being used as a sleeve for the new 16-inch pipe. The remaining existing 30-inch pipe shall be demolished
 - c. Modification of alignment of 3-inch backwash piping and add approximately 55 feet of 3-inch backwash piping
 - d. Above ground ductile iron pipe of various sizes and associated fittings and appurtenances including: (1) approximately 10 feet of 12-inch ductile iron pipe, (2) approximately 15 feet of 16-inch ductile iron pipe and (3) approximately 3 feet of 8-inch ductile iron pipe
 - e. Two AWWA C504 12" butterfly valves;
3. Installation of structural slabs and pipe supports;
4. Installation of two orifice plates suitable for installation on 16-inch ductile iron pipe with 4.25-inch diameter openings;
5. Associated demolition activities;
6. Furnish and apply protective coatings;
7. Furnish and install electrical and instrumentation; and
8. Provide facility start-up.

EXHIBIT "D"

MWRP Phase 2 Expansion and Flood Protection Improvements
PR 20214, 20542, 30214, and 30542
Construction Summary

Contractor: J.R. Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount							Contract Days			Original Completion Date: 8/1/2012
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	
1	Approved by Director of Engineering and Construction Approved on November 19, 2009 1.1 Partnering Workshop – IRWD and the Contractor agreed to split equally the cost of partnering. The initial partnering workshop was held on September 3, 2009. This change request represents the Contractor's portion of the cost of that initial workshop. It is a credit to IRWD. 1.2 Installation of Bollards – The Contractor installed bollards around the IRWD MWRP Phase 2 Field Office Trailer and K-rails around the interim sodium hypochlorite System to protect from traffic 1.3 Relocation of 4-inch Natural Gas Pipeline	A		\$195.40	\$0.00		\$195.40	0.0%	\$87,479,645.40	0	0	1,094	8/1/2012
2	Approved by Director of Engineering and Construction Approved on December 3, 2009 2.1 Previously Approved Change Request #4 – Tree Removal and Grinding at Flood Improvements and Duck Club Building 2.2 Previously Approved NOPE #1 – Demolish Abandoned Building 2.3 Repair of 10-inch PVC Groundwater Line at the New Headworks Area	A D B		\$16,018.04	\$195.40		\$16,213.44	0.0%	\$87,495,663.44	0	0	1,094	8/1/2012
3	Approved by Director of Engineering and Construction Approved on December 18, 2009 3.1 Construct Temporary Access Road to Staging Area 3	A		\$0.00	\$16,213.44		\$16,213.44	0.0%	\$87,495,663.44	0	0	1,094	8/1/2012
4	Approved by Board of Directors Approved on January 25, 2010 4.1 Upsize Area 600 Aeration Blower from 350 to 500 hp 4.2 4.3 Upsizing Soft Starters for Area 700 Blowers from 350 to 450 hp	C C A		\$143,950.10	\$16,213.44		\$160,163.54	0.2%	\$87,639,613.54	0	0	1,094	8/1/2012
5	Infrared Windows to Measure Stray Currents Approved by Director of Engineering and Construction Approved on December 29, 2009 5.1 Relocation of K-rail to Allow Construction Equipment access for pond maintenance (PR 10942)	D		\$5,081.52	\$160,163.54		\$165,245.06	0.2%	\$87,644,695.06	0	0	1,094	8/1/2012
6	Approved by Engineering & Operations Comm Approved on January 19, 2010 6.1 WAS and Skimming Pumps Replacement (PR 20779)	D		\$77,478.00	\$165,245.06		\$242,723.06	0.3%	\$87,722,173.06	0	0	1,094	8/1/2012

MWRP Phase 2 Expansion and Flood Protection Improvements
 PR 20214, 20542, 30214, and 30542
 Construction Summary

Contractor: J. R. Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount							Contract Days			Original Completion Date: 8/1/2012
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	
7	Approved by AGM Approved on February 9, 2010 7.1 Relocation and Repair of Unknown Utilities. The Contractor relocated a 1-inch air line and repaired a 2-inch chlorine line, both of which were not shown on the Plans. (CCR #10) 7.2 Removal and Disposal of Unknown Electrical Ductbanks at future Sodium Hypochlorite Feed Facility. (CCR #12) 7.3 Non-compensable Weather-Related Delay 7.4 Non-compensable Time Extension Due to Change Order No. 4 7.5 Addition of Manways on Sodium Hypochlorite Tanks (CCR #23)	B B B C A	\$ \$ \$ \$ \$	2,588.36 2,216.31 - - 5,410.20	\$10,214.87 \$242,723.06	\$252,937.93	0.3%	\$87,479,450.00 \$87,752,367.93	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	1,094 1,094	8/1/2012
8	Approved by Board of Directors Approved on February 22, 2010 8.1 Delete Bid Item A.28 - System Integration 8.2 System Integration Coordination and SCADA Hardware Procurement	A A	\$ \$	(1,624,460.00) 488,639.25	-\$1,135,820.75 \$252,937.93	-\$882,882.82	-1.0%	\$86,596,567.18	0 0	0 0	0 0	1,094 1,094	8/1/2012
9	Approved by AGM Approved on March 18, 2010 9.1 Deletion of Change Order 4, Line Item 3 - Installation of Infrared Windows.	A	\$	(36,064.78)	-\$36,064.78	-\$918,947.60	-1.1%	\$86,560,502.40	0	0	0	1,094	8/1/2012
10	Approved by AGM Approved on March 23, 2010 10.1 Removal of 18-inch pipe and installation of 24-inch blind flange at Sodium Hypochlorite System excavation (CR #24) 10.2 Addition of 24-inch side manway for Manganese Hydroxide tanks (CR #27) 10.3 Relocation of 54" Primary Effluent Line (CR #29) 10.4 Change in PVC C900/C905 Manufacturer (CR #30)	B A A A	\$ \$ \$ \$	\$2,708.66 \$5,667.83 (\$15,928.00) \$14,514.96	\$6,963.45 -\$918,947.60	-\$911,984.15	-1.0%	\$86,567,465.85	0 0 0 0	0 0 0 0	0 0 0 0	1,094 1,094	8/1/2012

MWRP Phase 2 Expansion and Flood Protection Improvements
 PR 20214, 20542, 30214, and 30542
 Construction Summary

Contractor: J.R. Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount						Contract Days			Original Completion Date:
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	
11	Approved by Director of Engineering and Construction Approved on April 26, 2010 11.1 Abandoned 24-inch line at high rate clarifier location (CR #026) 11.2 Exploratory Excavation for Duct Bank at MPS-2 electrical building 11.3 Provide chain operators and chain, and grease fittings for plug valves for the WAS/Skimming Pumps Replacement Project (PR 20779) (CR #036)	B B D	\$15,782.97 \$3,035.98 \$2,214.78	-\$911,984.15	-\$890,950.42	-1.0%	\$86,568,499.58	0	0	0	1,094	8/1/2012
12	Approved by Director of Engineering and Construction Approved on April 28, 2010 12.1 Relocation of Existing 10-inch and 6-inch GW line (CR #014)	B	\$17,121.47	-\$890,950.42	-\$873,828.95	-1.0%	\$86,605,621.05	0	0	0	1,094	8/1/2012
13	Approved by AGM Approved on April 28, 2010 13.1 Modifications in Checkered Aluminum Plates at the Headworks Area (CR 037)	C	\$34,095.00	-\$873,828.95	-\$839,733.95	-1.0%	\$86,639,716.05	0	0	0	1,094	8/1/2012
14	Approved by Director of Engineering and Construction Approved on May 4, 2010 14.1 Electrical Substation Work (Two additional 5-inch Conduits and Connection bwn IRWD and SCE) (CR 028)	A	\$16,655.10	-\$839,733.95	-\$823,078.85	-0.9%	\$86,656,371.15	0	0	0	1,094	8/1/2012
15	Approved by AGM Approved on May 21, 2010 15.1 Credit for Not Relocating the 18-inch diameter drain line at HRC (CR #019) 15.2 Credit for Slab Penetration Modifications, Detail P17 (RFI 0102) (CR #032)	A A	(\$42,262.00) (\$6,745.95)	-\$823,078.85	-\$872,086.80	-1.0%	\$86,607,363.20	0	0	0	1,094	8/1/2012
16	Approved by Director of Engineering and Construction Approved on May 25, 2010 16.1 Abandonment of 6" Pipes at MBR Screen Area (CR 042) 16.2 Addition of Three Transformers at UV Disinfection Facility (RFI 0149) 16.3 Remove encasement on existing utilities to allow construction of future Primary Sedimentation Tanks (CR 051)	B C B	\$2,536.36 \$18,633.63 \$1,188.43	-\$872,086.80	-\$849,728.38	-1.0%	\$86,629,721.62	0	0	0	1,094	8/1/2012

MWRP Phase 2 Expansion and Flood Protection Improvements
 PR 20214, 20542, 30214, and 30542
 Construction Summary

Contractor: J.R. Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount						Contract Days			Original Completion Date	
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days		Revised Total Contract Days
17	Approved by Engineering & Operations Committee Approved on June 15, 2010			-\$55,420.00	-\$849,728.38	-\$905,148.38		-1.0%	\$86,574,301.62	0	0	1,094	8/1/2012
17.1	Demolition of Old Clarifier Bottoms (CR 013)	B	(\$55,420.00)		-\$905,148.38	-\$880,266.14		-1.0%		0	0	1,094	8/1/2012
18	Approved by Director of Engineering and Construction Approved on July 28, 2010			\$24,882.24	-\$905,148.38	-\$880,266.14			\$86,599,183.86	0	0	1,094	8/1/2012
18.1	Water Control Gate Revisions (CR #034)	C	\$17,923.23							0	0		
18.2	Repair of Existing Vault west of High Rate Clarifier (CR #057)	B	\$1,451.75							0	0		
18.3	Additional Demolition at Abandoned Aerobic Digester Area (CR #063)	B	\$5,507.26							0	0		
19	Approved by Director of Engineering and Construction Approved on July 30, 2010			\$16,058.68	-\$880,266.14	-\$864,207.46		-1.0%	\$86,615,242.54	0	0	1,094	8/1/2012
19.1	Platform modifications at Sodium Hypochlorite Feed System (CR 025)	A	\$2,478.67							0	0		
19.2	Pothole of existing 36-inch filter influent pipe (CR 043)	A	\$4,503.99							0	0		
19.3	Delete 6" knife gate valve and add 6" plug valve at Primary Sedimentation (CR 046)	A	\$662.31							0	0		
19.4	Repair of reclaimed water leak near old control room (CR 054)	B	\$1,173.07							0	0		
19.5	MBR fine screen cover plates modifications (CR 064)	B	\$7,240.64							0	0		
20	Approved by Assistant GM Approved on August 26, 2010			\$34,622.27	-\$864,207.46	-\$829,585.19		-0.9%	\$86,649,864.81	0	0	1,094	8/1/2012
20.1	Area 600 Blower Discharge Modifications (CR 050)	A	\$34,622.27							0	0		
21	Approved from Board of Directors Approved on August 23, 2010			\$277,384.97	-\$829,585.19	-\$552,200.22		-0.6%	\$86,977,249.78	0	0	1,094	8/1/2012
21.1	Valve Vaults Modifications (CR 020)	A	\$277,384.97							0	0		
22	Approved by Director of Engineering and Construction Approved on August 26, 2010			\$23,117.06	-\$552,200.22	-\$529,083.16		-0.6%	\$86,950,366.84	0	0	1,094	8/1/2012
22.1	Site Cleanup Due to Existing Filter Overflow (CR 065)	B	\$4,271.51							0	0		
22.2	Hollow shaft motor modifications to Vertical Turbine & Vertical Propeller Pumps (CR 069)	A	\$18,845.55							0	0		
23	Approved by Director of Engineering and Construction Approved on September 9, 2010			\$23,569.60	-\$529,083.16	-\$505,513.56		-0.6%	\$86,973,936.44	0	0	1,094	8/1/2012
23.1	MBR Anoxic Wall Modifications (CR 061)	C	\$6,399.86							0	0		
23.2	Repair Existing 6-inch GW near SCE Station (CR 067)	B	\$3,449.83							0	0		
23.3	Unforeseen Conditions at SCE Conduit Installation (CR 075)	B	\$13,719.91							0	0		

MWRP Phase 2 Expansion and Flood Protection Improvements
 PR 20214, 20542, 30214, and 30542
 Construction Summary

Contractor: J R Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount										Contract Days		Original Completion Date: 8/1/2012
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Revised Total Contract Days	Original Days: 1,094	Revised Total Contract Days			
24	Approved by Engineering and Operations Committee Approved on September 21, 2010			-\$52,172.00	-\$505,513.56		-\$557,685.56	-0.6%	\$86,921,764.44	0	0	0	1,094	8/1/2012	
24.1	UVE Piping Modifications at Chlorine Contact Tanks (CR 056)	A	(\$52,172.00)												
25	Approved by Board of Directors Approved on September 27, 2010			\$186,651.45	-\$557,685.56		-\$371,034.11	-0.4%	\$87,108,415.89	0	0	0	1,094	8/1/2012	
25.1	Modifications to Campus Drive Entrance (CR 022)	A	\$186,651.45												
26	Approved by Director of Engineering and Construction Approved on October 20, 2010			\$19,392.74	-\$371,034.11		-\$351,641.37	-0.4%	\$87,127,868.63	0	0	0	1,094	8/1/2012	
26.1	Change of Strut Material from FRP to Stainless Steel 316/Install CAT5 Cable from PLC 1600 to PLC 9 (CR 074) [PR 20214, 30214]	A	\$1,539.18												
26.2	Existing Primary Sludge Pump Room Demolition and Modifications (CR 076) [PR 20214, 30214]	C	\$3,909.94												
26.3	Fence Repair at SCE Substation (CR 078) [PR 20214, 30214]	B	\$1,957.62												
26.4	SHC Electrical and Controls and Milestone Revisions (CR 079) [PR 20214, 30214]	B	\$324.07												
26.5	Change to more Energy Efficient Air Conditioning Units (Five Total) (Submittal 15604-001) (CR 081) [PR 20214, 30214]	A	\$9,101.41												
26.6	Grouting of the Sodium Hypochlorite Tanks at their Permanent Site (CR 084) [PR 20214, 30214]	A	\$2,560.52												
27	Approved by Engineering & Operations Committee Approved on November 4, 2010			-\$58,157.82	-\$351,641.37		-\$409,799.19	-0.5%	\$87,069,650.81	0	0	0	1,094	8/1/2012	
27.1	Primary Sedimentation Tanks Flo-Clip Baffles Value Engineering (CR 080)	A	(\$58,157.82)												
28	Approved by GM Approved on November 24, 2010			\$39,525.24	-\$409,799.19		-\$370,273.95	-0.4%	\$87,109,176.05	0	0	0	1,094	8/1/2012	
28.1	Ducts for Future Phase 3 MBR (RFI 44) (RFI 016)	A	\$32,021.80												
28.2	Sodium Hypochlorite LCP Modifications (CR 071)	A	\$7,503.44												
29	Approved by Director of Engineering & Construction Approved on December 22, 2010			\$23,964.61	-\$370,273.95		-\$346,309.34	-0.4%	\$87,133,140.66	0	0	0	1,094	8/1/2012	
29.1	MBR Aeration Piping Access Platforms (CR-066)	A	\$14,074.73												
29.2	Electrical Conduit Installation near MWRP Phase 2 Trailers (Unforeseen Conditions) (CR 077)	B	\$9,889.88												

MWRP Phase 2 Expansion and Flood Protection Improvements
 PR 20214, 20542, 30214, and 30542
 Construction Summary

Contractor: J R Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount							Contract Days			Original Completion Date: 8/1/2012
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	
30	Approved by Assistant GM Approved on December 22, 2010 30.1 Pipe Support (20-PE and 18-ML) Modifications per Submittal 15090-003 (CR 073) 30.2 Material Change to SS 316 for Dry Type Transformer Submittal 16460-001 and Panelboard Submittal 16441-002 (CR 093) Pending Approval from Engineering & Operations Committee	C A	\$20,880.97 \$27,803.13	\$48,684.10	-\$346,309.34	-\$297,625.24	-0.3%	\$87,181,824.76	0	0	0	1,094	8/1/2012
31	Approval scheduled for January 18, 2011 31.1 Modifications at Campus Drive Access (CR 085) Approved by Director of Engineering & Construction	A	\$61,136.74	\$61,136.74	-\$297,625.24	-\$236,488.50	-0.3%	\$87,242,961.50	0	0	0	1,094	8/1/2012
32	Approved on January 31, 2011 32.1 Delete Grout Fillet and Add Embeds at Headworks Grit Chambers (CR 090) 32.2 ILCPs for Vertical Recirculating Chopper Pumps and Sump Pumps (CR 097) 32.3 Install Additional "Pipe Below Ground" Warning Tape (CR-099)	A C A	\$8,156.20 \$15,000.00 \$1,146.95	\$24,303.15	-\$236,488.50	-\$212,185.35	-0.2%	\$87,267,264.65	0	0	0	1,094	8/1/2012
33	Pending Approval from Board of Directors 33.1 Revised chlorine feed to filters (CR-038) 33.2 PEPS meter vaults and bypass piping revisions (CR-039) 33.3 MPS-2 Pump Discharge Pipe Modifications (NOPE #003/CR-040) 33.4 Modifications to MPS-2 Building Due to Unknown Duct Banks (RFI 160) (CR-049) 33.5 WAS/Foam Pump Revisions (CR-053) 33.6 Floodwall Revisions per County of Orange and FEMA comments (CR-083) 33.7 Modifications to Grating Supports at PST Splitter Box (CR-102) 33.8 Change to NEMA 3R SS 316 Cabinets and Additional Taps for UV Disinfection Transformers Added by CR 047/CO 16 (CR-104) 33.9 Miscellaneous Time & Material Items Demo Oversized Footing/Rebar on Existing Retaining Wall behind Paint Shop (CR-100) Removal of Unknown Concrete at the North Interceptor (CR-107) Thrust block on storage line at HRC vault (CR-108) Removal of encased pipe for pile driving at MBR (CR-109) Repair pile damaged when performing CR-109 (CR-110) Install hydrophilic waterstop at PST laundlers (CR-113)	C C D B C A C A B B B B B B	-\$3,510.68 -\$165,696.50 \$54,005.58 \$16,500.00 -\$5,696.40 \$350,685.85 \$5,266.73 \$12,003.29 \$5,391.41 \$2,917.38 \$3,638.22 \$2,756.79 \$1,320.34 \$3,258.14	\$282,840.15	-\$212,185.35	\$70,654.80	0.1%	\$87,556,104.80	0	0	0	1,094	8/1/2012

MWRP Phase 2 Expansion and Flood Protection Improvements
 PR 20214, 20542, 30214, and 30542
 Construction Summary

Contractor: J R Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount						Contract Days			Original Completion Date:	
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days		Revised Total Contract Days
34	Approved by Director of Engineering & Construction Approved on March 23, 2011												8/1/2012
34.1	Groundwater Well Modifications (CR-041) [PR 20214, 30214]	A	\$2,338.20										
34.2	Bypass for Shutdown at HRC Vault (CR-106) [PR 20214, 30214]	A	\$11,200.90										
34.3	Removal and Disposal of Abandoned 8-inch Reclaimed Water Line in the area of North Influent Interceptor Junction Structure (CR-111) [PR 20214, 30214]	B	\$3,039.17										
34.4	Additional Pipe Supports for 20" PE at MBR (CR-135) [PR 20214, 30214]	B	\$2,811.22										
34.5	Repair existing 6-in Reclaimed Water Line near Headworks (CR-138) [PR 20214, 30214]	C	\$2,455.07										
35	Approved by Asst. GM Approved on April 18, 2011												8/1/2012
35.1	Area 600 Blower Discharge Modifications (CR-055) [PR 20214, 30214]	A	\$28,785.00	\$43,741.00	\$92,499.36	\$136,240.36	0.2%	\$87,615,690.36	0	0	0	1,094	
35.2	Area 600 Blower Structural Support Modifications (CR-077) [PR 20214, 30214]	B	\$14,956.00										
36	Approved by Director of Engineering and Construction Approved on May 16, 2011												8/1/2012
36.1	Area 300 Primary Sedimentation and Area 700 Membrane Bioreactors FRP Launder Modifications (CR-087) [PR 20214, 30214]	A	\$4,757.27	\$23,514.97	\$136,240.36	\$159,755.33	0.2%	\$87,639,205.33	0	0	0	1,094	
36.2	Area 700 Membrane Bioreactors GE Piping Modifications (CR-136) [PR 20214, 30214]	B	\$16,933.64										
36.3	Addition of speed feedback on Various variable speed pumps (Chemical Systems) (CR-116) [PR 20214, 30214]	A	\$1,824.06										
37	Approved by Assistant GM Approved on May 30, 2011												8/1/2012
37.1	Replacement of Existing Area 600 Discharge Pipe Coupling (CR-117) [PR 20214, 30214]	A	\$14,011.85	\$46,369.50	\$159,755.33	\$206,124.83	0.2%	\$87,685,574.83	0	0	0	1,094	
37.2	Modifications to Primary Sedimentation Tank Embeds and Cover Plates (CR-125) [PR 20214, 30214]	A	\$6,751.65										
37.3	Increase of Bid Item A.8 - Additional Pre-drilling of Piles (CR-098) - 3.658 LF@ \$7/LF [PR 20214, 30214]	B	\$25,606.00										
38	Approved by Director of Engineering and Construction Approved on May 30, 2011												8/1/2012
38.1	Two-Sided (Split Faced) Masonry for Flood Protection Improvements (CR-088) [PR 20542, 30542]	C	\$19,704.00	\$24,692.00	\$206,124.83	\$230,816.83	0.3%	\$87,710,266.83	0	0	0	1,094	
38.2	Architectural Modifications of MBR Building per Revised Drawing A-702 (CR-149) [PR 20214, 30214]	C	\$4,988.00										

MWRP Phase 2 Expansion and Flood Protection Improvements
PR 20214, 20542, 30214, and 30542
Construction Summary

Contractor: J R Filanc Construction
Design Engineer: HDR

Change Order	Description	Category	Contract Amount										Contract Days			Original Completion Date:			
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Orders	Cum. Total C.O. days	Revised Total Contract Days	Original Days:	Original	Revised				
			Original Contract Amount: \$ 87,479,450.00													8/1/2012			
39	Approved by Engineering & Operations Committee Approved on June 21, 2011 Additional Architectural Modifications at High Rate Clarifier (CR-082) [PR 20214, 30214]	A	\$60,515.80	\$230,816.83	\$291,332.63	0.3%	\$87,770,782.63	0	0	0	0	0	0	0	1,094	0	1,094	8/1/2012	
40	Approved by Director of Engineering and Construction Approved on June 23, 2011 Double Containment Piping Modification for Sodium Hypochlorite System (CR-095) [PR 20214, 30214/Oracle 1599, 1706] Change of Enclosure from NEMA 4 to NEMA 4X SS for Chopper Pumps in CR-097 (CR-133) [PR 20214, 30214/Oracle 1599, 1706] Sodium Hypochlorite Tank Pad at PST Odor Control (CR-146) [PR 20214, 30214/Oracle 1599, 1706] Approved Assistant GM	A	\$16,157.16 \$1,347.00 \$5,709.89	\$291,332.63	\$314,546.68	0.4%	\$87,793,996.68	0	0	0	0	0	0	0	0	0	0	1,094	8/1/2012
41	Approved on June 24, 2011 MPS-2 replacement of existing valves (NOPE #4) (CR-126) [PR 20214, 30214/Oracle 1599, 1706] Graybar Modifications per RFI 372 (CR-144) [PR 20214, 30214/Oracle 1599, 1706] Steel Joists Modifications Due to Additional Load Requirements per Submittal 05221-001 (CR-153) [PR 20214, 30214/Oracle 1599, 1706]	A	\$35,068.26 \$3,429.00 \$9,508.00	\$362,551.94	\$421,702.68	0.5%	\$87,842,001.94	0	0	0	0	0	0	0	0	0	0	1,094	8/1/2012
42	Approved by Engineering & Operations Committee Approved on July 13, 2011 MBR Aeration and Permeate Piping Modifications (CR-048) [PR 20214, 30214/Oracle 1599, 1706]	B	\$59,150.74	\$362,551.94	\$421,702.68	0.5%	\$87,901,152.68	0	0	0	0	0	0	0	0	0	0	1,094	8/1/2012
43	Approved by Board of Directors Approved on July 25, 2011 Pipelines and Unilites for Future Biosolids (CR-017) (PR 20847/Oracle 1617) Biosolids Sewer Force Main (CR-045) (PR 20847/Oracle 1617) Geotechnical Investigation at Staging Area 2 for Biosolids Project (CR 137) (PR 20847/Oracle 1617)	D	\$503,272.17 \$626,976.14 \$2,035.40	\$1,132,283.71	\$1,553,986.39	1.8%	\$89,033,436.39	60 60 0	0	0	0	0	0	0	0	120	1,214	11/29/2012	
44	Pending Approval from Director of Engineering & Construction Approval Pending on August 18, 2011 Chemical Systems Pump Pad Modifications (CR-105) (PR 20214,30214/Oracle 1599,1706) Installation of 6" Gate Valve and Change of Pipe Size on PW near SII Junction (CR-140) (PR 20214,30214/Oracle 1599,1706) PLC-300 additional I/O to accommodate VFD change of Primary Sludge Pumps (PR 20214,30214/Oracle 1599,1706) Non-compensable time extension of Milestone 5 - Floodwall Installation delay due to FEMA review and regulatory compliance	A	\$1,833.71 \$9,141.00 \$13,999.77 \$0.00	\$1,553,986.39	\$1,578,960.87	1.8%	\$89,058,410.87	0	0	0	0	0	0	0	0	0	1,214	11/29/2012	
45	Approved by Director of Engineering & Construction	B	\$24,935.87	\$1,578,960.87	\$1,603,896.74	1.8%	\$89,083,346.74	0	0	0	0	0	0	0	0	0	1,214	11/29/2012	

MWRP Phase 2 Expansion and Flood Protection Improvements
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Contractor: J.R. Filanc Construction
 Design Engineer: HDR

Change Order	Description	Category	Contract Amount					Contract Days		Original Completion Date:				
			Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days		Original Days: 1,094	Revised Total Contract Days		
45.1	Approved on August 29, 2011 Deletion of Monorail and Door Modifications at Headworks (CR-103) (PR 20214,30214/Oracle 1599,1706)	A	\$3,570.03					0						
45.2	Hollow Metal Door Modifications (CR-156) (PR 20214,30214/Oracle 1599,1706)	A	\$7,396.38					0						
45.3	Miscellaneous T&M (CR-166) (PR 20214,30214/Oracle 1599,1706)	B	\$13,969.46					0						
46	Pending Approval from Board of Directors Approval Pending on September 26, 2011													
46.1	Replacement of Sand Canyon Zone A and Associated Piping, Valves, and Appurtenances (CR-130) (PR 30038/Oracle 1643)	D	\$455,216.07	\$476,789.37	\$1,603,896.74	\$2,080,686.11	2.4%	\$89,560,136.11	0	0	1,214	11/29/2012		
46.2	As Needed Potholing Related to Strainer Replacement and Pipe Installation (CR-130) (PR 30038/Oracle 1643)	D	\$21,573.30					0						

	Contract Amount	% of Original
A - District Convenience/Initiation - Project Related	\$ 9,961.18	0.0%
B - Differing Site Conditions	\$ 232,991.93	0.3%
C - Design Oversight	\$ 82,238.17	0.1%
D - District Convenience/Initiation - Non-Project Related	\$ 1,755,494.83	2.0%
TOTAL (A+B+C+D)	\$ 2,080,686.11	2.4%
TOTAL (A+B+C - (CCO No. 8 - SCADA))	\$ 1,461,012.03	1.7%

EXHIBIT "E"

IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Project Title: Michelson Water Reclamation Plant – Phase 2 Expansion Project & Flood Protection Improvements

Project No.: 20214, 30214, 20542 and 30542 Date: 9/7/11
Purchase Order No: 501695 Variance No.: 1

Originator: IRWD ENGINEER/CONSULTANT Other (Explain) _____

Description of Variance (*attach any back-up material*):
Supplemental pile foundation installation and geotechnical consulting services. See attached proposal Revised Proposal for Supplemental Pile Foundation Consulting Services, dated September 7, 2011.

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
Indicator Piles (see proposal - 9/7/11)						7,109
Production Piles (see proposal -9/7/11)						114,486
Total \$ =						121,595

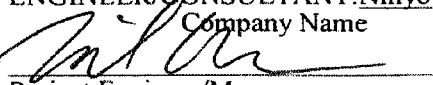
Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
		August 2012	Add 4 Months	November 29, 2012

Required Approval Determination:

Total Original Contract	\$ <u>304,900</u>	[] General Manager: Single Variance less than or equal to \$30,000.
Previous Variances \$	0	[] Committee: Single Variance greater than \$30,000, and less than or equal to \$60,000.
This Variance	\$ <u>121,595</u>	[X] Board: Single Variance greater than \$60,000.
Total Sum of Variances	\$ <u>121,595</u>	[] Board: Cumulative total of Variances greater than \$60,000, or 30% of the original contract, whichever is higher.
New Contract Amount	\$ <u>426,495</u>	
Percentage of Total Variances to Original Contract	39 %	

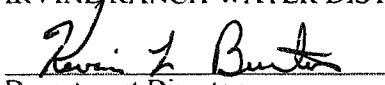
ENGINEER/CONSULTANT: Ninyo & Moore

 Company Name

 Project Engineer/Manager

 Date 9/7/11

 Date 9/7/11
 Engineer's/Consultant's Management

IRVINE RANCH WATER DISTRICT

 Department Director


 Date 9/14/11

 Date
 General Manager/Comm./Board

September 7, 2011
Proposal No. P-14173A

Mr. Billy Stewart, P.E.
Irvine Ranch Water District
P.O. Box 57000
Irvine, California 92619-7000

**Subject: Revised Proposal for Supplemental Pile Foundation Consulting Services
Michelson Water Reclamation Plant - Phase 2 Expansion
Irvine Ranch Water District
Irvine, California**

Dear Mr. Stewart:

Ninyo & Moore is pleased to submit this revised supplemental proposal to provide continued construction services during the remainder of the installation of driven piles for the Phase 2 Expansion of the Michelson Water Reclamation Plant. We have been providing these services since October 2009 for the project. Due to the Contractor's schedule, site soil conditions, supplemental inspection services, and supplemental design services, our original estimate provided in our referenced proposal date of August 6, 2009, has been exceeded due to the conditions outlined in the attached Table 1. Our supplemental services for the project will include geotechnical engineering, monitoring of pile driving operations, consultations and documentation of the foundation construction. Our work will include the responsibilities of the geotechnical engineer as indicated in the project specifications and evaluation of the contractor conformance to the project specifications.

The Phase 2 Expansion project will include construction of multiple new structures, piping systems and associated infrastructure improvements. Driven pre-cast concrete piles will be used to support the Influent Trunk Sewers, Headworks Facility, MBR Complex, High Rate Clarifier and Electrical Buildings. Per project Addendum No. 4, the new Flood Wall construction will be included in the project. The Flood Wall project will include installation of piles for wall support. The general sequence of work will involve: 1) review and evaluation of contractor submittals regarding pile driving equipment, pile driving plans/construction sequence, and Wave Equation Analysis (WEAP) data, 2) field evaluation and engineering analysis of Indicator Piles, including Pile Driving Analyzer (PDA) tests and Case Pile Wave Analysis Program (CAPWAP) results, and 3) monitoring and documentation of Production Piles. The WEAP analysis, PDA testing and

CAPWAP programs will be performed by the contractor in accordance with the project specifications and the data will be provided to Ninyo & Moore for analysis.

There will be four additional Indicator Piles in the Phase 2 Expansion for the south section of the influent trunk sewer and 268 Production Piles. The Flood Wall Indicator Piles have been completed. Approximately 600 of the 1,117 Production Piles still need to be installed for the floodwall. During pile driving operations, we will provide a Project Engineer for each pile driving rig in operation. During the Indicator Pile testing, our Principal Engineer will be on site periodically to observe the pile driving and consult with the Irvine Ranch Water District (IRWD) construction management team and the contractor. For estimating purposes, we have assumed that our Project Engineer(s) will be on site full time during pile driving operations, with periodic visits by our Principal Engineer. We have also assumed that the remaining Indicator Piles will be installed in one day and that an additional day will be involved for re-tap (total 2 rig days). During the Production Piles (868) we have assumed that 10 piles per day per rig will be installed, plus an additional 10 percent time for repair of damaged piles and re-tap (total 100 rig days).

SCOPE OF SERVICES

Based on our experience and our project understanding, we have prepared the following scope of services.

Indicator Piles

- Check pile location, depth of pre-drill, pile length, concrete strength and pile plumbness before driving. This task will be based on review of the contractor submittals, field survey data, project plans, pile schedules and pile rig set up.
- Evaluate and provide recommendations regarding pile pre-drill depths.
- Compare the pile driving record with subsurface soil conditions obtained from our field exploration.
- Record blow counts and pile hammer performance information, including hammer type, stroke and cushion material and dimension during pile driving operation.
- Evaluate the PDA results with pile driving records on-site to check that the compressive and tensile stresses during pile driving are within the tolerance.
- Evaluate the depth of refusal based on the PDA results.
- Coordinate the re-strike tests on the Indicator Piles per the project specifications (5 percent within 5 days and remaining piles after 7 days).

- Evaluate and make recommendations to IRWD if obstacles encountered during pile driving.
- Assist the contractor to evaluate the vibration and noise issues by using seismograph, if requested.
- Evaluate and make recommendations for damaged piles, if appropriate.
- Prepare daily field reports to document work performed, piles completed, pile driving conditions and contractor conformance to the project specifications. A pile plan and spread sheet will be developed for the project that will track piles completed and record details of the pile driving. The pile plan and spread sheet will be updated daily and electronic version will be available for review by IRWD/contractor.
- Attend meetings with IRWD and contractor to discuss Indicator Pile results and production pile recommendations.
- Develop recommendations for pile lengths and pile driving criteria for Production Piles.
- Prepare reports presenting Indicator Pile results and recommendations.

Production Piles

- Check pile location, depth of pre-drill, pile length, concrete strength and pile plumbness before driving. This task will be based on review of the contractor's field survey data, project plans, pile schedules and pile rig set up.
- Record blow counts and pile hammer performance information, including hammer type, hammer stroke, and cushion material and dimension during pile driving operation.
- Evaluate and consult with IRWD, the project structural engineer and the contractor for cutting off piles or over-driving piles, if refusal is encountered before reaching the specified tip elevation.
- Evaluate and consult with IRWD, the project structural engineer and the contractor for re-striking or over-driving the pile if blow counts are less than required near the specified tip elevation.
- Evaluate and make recommendations to IRWD if pile damage and/or obstacles are encountered during pile driving, as well as other conditions, such as ground heaving.
- Prepare daily field reports to document work performed, piles completed, and observations regarding pile driving conditions and contractor conformance to project specifications. The pile plan and spread sheet will be updated daily and will be available for review by the IRWD/contractor.
- Provide as-needed engineering support and consultations.
- Prepare a report presenting the results of the pile construction with conclusions regarding the adequacy of the pile installation. Our report will include detailed information regarding the pile driving in tabulated form, including pile number, pile depth, blow counts, and additional pertinent data for each pile.

ASSUMPTIONS

The following assumptions have been made in the preparation of this scope of services:

- We have assumed that the contractor will perform the pile driving at the estimated rate per pile driving rig outlined above.
- We have assumed that our representative(s) will be on site full time (8-hour working days) for the duration of the pile driving.

ESTIMATED FEE

Our services will continue to be performed on a time-and-materials basis in accordance with the attached Schedule of Fees. Based on the scope of services and assumptions presented above, we estimate that our fees for the additional Indicator Piles will be approximately \$7,100 (seven thousand one hundred dollars). Our estimated fees for the remaining Production Piles will be approximately \$114,500 (one hundred fourteen thousand five hundred dollars). Our total estimated fee for the project is approximately \$121,600 (one hundred twenty-one thousand six hundred dollars). Detailed breakdowns of our estimated fees are presented in the attached Tables 2 and 3.

Thank you for the opportunity to provide continued service on this project.

Respectfully submitted,
NINYO & MOORE



Michael T. Pearce, PE, GE
Senior Engineer

MTP/CAP/JV/sc



Jalal Vakili, PhD, PE
Principal Engineer

Attachments: References

- Table 1 – Outline of Conditions Resulting in Supplemental Services
- Table 2 – Breakdown of Estimated Fee – Indicator Piles
- Table 3 – Breakdown of Estimated Fee – Production Piles
- Schedule of Fees
- Schedule of Fees for Laboratory Testing

Distribution: (1) Addressee (via e-mail)

REFERENCES

- HDR Engineering, Inc., 2009, Project Manual for Michelson Water Reclamation Plant, Phase 2 Expansion, Project No. 20214, 30214, Volumes 1, Volumes 2A and 2B (Specifications), Volumes 4A and 4B (Construction Plans), and Volume 5, dated March.
- Ninyo & Moore, 2008a, Geotechnical Evaluation, Phase 2 Expansion, Michelson Water Reclamation Plant, Irvine Ranch Water District, Irvine, California, dated January 7.
- Ninyo & Moore, 2008b, Geotechnical Evaluation, Proposed Floodwall Improvements, Michelson Water Reclamation Plant, Irvine Ranch Water District, Irvine, California, dated July 8.
- Ninyo & Moore, 2008c, Geotechnical Report, Phase 2 Expansion, Michelson Water Reclamation Plant, Irvine Ranch Water District, Irvine, California, dated July 17.
- Ninyo & Moore, 2009a, Geotechnical Recommendations, Project Improvements within Orange County Flood Control District Right-of-Way, Phase 2 Expansion, Michelson Water Reclamation Plant, Irvine, California, dated February 27.
- Ninyo & Moore, 2009b, Geotechnical Evaluation, FEMA Levee Certification and San Diego Creek Flood Protection Improvements, Michelson Water Reclamation Plant, Irvine Ranch Water District, Irvine, California, dated June 23.
- Ninyo & Moore, 2009c, Proposal for Pile Foundation Consulting Services, Michelson Water Reclamation Plant – Phase 2 Expansion, Irvine Ranch Water District, Irvine, California, dated August 6.

TABLE 1 – OUTLINE OF CONDITIONS RESULTING IN SUPPLEMENTAL SERVICES

- 1) Contractor progress was slower than the original estimate (Schedule was extended four months).
- 2) Vibration of adjacent structures resulted in slow production.
- 3) Bird nesting limited the work area, resulting in slow production.
- 4) Additional design services for lateral capacity analysis due to site conditions.
- 5) Additional design services for pavement design for campus access per city requirements.
- 6) Provided out-of-scope testing and inspection during levee pipeline installation.
- 7) Provided out-of-scope keyway inspection for Pond D.

TABLE 2 – BREAKDOWN OF ESTIMATED FEE - INDICATOR PILES

SUBMITTALS, PROJECT MANAGEMENT AND MEETINGS			
Principal Engineer/Geologist/Environmental Scientist	1 hour	@ \$ 139.00 /hour	\$ 139.00
Project Engineer/Geologist/Environmental Scientist	4 hours	@ \$ 123.00 /hour	\$ 492.00
Subtotal			\$ 631.00

PILE DRIVING MONITORING (2 Days)			
Project Engineer/Geologist/Environmental Scientist	16 hours	@ \$ 123.00 /hour	\$ 1,968.00
Subtotal			\$ 1,968.00

DATA COMPILATION AND ANALYSIS			
Principal Engineer/Geologist/Environmental Scientist	4 hours	@ \$ 139.00 /hour	\$ 556.00
Project Engineer/Geologist/Environmental Scientist	8 hours	@ \$ 123.00 /hour	\$ 984.00
Staff Engineer/Geologist/Environmental Scientist	8 hours	@ \$ 96.00 /hour	\$ 768.00
Subtotal			\$ 2,308.00

REPORT PREPARATION			
Principal Engineer/Geologist/Environmental Scientist	2 hours	@ \$ 139.00 /hour	\$ 278.00
Project Engineer/Geologist/Environmental Scientist	8 hours	@ \$ 123.00 /hour	\$ 984.00
Staff Engineer/Geologist/Environmental Scientist	6 hours	@ \$ 96.00 /hour	\$ 576.00
Technical Illustrator/CAD Operator	4 hours	@ \$ 69.00 /hour	\$ 276.00
Data Processing, Technical Editing, or Reproduction	2 hours	@ \$ 44.00 /hour	\$ 88.00
Subtotal			\$ 2,202.00

TOTAL ESTIMATED FEE			\$ 7,109.00
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TABLE 3 – BREAKDOWN OF ESTIMATED FEE - PRODUCTION PILES

PROJECT MANAGEMENT AND MEETINGS			
Principal Engineer/Geologist/Environmental Scientist	8 hours @	\$ 139.00 /hour	\$ 1,112.00
Project Engineer/Geologist/Environmental Scientist	20 hours @	\$ 123.00 /hour	\$ 2,460.00
Subtotal			\$ 3,572.00
PILE DRIVING MONITORING (868 Production Piles/100 Rig Days)			
Principal Engineer/Geologist/Environmental Scientist	20 hours @	\$ 139.00 /hour	\$ 2,780.00
Project Engineer/Geologist/Environmental Scientist	800 hours @	\$ 123.00 /hour	\$ 98,400.00
Subtotal			\$ 101,180.00
DATA COMPILATION AND ANALYSIS			
Principal Engineer/Geologist/Environmental Scientist	8 hours @	\$ 139.00 /hour	\$ 1,112.00
Project Engineer/Geologist/Environmental Scientist	40 hours @	\$ 123.00 /hour	\$ 4,920.00
Subtotal			\$ 6,032.00
REPORT PREPARATION			
Principal Engineer/Geologist/Environmental Scientist	2 hours @	\$ 139.00 /hour	\$ 278.00
Project Engineer/Geologist/Environmental Scientist	8 hours @	\$ 123.00 /hour	\$ 984.00
Staff Engineer/Geologist/Environmental Scientist	16 hours @	\$ 96.00 /hour	\$ 1,536.00
Technical Illustrator/CAD Operator	8 hours @	\$ 69.00 /hour	\$ 552.00
Data Processing, Technical Editing, or Reproduction	8 hours @	\$ 44.00 /hour	\$ 352.00
Subtotal			\$ 3,702.00
TOTAL ESTIMATED FEE			\$ 114,486.00

SCHEDULE OF FEES

HOURLY CHARGES FOR PERSONNEL

Principal Engineer/Geologist/Environmental Scientist.....	\$ 139
Senior Engineer/Geologist/Environmental Scientist.....	\$ 133
Senior Project Engineer/Geologist/Environmental Scientist.....	\$ 127
Project Engineer/Geologist/Environmental Scientist.....	\$ 123
Senior Staff Engineer/Geologist/Environmental Scientist.....	\$ 109
Staff Engineer/Geologist/Environmental Scientist.....	\$ 96
GIS Analyst.....	\$ 96
Field Operations Manager.....	\$ 87
Supervisory Technician*.....	\$ 87
Nondestructive Examination Technician, UT, MT, LP*.....	\$ 87
Pull Test Technician and Equipment*.....	\$ 87
Senior Field/Laboratory Technician*.....	\$ 69
Field/Laboratory Technician*.....	\$ 69
ACI Concrete Technician*.....	\$ 69
Concrete/Asphalt Batch Plant Inspector.....	\$ 69
Special Inspector, Reinforced Concrete*.....	\$ 69
Special Inspector, Pre-stressed Concrete*.....	\$ 69
Special Inspector, Reinforced Masonry*.....	\$ 69
Special Inspector, Structural Steel*.....	\$ 69
Special Inspector, Welding, AWS*.....	\$ 69
Special Inspector, Fireproofing*.....	\$ 69
Technical Illustrator/CAD Operator.....	\$ 69
Geotechnical/Environmental/Laboratory Assistant.....	\$ 53
Information Specialist.....	\$ 52
Data Processing, Technical Editing, or Reproduction.....	\$ 44

OTHER CHARGES

Expert Witness Testimony.....	\$ 400 /hr
Concrete Coring Equipment (includes one technician).....	\$ 160 /hr
Special Preparation of Standard Test Specimens.....	\$ 64 /hr
Inclinometer Usage.....	\$ 32 /hr
Vapor Emission Kits.....	\$ 30 /kit
Rebar Locator (Pachometer).....	\$ 10 /hr
Nuclear Density Gauge Usage.....	\$ 9 /hr
Field Vehicle Usage.....	\$ --
Direct Project Expenses.....	Cost plus 15 %
Laboratory testing, geophysical equipment, and other special equipment provided upon request.	

NOTES (Field Services)

For field and laboratory technicians and special inspectors, regular hourly rates are charged during normal weekday construction hours. Overtime rates at 1.5 times the regular rates will be charged for work performed outside normal construction hours and all day on Saturdays. Rates at twice the regular rates will be charged for all work in excess of 12 hours in one day or on Sundays and holidays. Lead time for any requested service is 24 hours. Field Technician rates are based on a 2-hour minimum. Special inspection rates are based on a 4-hour minimum for the first 4 hours and an 8-hour minimum for hours exceeding 4 hours. Field personnel are charged portal to portal.

*Indicates rates that are based on Prevailing Wage Determination made by the State of California, Director of Industrial Relations on a semiannual basis. Our rates will be adjusted in conjunction with the increase in the Prevailing Wage Determination during the life of the project.

INVOICES

Invoices will be submitted monthly and are due upon receipt. A service charge of 1.0 percent per month may be charged on accounts not paid within 30 days.

TERMS AND CONDITIONS

The terms and conditions of providing our consulting services include our limitation of liability and indemnities as presented in Ninyo & Moore's Work Authorization and Agreement.

IRVINE RANCH WATER DIST | EXHIBIT "F"

Expenditure Authorization

Project Name: SAND CANYON ZONE A STRAINER REPLACEMENT
 Project No: 30038 EA No: 4
 Project Manager: MALLOY, STEVEN
 Project Engineer: STEWART, WILLIAM
 Request Date: September 20, 2011

ID Split: Miscellaneous

Improvement District (ID) Allocations		
ID No.	Allocation %	Source of Funds
210	100.0	REPLACEMENT FUND**
Total	100.0%	

Summary of Direct Cost Authorizations

Previously Approved EA Requests:	\$467,500
This Request:	\$377,900
Total EA Requests:	\$845,400
Previously Approved Budget:	\$733,200
Budget Adjustment Requested this EA:	\$112,200
Updated Budget:	\$845,400
Budget Remaining After This EA	\$0

Comments: 100% Replacement Funds

Phase	This EA Request	Previous EA Requests	EA Requests to Date	This Budget Request	Previous Budget	Updated Budget	Start	Finish
ENGINEERING DESIGN - IRWD	20,000	10,000	30,000	0	30,000	30,000	1/08	11/12
ENGINEERING DESIGN - OUTSIDE	(158,000)	293,000	135,000	(158,000)	293,000	135,000	4/09	11/12
DESIGN STAFF FIELD SUPPORT	0	3,000	3,000	0	3,000	3,000	4/09	11/12
ENGINEERING - CA&I IRWD	5,000	0	5,000	0	5,000	5,000	2/10	11/12
ENGINEERING - CA&I OUTSIDE	35,000	0	35,000	10,000	25,000	35,000	2/10	11/12
CONSTRUCTION FIELD SUPPORT	36,000	24,000	60,000	0	60,000	60,000	2/10	11/12
CONSTRUCTION	405,000	95,000	500,000	250,000	250,000	500,000	2/10	11/12
LEGAL	500	0	500	0	500	500	8/08	11/12
CAPITALIZED INTEREST EXPENSE/R	0	0	0	0	0	0	8/08	11/12
Contingency - 10.00% Subtotal	\$34,400	\$42,500	\$76,900	\$10,200	\$66,700	\$76,900		
Subtotal (Direct Costs)	\$377,900	\$467,500	\$845,400	\$112,200	\$733,200	\$845,400		
Estimated G/A - 180.00% of direct labor*	\$107,900	\$68,500	\$176,400	\$0	\$176,400	\$176,400		
Total	\$485,800	\$536,000	\$1,021,800	\$112,200	\$909,600	\$1,021,800		
Direct Labor	\$61,000	\$37,000	\$98,000	\$0	\$98,000	\$98,000		

*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:

[Signature] 9/20/11 Steve Malloy 9-20-11

Department Director:

[Signature] Kevin L. Burton 9-21-11

Finance:

Board/General Manager:

** IRWD hereby declares that it reasonably expects those expenditures marked with two asterisks to be reimbursed with proceeds of future debt to be incurred by IRWD in a maximum principal amount of \$1,043,000. 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.

