AGENDA
IRVINE RANCH WATER DISTRICT
BOARD OF DIRECTORS
REGULAR MEETING

June 11, 2012

PLEDGE OF ALLEGIANCE

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

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

NOTICE

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

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. UPDATE ON FEDERAL FUNDING

   Staff will present a history of appropriations and grants issued to the District under the District's Title XVI Authorization for Groundwater and Surface Water Improvement.

WORKSHOP

4. FISCAL YEAR 2012-13 CAPITAL BUDGET

   Recommendation: That the Board adopt a resolution approving the District's Capital Budget for Fiscal Year 2012-13. | Reso. No. 2012-

CONSENT CALENDAR	Next Resolution No. 2012-23	Items 5-15

5. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the May 29, 2012 Regular Board Meeting be approved as presented.

6. SELF-INSURED WORKERS' COMPENSATION COVERAGE

Recommendation: That the Board direct staff to continue to self-insure Workers' Compensation coverage using the District's current providers as outlined, bind coverage with CSAC Excess Insurance Authority at the $125,000 self-insured retention level and authorize the continuation of the Third Party Administrator coverage with York Insurance Services.

7. 2012 STATE LEGISLATIVE UPDATE

Recommendation: That the Board take a SUPPORT position on SB 1251 (Evans) and SB 1535 (Padilla) and a WATCH position on AB 2063 (Alejo).

8. 2012 SELECTION OF STATE LOBBYIST/CONSULTANT

Recommendation: That the Board approve a one-year Professional Services Agreement, from July 1, 2012 through June 30, 2013, with O'Haren Government Relations in the amount of $6,500 per month retainer plus reimbursable direct expenses for a total not to exceed $85,800.

9. GRANT OF EASEMENT TO KERN WATER BANK AUTHORITY

Recommendation: That the Board adopt a resolution authorizing the Grant of Easement for ingress and egress purposes to Kern Water Bank Authority. — Reso. No. 2012-

10. WATER SUPPLY ASSESSMENT FOR HERITAGE FIELDS PROJECT 2012 – GENERAL PLAN AMENDMENT AND ZONE CHANGE

Recommendation: That the Board approve the Water Supply Assessment for Heritage Fields Project 2012 General Plan Amendment and Zone Change.

11. VERIFICATION OF SUFFICIENT WATER SUPPLIES FOR SHEA BAKER RANCH (TENTATIVE TRACT MAP 16466)

Recommendation: That the Board approve the Verification of Sufficient Water Supplies for Shea Baker Ranch (Tentative Tract Map 16466).

CONSENT CALENDAR – Continued **Items 5-15**

12. SUSPENSION OF NATURAL TREATMENT SYSTEM SITE NO. 62 AND SMALL AREA MITIGATION SITE 1 PROJECTS

Recommendation: That the Board authorize staff to notify the Environmental Protection Agency of the District's intent not to construct the Natural Treatment System Site 62 project, and request that the grant agreement be terminated.

13. QUITCLAIM OF REAL PROPERTY

Recommendation: That the Board adopt a resolution approving execution of the of the Quitclaim Deed to IAC Apartment Development JV LLC. Reso. No. 2012-

14. ORANGE PARK ACRES WELL REPLACEMENT PROJECT FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Recommendation: That the Board find on the basis of the whole record before it (including the initial study and the comments received), that there is no substantial evidence that the Orange Park Acres Well Replacement Project will have a significant effect on the environment and that the Negative Declaration reflects IRWD's independent judgment and analysis; adopt the proposed Negative Declaration for the Orange Park Acres Well Replacement Project and Mitigation Monitoring and Reporting Program incorporated within the Mitigated Negative Declaration and approve the project; and direct staff to post and file a Notice of Determination and submit payment for the California Department of Fish and Game Filing fee.

15. REAPPOINTMENT OF COMMISSIONERS OF IRVINE RANCH WATER DISTRICT JOINT POWERS AGENCY

Recommendation: Acting as the governing board of Irvine Ranch Water District and as the governing body of Community Facilities District No. 1 of Irvine Ranch Water District, appoint Steven LaMar, Mary Aileen Matheis, Douglas Reinhart, Peer Swan and John Withers as Commissioners of the Irvine Ranch Water District Joint Powers Agency.

ACTION CALENDAR

16. NEWPORT BAY WATERSHED TMDL PROGRAM – COOPERATIVE AGREEMENT D11-066

Recommendation: That the Board approve Agreement D11-066 (Agreement to Fund Nutrient, Fecal Coliform and Toxics Total Maximum Daily Load (TMDL) Programs in the Newport Bay Watershed); authorize the General Manager to execute the agreement subject to non-substantive changes; and approve IRWD's funding share of up to $150,000 for Fiscal Year 2012-13.

ACTION CALENDAR - Continued

17. PASS THROUGH INDEMNIFICATION AGREEMENTS WITH ROSEDALE RIO BRAVO WATER STORAGE DISTRICT

Recommendation: That the Board authorize the General Manager to execute the three indemnification letter agreements with Rosedale-Rio Bravo Water Storage District subject to non-substantive changes by the General Manager and legal counsel to the letter agreements and subject to non-substantive changes to the three Kern County Water District/Rosedale-Rio Bravo Water Storage District agreements.

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.

18. A. General Manager's Report

B. Directors' Comments

1)

2)

3)

4)

OTHER BUSINESS - Continued

18. B. Directors' Comments

5)

C. Adjourn.

* *

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.

June 11, 2012
Prepared by: E. Akiyoshi/M. Hoolihan
Submitted by: K. Burton
Approved by: Paul Cook

WORKSHOP

FISCAL YEAR 2012-13 CAPITAL BUDGET

SUMMARY:

The projected expenditures for the proposed FY 2012-13 Capital Budget are $64.4 million. Staff recommends that a resolution be adopted approving the FY 2012-13 Capital Budget. A final Capital Budget notebook will be distributed following adoption.

FISCAL IMPACTS:

The table below shows the major project groups for the FY 2012-13.

Project Group	*FY 2012-13, $M*
MWRP Improvements	$ 11.5
OCSD CORF and Solids Handling	6.5
MWRP Biosolids Handling	5.1
Business Software	4.9
Baker Water Treatment Plant	4.2
Water Banking	2.1
OPA Groundwater Project	2.1
Syphon Reservoir (Interim Integrations/Feasibility)	1.6
Santiago Canyon Area Booster Pump Station Permanent Generators	1.3
Newport Blvd Water Main Replacement	1.0
Subtotal for Top Ten Projects:	$ 40.3
Other Projects:	$ 24.1
Total of all Projects:	$ 64.4

For the previous fiscal year, FY 2011-12, the Capital Budget expenditures were estimated to be $116.2 million. Actual expenditures are estimated to be approximately $106.6 million, or 92% of projected expenditures. The proposed FY 2012-13 Capital Budget is attached as Exhibit "A". A copy of the resolution is attached as Exhibit "B".

ENVIRONMENTAL COMPLIANCE:

None required.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 15, 2012. The draft FY 2012-13 Capital Budget summary presented to the Committee was $64.0 million. The item was also presented in a Workshop at the May 29, 2012 Board meeting.

The following changes have been made subsequent to the May 29, 2012 Board meeting:

- Project 1578, Pond 3 Observation Deck -- $72,600 has been added to the Capital Budget as discussed during the San Joaquin Marsh Ad Hoc Committee meeting on May 31, 2012.
- Projects 1570, 1602, and 1612, Santiago Canyon Area BPS Permanent Generators: Budgets are proposed to be increased by a combined total of $258,000 and will be reflected in the FY 12-13 Capital Budget. The budget increases are required due to the construction bid amount being greater than the engineer's estimate. Staff anticipates presenting these projects for construction award at the June 25, 2012 Board meeting.

As requested by the Board at the May 29, 2012 meeting, staff has made the following revisions:

- Flagged Projects – Projects that are nearing completion are being removed from the flagged projects list and include projects 1081 (Wells 21 and 22), 1498 (Lake Forest Well #2 Replacement/Wellhead), and 1520, 1167, 1236 (Great Park SAMP Update).
- All future Anaheim Well Field projects will be flagged.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2012 –

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY
CALIFORNIA, APPROVING THE DISTRICT'S CAPITAL
BUDGET FOR FISCAL YEAR 2012-13

LIST OF EXHIBITS:

Exhibit "A" – FY 2012-13 Capital Budget
Exhibit "B" – Resolution

CAPITAL BUDGET

FISCAL YEAR 2012/13

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

FISCAL YEAR 2012/13
CAPITAL BUDGET

TABLE OF CONTENTS

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1006	WATER BANKING EXPANSION	65,500	104,500	9,842,000	10,070,600	No	Planning
1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	55,000	145,000	55,000	145,000	No	Pending
1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	144,200	155,800	731,500	812,500	No	Construction
1016	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	143,000	179,000	No	Design
1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	464,600	474,400	3,499,100	3,603,500	No	Design
1030	SEWER VAULT LID REHABILITATION	19,400	32,900	297,600	351,600	No	Design
1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No	Pending
1047	LEGACY PARK TUSTIN RANCH ROAD	417,700	443,600	946,100	1,035,700	No	Construction
1054	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	242,000	350,000	No	Design
1056	PA39 PHASE 1 RW PIPELINES	51,200	58,300	180,400	220,000	No	Design
1063	PA18 ZN B-C BPS	5,700	6,300	1,813,500	1,903,500	No	Design
1065	RECYCLED VAULT LID REHABILITATION	130,300	155,400	297,600	351,600	No	Design
1066	LEGACY PARK TUSTIN RANCH ROAD	463,200	489,100	1,041,000	1,128,700	No	Construction
1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No	Pending
1079	GIS VALVE AND HYDRANT APPLICATION	20,000	27,600	20,000	27,600	No	Pending
1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	637,400	692,500	39,921,300	41,271,300	Yes	Construction
1090	SCADA WATER SYSTEM REPLACEMENT	216,800	237,000	1,479,900	1,820,100	No	Construction
1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	183,700	237,100	401,500	518,500	No	Pending
1096	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRAI	57,800	75,800	271,700	433,700	No	Construction
1103	PA 30 AND 51 NONPOTABLE FACILITIES	116,400	138,100	10,139,600	12,029,600	No	Pending
1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	18,000	26,900	236,500	353,500	No	Pending
1108	RECOAT FLEMING RESERVOIR	31,000	40,400	61,700	80,600	No	Planning
1118	MWRP FLOOD PROTECTION	267,700	287,600	3,304,500	3,691,500	No	Construction
1129	SEWER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No	Design
1132	CPTS RESTORE AND INSTALL	49,500	76,500	177,700	285,700	No	Planning
1134	GIS COLLECTIONS MAINTENANCE APPLICATION	60,000	86,100	60,000	86,100	No	Pending
1136	LONG TERM SEWER SYSTEM FLOW MONITORING	62,200	79,100	330,000	420,000	No	Planning
1149	MWRP GEN SYS MODS 12/13	222,200	225,800	222,200	225,800	No	Construction
1150	MWRP FLOOD PROTECTION	413,500	445,200	5,215,500	5,899,500	No	Construction
1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	143,000	156,900	852,500	969,500	No	Construction
1161	RECYCLED WATER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No	Design
1167	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes	Planning
1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOLA RA TO L	538,400	596,500	601,800	691,800	No	Construction
1177	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No	Pending
1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	70,400	105,800	1,069,200	1,197,000	No	Planning

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1189	LAKE FOREST DW OPPORTUNITY AREAS	55,400	146,900	5,483,300	6,305,900	No	Planning
1195	DATS & WELL 77 LEASE PAYMENT 12/13	250,000	250,000	405,700	405,700	No	Pending
1203	RAISE MANHOLES TO GRADE 12/13	165,000	165,000	165,000	165,000	No	Pending
1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	266,700	292,500	3,321,000	3,871,600	No	Planning
1221	SEWER GEN SYS MODS 12/13	275,000	275,000	275,000	275,000	No	Pending
1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	52,800	139,200	52,800	139,200	No	Pending
1229	PA 40 PHASE 2 NONPOTABLE WATER SYSTEM FACILITIES	551,000	573,500	2,436,100	2,526,100	No	Construction
1236	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes	Planning
1245	MODJESKA CANYON PIPELINE RELOCATIONS SITES 2,8,11	1,200	1,200	794,200	866,200	No	Planning
1248	ASPHALT REPAIR AT 15 SITES	26,300	32,900	52,600	65,900	No	Planning
1250	OPA / REGIONAL GROUNDWATER PROJECT	2,049,200	2,286,000	7,355,300	8,003,300	No	Construction
1251	MECH & ELEC SYS MODS - SEWER 12/13	165,000	165,000	165,000	165,000	No	Planning
1257	HQ LIGHTING RETROFIT	2,500	2,900	4,800	5,500	No	Planning
1259	GEN SYS MODS 12/13	58,300	79,900	58,300	79,900	No	Pending
1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	78,300	78,300	913,000	961,600	No	Construction
1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	949,100	949,100	4,910,000	5,090,000	No	Planning
1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	110,000	110,000	110,000	110,000	No	Construction
1267	ROOF REPAIR AT 3 SITES	49,000	50,800	97,900	101,500	No	Planning
1268	RAISE SYSTEM VALVES 12/13	170,500	179,500	170,500	179,500	No	Pending
1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	8,000	10,800	183,700	237,700	No	Construction
1276	1" TO 2" METER REPLACEMENT 12/13	120,500	134,000	120,500	134,000	No	Pending
1279	OPA / REGIONAL TRANSMISSION MAIN	48,800	49,800	10,988,900	11,564,900	No	Construction
1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPMENT	476,800	482,400	7,732,700	7,939,700	No	Planning
1296	CSR METER REPLACEMENT 12/13	51,700	55,300	51,700	55,300	No	Pending
1304	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	206,800	224,800	206,800	224,800	No	Pending
1306	RMS MIXING SYSTEM UPGRADES	22,500	22,500	360,100	369,100	No	Construction
1308	PA6 PH2 NEIGHBORHOOD 3 ZONE C RW PIPELINE	379,000	404,900	857,000	931,700	No	Design
1310	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No	Pending
1316	OPS CENTER HVAC CHILLER REPLACEMENT	72,200	75,800	144,500	151,700	No	Planning
1318	CHIQUITA GENERAL SYSTEM MODIFICATIONS 012/13	70,400	70,400	70,400	70,400	No	Construction
1319	OPS CENTER HVAC CHILLER REPLACEMENT	15,800	16,700	31,400	33,200	No	Planning
1326	STOCKDALE WEST FACILITIES	204,700	233,100	3,273,600	3,363,600	No	Construction
1328	ROOF REPAIR AT 3 SITES	74,100	75,400	148,000	150,700	No	Planning
1336	HQ LIGHTING RETROFIT	11,100	14,700	22,100	29,300	No	Planning
1337	OPA - DEMOLITION OF TANK & FOUR BPS	20,900	20,900	275,000	275,000	No	Planning

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1338	WATER BANKING AGREEMENTS	48,800	110,500	146,300	331,700	No	Planning
1340	ENG PLANNING STUDY RESERVE 12/13	116,600	253,400	116,600	253,400	No	Pending
1341	STRAND RANCH CROSS VALLEY CANAL TURNOUTS (KERN C	173,000	173,000	1,358,500	1,394,500	No	Design
1345	CALTRANS SHALLOW GROUNDWATER STUDY	200	400	319,000	391,000	No	Planning
1346	PA 40 PHASE 2 POTABLE WATER SYSTEM FACILITIES	86,200	108,700	194,700	239,700	No	Construction
1347	ASPHALT REPAIR AT 15 SITES	21,700	25,900	43,400	52,000	No	Planning
1364	MECH & ELEC SYS MODS - RW 12/13	220,000	220,000	220,000	220,000	No	Pending
1371	DEMOLITION OF HARDING TRUCK TRAIL RESERVOIR	5,900	7,900	34,700	43,700	No	Construction
1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	33,000	69,000	33,000	69,000	No	Pending
1391	CROSS VALLEY CANAL CAPACITY PURCHASE (KERN COUNT	95,700	95,700	656,300	683,300	No	Planning
1393	OCSD SOLIDS HANDLING 12/13	1,150,000	1,150,000	1,150,000	1,150,000	No	Construction
1403	WELL 107 REPLACEMENT & SITE ACQUISITION	455,100	467,100	3,538,600	3,646,600	No	Construction
1408	BARRANCA 54", 12" DW PIPELINE RELOCATIONS - VESTAR	27,200	44,500	3,174,100	3,291,100	No	Construction
1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	1,600	4,100	237,600	291,600	No	Design
1417	BAKER WTP	4,173,900	4,477,100	80,010,000	82,170,000	No	Design
1427	DOMESTIC WATER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No	Design
1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	47,300	124,700	47,300	124,700	No	Pending
1436	LAKE FOREST WW OFFSITE IMPROVEMENTS	78,900	208,600	4,051,000	4,659,400	No	Planning
1445	LAKE FOREST WW OPPORTUNITY AREAS	15,100	39,900	1,647,800	1,896,200	No	Planning
1448	WELL 53 SITE ACQUISITION & WELL DRILLING	13,700	19,000	2,405,700	2,477,700	No	Planning
1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	343,400	398,800	1,758,900	2,073,900	No	Construction
1466	PA 30 AND 51 DOMESTIC FACILITIES	95,200	114,800	8,295,100	10,005,100	No	Pending
1469	OCWD ANNEXATION	276,600	314,200	992,300	1,127,300	No	Planning
1472	GREENHOUSE GAS INVENTORY	54,100	85,300	202,100	319,100	No	Planning
1474	NEWPORT COAST CATHODIC PROTECTION	681,400	736,400	2,461,400	2,672,000	No	Construction
1477	LAWRP BIOSOLIDS HANDLING FACILITY	33,800	82,900	3,659,400	3,947,400	No	Planning
1485	OCSD EQUITY 11/12	2,680,800	2,680,800	8,013,000	8,013,000	No	Construction
1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	650,100	668,100	650,100	668,100	No	Pending
1490	MWRP BACKWASH SUPPLY PUMP REPLACEMENT	197,800	197,800	396,000	396,000	No	Pending
1495	OCSD EQUITY 12/13	100	100	100	100	No	Construction
1496	RESIDENTIAL METER REPLACEMENT 12/13	294,100	317,500	294,100	317,500	No	Pending
1498	LAKE FOREST WELL #2 REPLACEMENT DRILLING/WELLHEAI	53,800	60,400	2,394,200	2,637,000	Yes	Construction
1499	OPS CENTER HVAC CHILLER REPLACEMENT	69,000	71,500	138,200	143,200	No	Planning
1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOLA RA TO L	263,900	283,600	290,400	319,200	No	Construction
1512	RMS AT 5 DW RESERVOIRS	14,100	38,100	2,501,200	2,690,200	No	Planning

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1517	LAKE FOREST RW OPPORTUNITY AREAS	40,900	108,500	4,040,500	4,648,900	No	Planning
1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	174,000	195,000	1,580,400	1,769,400	No	Design
1519	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO PORTOLA	225,100	234,900	1,755,600	1,860,000	No	Design
1520	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes	Planning
1534	MWRP MPS-3 PUMP REPLACEMENT	127,400	127,400	255,000	255,000	No	Pending
1535	OCSD CORF 11/12	1,314,800	1,314,800	6,545,000	6,545,000	No	Construction
1538	ROOF REPAIR AT 3 SITES	89,800	91,600	179,700	183,300	No	Planning
1540	WELL 106 REPLACEMENT DRILLING & SITE ACQUISITION	72,300	112,700	2,021,400	2,120,400	No	Design
1541	OCSD CORF 12/13	1,336,300	1,336,300	1,673,000	1,673,000	No	Construction
1549	HQ LIGHTING RETROFIT	11,100	14,700	22,100	29,300	No	Planning
1556	ASPHALT REPAIR AT 15 SITES	1,000	1,300	1,800	2,400	No	Planning
1565	ENG PLANNING STUDY RESERVE 12/13	116,600	224,600	116,600	224,600	No	Pending
1570	SANTIAGO CANYON AREA BPS PERMANENT GENERATORS	1,023,000	1,079,100	1,577,300	1,694,300	No	Construction
1578	POND 3 OBSERVATION DECK	72,600	74,600	74,800	80,700	No	Design
1580	MWRP SECONDARY DEWATERING PUMP REPLACEMENT	30,000	30,000	60,000	60,000	No	Pending
1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	300	700	2,913,900	3,075,900	No	Pending
1599	MWRP EXPANSION PHASE II	6,609,800	7,000,600	66,615,300	70,591,500	No	Construction
1600	PORTOLA HILLS LS ABANDONMENT	251,300	352,100	2,640,000	2,883,000	No	Design
1602	SANTIAGO CANYON AREA READ BPS MCC	114,400	124,900	161,800	188,800	No	Construction
1612	SANTIAGO CANYON AREA SHAW BPS MCC	110,200	120,700	156,300	183,300	No	Construction
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILI	5,135,200	5,483,000	174,579,000	181,447,300	Yes	Design
1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	140,500	182,600	456,400	593,200	No	Planning
1625	MECH & ELEC SYS MODS - DW 12/13	275,000	275,000	275,000	275,000	No	Pending
1627	SERVICE LINE & MAIN REPLACEMENT 12/13	200,200	218,200	200,200	218,200	No	Pending
1629	DISTRICT WIDE SEWER REHABILITATION	85,400	131,700	749,100	875,100	No	Design
1632	PA39 DW PIPELINES (LAKE FOREST BAKE TO ROMANO)	153,300	168,200	691,900	776,500	No	Construction
1637	CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS IN SCWD	32,400	35,400	96,800	105,800	No	Planning
1640	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	242,000	350,000	No	Design
1642	PA 30 AND 51 WASTEWATER FACILITIES	115,200	137,900	10,038,800	12,018,800	No	Pending
1643	SAND CANYON ZONE A STRAINER REPLACEMENT	118,200	140,700	845,400	1,021,800	No	Construction
1646	GEN SYS MODS 12/13	135,300	174,900	135,300	174,900	No	Pending
1648	PA18 ZN 3-4 BPS	6,900	7,500	2,679,700	2,769,700	No	Planning
1656	RAISE SYSTEM VALVES 12/13	170,500	179,500	170,500	179,500	No	Pending
1662	PA39 SEWER PIPELINES (PHASE 1)	165,900	186,300	710,600	813,200	No	Construction
1664	NEWPORT COAST CATHODIC PROTECTION	508,400	548,500	1,852,400	2,010,800	No	Construction

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1665	NEWPORT COAST CATHODIC PROTECTION	171,800	183,500	617,000	661,600	No	Construction
1667	1" TO 2" METER REPLACEMENT 12/13	91,700	115,800	91,700	115,800	No	Pending
1669	FILTERS FOR FIVE COMMERCIAL BUILDINGS	33,900	38,300	239,300	270,800	No	Design
1674	CSR METER REPLACEMENT 12/13	203,500	212,500	203,500	212,500	No	Pending
1680	SCADA WATER SYSTEM REPLACEMENT	376,200	436,900	2,940,400	3,948,400	No	Construction
1685	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No	Pending
1695	COOLING TOWER CONST./MONITORING	125,100	207,900	198,000	329,400	No	Water Quality
1696	BARRANCA 16" RW RELOCATION - VESTAR	15,300	26,500	1,510,300	1,585,900	No	Construction
1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	47,300	124,700	47,300	124,700	No	Pending
1706	MWRP EXPANSION PHASE II	4,165,000	4,412,500	44,164,200	46,786,800	No	Construction
1727	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No	Pending
1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	577,600	630,600	1,186,200	1,334,700	No	Construction
1742	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No	Pending
1754	UCI / NIST	55,900	89,100	242,000	386,000	No	Planning
1767	ENG PLANNING STUDY RESERVE 12/13	143,000	287,000	143,000	287,000	No	Pending
1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	85,100	129,400	683,700	773,700	No	Design
1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRA	12,600	19,800	157,300	171,700	No	Pending
1792	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No	Pending
1798	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRA	104,700	122,700	420,200	528,200	No	Construction
1800	DOMESTIC VAULT LID REHABILITATION	120,000	149,700	297,600	378,600	No	Construction
1829	WEATHER-BASED IRRIG. CONTROLLER IMPLEMENTATION	44,300	53,100	429,000	519,000	No	Design
1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	78,300	78,300	903,100	948,100	No	Construction
1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	51,100	65,500	319,000	409,000	No	Planning
1839	CPTS RESTORE AND INSTALL	77,000	113,000	221,700	365,700	No	Planning
1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No	Pending
1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	33,000	69,000	33,000	69,000	No	Pending
1845	GIS VALVE AND HYDRANT APPLICATION	20,000	27,600	20,000	27,600	No	Pending
1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	160,300	270,900	2,249,500	2,519,500	Yes	Design
1866	NEWPORT BLVD WATER MAIN REPLACEMENT	1,139,500	1,174,700	5,279,500	5,675,500	No	Construction
2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1,541,100	1,653,400	17,739,700	18,387,700	No	Planning
3236	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No	Design
3237	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No	Design
3435	LEGACY PARK TUSTIN RANCH ROAD	508,500	543,000	1,155,800	1,272,800	No	Construction
3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	231,600	255,000	1,052,300	1,181,900	No	Construction
3531	PORTOLA ZONE 9 RESERVOIR ACCESS ROAD REPAIR	24,500	35,900	94,600	139,600	No	Design

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAI	615,000	838,800	1,992,100	2,712,100	No	Planning
3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAI	615,000	838,800	1,992,100	2,712,100	No	Planning
3585	BAKE PKWY SAN DIEGO CRK TO LAKE FOREST DR	216,100	245,900	470,800	541,000	No	Construction
3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	35,500	52,500	56,300	83,300	No	Planning
3667	JACKSON RANCH SOLAR PROJECT	87,100	145,700	131,600	221,600	No	Planning
3709	OPA - MEADS PS MODIFICATIONS	16,500	16,500	216,000	216,000	No	Design
3712	BEE CANYON BPS	46,800	71,500	211,200	301,200	No	Construction
3716	WELL 51 REPLACEMENT	2,300	6,000	2,123,000	2,321,000	No	Planning
3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITE ACQUIS.	277,600	322,900	3,685,600	3,820,600	No	Design
3718	DOMESTIC AUTOMATION EQUIPMENT REPLACEMENT 12/13	22,000	22,000	22,000	22,000	No	Construction
3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	106,900	125,700	107,300	126,200	No	Planning
3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No	Planning
3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	286,000	304,000	286,000	304,000	No	Construction
3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	51,500	56,900	51,700	57,100	No	Planning
3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No	Planning
3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	1,332,000	1,501,700	1,399,800	1,597,800	No	Design
3730	WQ PLANNING RESERVES 12/13 - RECYCLED	93,100	102,100	93,500	102,500	No	Planning
3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	250,000	304,000	250,000	304,000	No	Planning
3732	RW CONVERSION FOR OFF-SITE 12/13	145,800	190,800	145,800	190,800	No	Construction
3733	RECYCLED AUTOMATION EQUIPMENT REPLACEMENT 12/13	22,000	22,000	22,000	22,000	No	Construction
3750	SOCWA CROSSING PROTECTION	100,000	100,000	100,000	100,000	No	Planning
3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	350,000	368,000	350,000	368,000	No	Design
3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	184,900	238,900	246,400	318,400	No	Planning
3772	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No	Planning
3773	ENERGY EFFICIENCY PUMP REPLACEMENT	50,100	54,600	100,000	109,000	No	Design
3774	WELL MAINTENANCE AND REHABILITATION	130,100	139,100	260,000	278,000	No	Design
3775	MISC SEWER IMPROVEMENTS AT JAMBOREE CENTER	98,700	121,600	132,600	167,700	No	Construction
3777	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No	Planning
3778	HEALTH DEPT FEES FOR 12/13	77,000	96,500	77,000	96,500	No	Construction
3779	SALT MANAGEMENT PLAN DEVELOPMENT	110,100	132,600	220,000	265,000	No	Planning
3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	75,100	120,100	2,500,000	2,590,000	No	Design
3783	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No	Planning
3784	ENERGY EFFICIENCY PUMP REPLACEMENT	25,100	29,600	50,000	59,000	No	Design
3786	DW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	133,800	155,400	222,200	258,200	No	Construction
3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	57,700	68,500	95,700	113,700	No	Construction

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget
Project Expenditures by Project Number

Project No.	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
3788	RW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	17,500	22,900	28,600	37,600	No	Construction
3799	COATING MWRP	350,000	359,000	350,000	359,000	No	Planning
3844	PA 9B SEWER IMPROVEMENTS	194,900	219,800	238,700	283,700	No	Construction
	Grand Total:	**$64,396,000**	**$72,061,200**	**$664,623,400**	**$709,769,300**		

** "Pending" phase refers to projects not yet initiated.

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Flagged Projects

Project	Project Title
1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget

Top 20% of Projects by Decreasing Fiscal Year Expenditures

Project	Project Title	FY Direct Cost	FY Direct+GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1599	MWRP EXPANSION PHASE II	6,609,800	7,000,600	66,615,300	70,591,500	No	Construction
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACIL	5,135,200	5,483,000	174,579,000	181,447,300	Yes	Design
1417	BAKER WTP	4,173,900	4,477,100	80,010,000	82,170,000	No	Design
1706	MWRP EXPANSION PHASE II	4,165,000	4,412,500	44,164,200	46,786,800	No	Construction
1485	OCSD EQUITY 11/12	2,680,800	2,680,800	8,013,000	8,013,000	No	Construction
1250	OPA / REGIONAL GROUNDWATER PROJECT	2,049,200	2,286,000	7,355,300	8,003,300	No	Construction
2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1,541,100	1,653,400	17,739,700	18,387,700	No	Planning
3236	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No	Design
3237	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No	Design
1541	OCSD CORF 12/13	1,336,300	1,336,300	1,673,000	1,673,000	No	Construction
3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	1,332,000	1,501,700	1,399,800	1,597,800	No	Design
1535	OCSD CORF 11/12	1,314,800	1,314,800	6,545,000	6,545,000	No	Construction
1393	OCSD SOLIDS HANDLING 12/13	1,150,000	1,150,000	1,150,000	1,150,000	No	Construction
1866	NEWPORT BLVD WATER MAIN REPLACEMENT	1,139,500	1,174,700	5,279,500	5,675,500	No	Construction
1570	SANTIAGO CANYON AREA BPS PERMANENT GENERATORS	1,023,000	1,079,100	1,577,300	1,694,300	No	Construction
1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	949,100	949,100	4,910,000	5,090,000	No	Planning
1474	NEWPORT COAST CATHODIC PROTECTION	681,400	736,400	2,461,400	2,672,000	No	Construction
1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	650,100	668,100	650,100	668,100	No	Pending
1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	637,400	692,500	39,921,300	41,271,300	Yes	Construction
3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVA	615,000	838,800	1,992,100	2,712,100	No	Planning
3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVA	615,000	838,800	1,992,100	2,712,100	No	Planning
1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	577,600	630,600	1,186,200	1,334,700	No	Construction
1229	PA 40 PHASE 2 NONPOTABLE WATER SYSTEM FACILITIES	551,000	573,500	2,436,100	2,526,100	No	Construction
1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOLA RA TO	538,400	596,500	601,800	691,800	No	Construction
3435	LEGACY PARK TUSTIN RANCH ROAD	508,500	543,000	1,155,800	1,272,800	No	Construction
1664	NEWPORT COAST CATHODIC PROTECTION	508,400	548,500	1,852,400	2,010,800	No	Construction
1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPMENT	476,800	482,400	7,732,700	7,939,700	No	Planning
1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	464,600	474,400	3,499,100	3,603,500	No	Design
1066	LEGACY PARK TUSTIN RANCH ROAD	463,200	489,100	1,041,000	1,128,700	No	Construction
1403	WELL 107 REPLACEMENT & SITE ACQUISITION	455,100	467,100	3,538,600	3,646,600	No	Construction
1047	LEGACY PARK TUSTIN RANCH ROAD	417,700	443,600	946,100	1,035,700	No	Construction
1150	MWRP FLOOD PROTECTION	413,500	445,200	5,215,500	5,899,500	No	Construction
1308	PA6 PH2 NEIGHBORHOOD 3 ZONE C RW PIPELINE	379,000	404,900	857,000	931,700	No	Design
1680	SCADA WATER SYSTEM REPLACEMENT	376,200	436,900	2,940,400	3,948,400	No	Construction
3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	350,000	368,000	350,000	368,000	No	Design

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012 / 13 Capital Budget

Top 20% of Projects by Decreasing Fiscal Year Expenditures

Project	Project Title	FY Direct Cost	FY Direct+GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
3799	COATING MWRP	350,000	359,000	350,000	359,000	No	Planning
1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	343,400	398,800	1,758,900	2,073,900	No	Construction
3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No	Planning
3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No	Planning
1496	RESIDENTIAL METER REPLACEMENT 12/13	294,100	317,500	294,100	317,500	No	Pending
3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	286,000	304,000	286,000	304,000	No	Construction
3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITE ACQUIS	277,600	322,900	3,685,600	3,820,600	No	Design
1469	OCWD ANNEXATION	276,600	314,200	992,300	1,127,300	No	Planning
1625	MECH & ELEC SYS MODS - DW 12/13	275,000	275,000	275,000	275,000	No	Pending
1118	MWRP FLOOD PROTECTION	267,700	287,600	3,304,500	3,691,500	No	Construction
1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	266,700	292,500	3,321,000	3,871,600	No	Planning
1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOLA RA TO I	263,900	283,600	290,400	319,200	No	Construction
1600	PORTOLA HILLS LS ABANDONMENT	251,300	352,100	2,640,000	2,883,000	No	Design
3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	250,000	304,000	250,000	304,000	No	Planning
1767	ENG PLANNING STUDY RESERVE 12/13	143,000	287,000	143,000	287,000	No	Pending
	Grand Total:	**$51,445,300**	**$55,765,400**	**$528,733,200**	**$556,322,000**		

** "Pending" phase refers to projects not yet initiated.

IRVINE RANCH WATER DISTRICT
FY 2012/13 Capital Budget
Top Ten Project Groups

Order	Name of Group	FY 12/13 Amount ($ Millions)	Expended to Date ($ Millions)	Projected Future Expenditure ($ Millions)	Project Total ($ Millions)
1	MWRP Improvements	11.5	97.6	10.3	119.3
2	OCSD CORF and Solids Handling	6.5	0.0	16.6	23.1
3	MWRP Biosolids	5.1	12.0	157.4	174.6
4	Software Replacement	4.9	1.9	7.0	13.8
5	Baker WTP	4.2	6.3	69.6	80.0
6	Water Banking	2.1	15.4	5.2	22.6
7	OPA/Regional Groundwater Project	2.1	10.7	5.6	18.3
8	Syphon Reservoir	1.6	1.5	1.6	4.7
9	Santiago Canyon Area BPS Permanent Generators	1.3	0.4	0.3	1.9
10	Newport Blvd Water Main Replacement	1.0	0.8	3.1	4.9
	Subtotal	**40.2**	**146.5**	**276.6**	**463.2**
	Total All Projects	**64.4**			

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

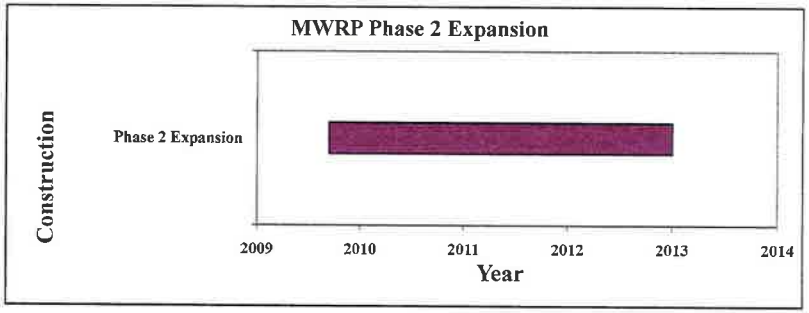
Project Group Name: MWRP Phase 2 Expansion

Project Description

The Phase 2 Expansion will increase the MWRP treatment capacity from 18 to 28 MGD. Primary components of the expansion include new influent sewers; influent flow metering facilities; centralized headworks facilities; primary clarification facilities; primary effluent pumping station; flow equalization basin modifications; nitrification/denitrification membrane bioreactor facilities; high rate clarification facilities; ultra-violet disinfection facilities; rehabilitation of existing chlorine contact chambers; effluent pumping station modifications; magnesium hydroxide, ferric chloride, polymer, sodium hypochlorite, and sodium hydroxide chemical storage and feed facilities; associated electrical, instrumentation and controls, and telemetry improvements; demolition work; site work and driven pile foundations; yard piping and grading modifications; and site paving and restoration work.

Also included is the Flood Protection project consisting of a wall around MWRP to provide flood protection from the San Diego Creek.

FY 2012/13 Key Milestones:	**Date**
Complete MWRP Flood Wall Construction	Oct-12
Complete MWRP Phase 2 Expansion Construction	Jan-13



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	$ 113,348,400	$ -	$ 5,951,100	$ 119,299,500	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	**$ 113,348,400**	**$ -**	**$ 5,951,100**	**$ 119,299,500**	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Total Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1599	MWRP EXPANSION PHASE II	$ 66,615,300	$ 6,609,800	$ 5,349,637	$ 54,655,863	Construction
1706	MWRP EXPANSION PHASE II	$ 44,164,200	$ 4,165,000	$ 3,855,730	$ 36,143,470	Construction
1150	MWRP FLOOD PROTECTION	$ 5,215,500	$ 413,500	$ 593,667	$ 4,208,333	Construction
1118	MWRP FLOOD PROTECTION	$ 3,304,500	$ 267,700	$ 470,049	$ 2,566,751	Construction
	TOTAL	**$ 119,299,500**	**$ 11,456,000**	**$ 10,269,083**	**$ 97,574,417**	

Project Status

Construction of the Phase 2 Expansion began in September 2009 and is anticipated to be completed by Jan 2013.

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2011/12

Project Group Name: OCSD CORF and Solids Handling

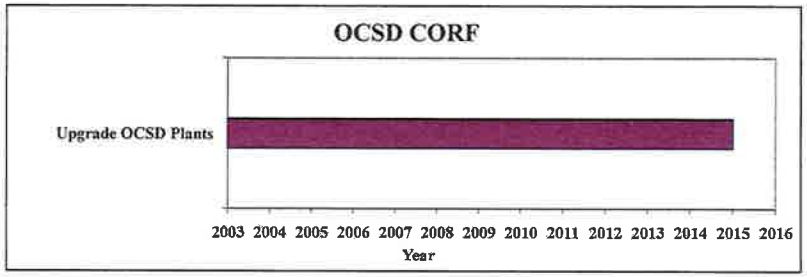
Project Description

OCSD's Capital Outlay Revolving Fund (CORF) funds OCSD projects such as plant upgrades for secondary treatment and the Groundwater Replenishment System (GWRS).

For FY 12/13, leased OCSD biosolids handling costs are also included.

FY 2012/13 Key Milestones

	Date
Complete Plant Upgrades for Secondary Treatment Standards	Dec-13



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	**$ 8,707,900**	**$ 8,673,200**	**$ -**	**$ 17,381,100**	
Existing Offsets	$ -	$ -	$ -	$0	
Potential Future Offsets	$ -	$ -	$ -	$0	
Net Amounts	**$ 8,707,900**	**$ 8,673,200**	**$ -**	**$ 17,381,100**	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2011/12

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1541	OCSD CORF 12/13	$ 1,673,000	$ 1,336,300	$ 336,700	$ -	Construction
1393	OCSD SOLIDS HANDLING 12/13	$ 1,150,000	$ 1,150,000	$ -	$ -	Construction
1485	OCSD EQUITY 11/12	$ 8,013,000	$ 2,680,800	$ 5,332,200	$ -	Construction
1535	OCSD CORF 11/12	$ 6,545,000	$ 1,314,800	$ 5,230,200	$ -	Construction
1495	OCSD EQUITY 12/13	$ 100	$ 100	$ -	$ -	Construction
	Total	**$ 17,381,100**	**$ 6,482,000**	**$ 10,899,100**	**$ -**	

Project Status

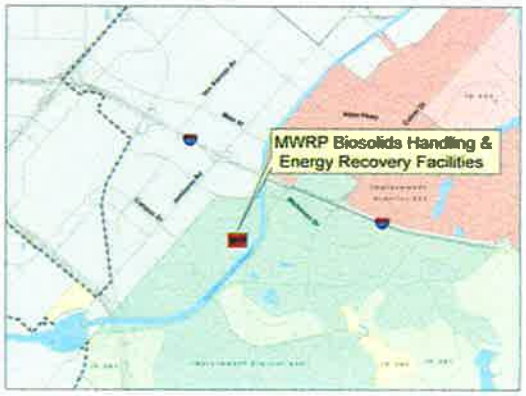
OCSD invoices IRWD on a quarterly basis for IRWD's share of funding OCSD construction. IRWD will continue to pay a portion of the CORF on an annual basis.

For FY 12/13 CORF payments, staff expects to pay 80% in FY12/13 and 20% in FY 13/14. For FY 13/14 CORF payments, staff expects to pay 80% in FY 13/14 and will carryover 20% to FY 14/15.

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

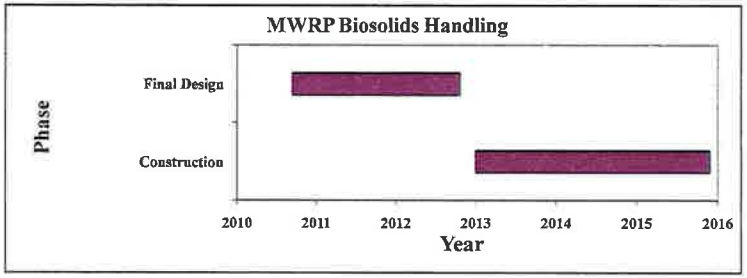
Project Group Name: MWRP Biosolids Handling and Energy Recovery Facility

The project includes the design and construction of facilities for thickening, acid-phase anaerobic digestion, dewatering, drying and pelletization, energy generation using a fuel cell, and use of pellets as a fertilizer or e-fuel. It will also include a solids receiving station to allow processing of dewatered sludge from the Los Alisos Water Recycled Water Plant (LAWRP) and alternative dewatered sludge from other wastewater facilities such as the Orange County Sanitation District (OCSD) for drying and pelletization. A FOG receiving and transfer station to the digesters is being designed and will be constructed to increase methane and energy production capabilities. IRWD will cease conveyance of MWRP residuals to the OCSD system by 2016.



FY 2012/13 Key Milestones:

	Date
Complete MWRP Biosolds Handling and Energy Recovery Facility Design	Sep-12
Complete MWRP Biosolids Handling and Energy Recovery Facility Construction	Dec-15



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	$ 174,579,000	$ -	$ -	$ 174,579,000	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	$ 174,579,000	$ -	$ -	$ 174,579,000	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Total Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	$ 174,579,000	$ 5,135,200	$ 157,350,284	$ 12,093,516	Design
	TOTAL	**$ 174,579,000**	**$ 5,135,200**	**$ 157,350,284**	**$ 12,093,516**	

Project Status

Final design is scheduled for completion in September 2012 with CEQA and the CUP for height variance completion in October 2012. The design incorporated the capability of processing dewatered sludge from LAWRP and or other agencies such as OCSD in the dryer system to make pellets along with a FOG receiving and transfer station to the digesters for additional generation of methane gas. Construction is scheduled to begin in January 2013 with the MWRP Biosolids facility in operation by December 2015.

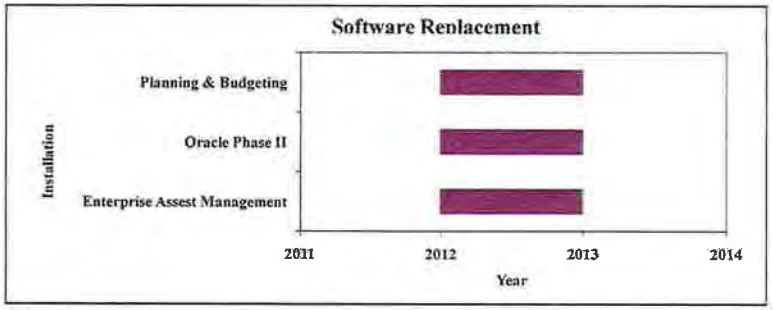
Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Project Group Name: Business Software Replacement

Project Description

This project involves the Phase II implementation of Oracle, Enterprise Asset Management Software Assessment and Evaluation, and Planning & Budgeting Software

FY 2012/13 Key Milestones	Date
Enterprise Asset Management	Dec-13
Oracle Phase II	Dec-13
Planning & Budgeting	Dec-13



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	$ 13,745,800	$ -	$ -	$ 13,745,800	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	$ 13,745,800	$ -	$ -	$ 13,745,800	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	$ 1,992,100	$ 615,000	$ 1,366,306	$ 10,794	Design
3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	$ 1,992,100	$ 615,000	$ 1,324,889	$ 52,211	Design
3237	ORACLE PHASE 2 - TECH AND UB	$ 4,242,800	$ 1,494,200	$ 2,008,150	$ 740,450	Design
3236	ORACLE PHASE 2 - TECH AND UB	$ 4,242,800	$ 1,494,200	$ 1,685,951	$ 1,062,649	Design
3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	$ 638,000	$ 316,500	$ 321,500	$ -	Design
3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	$ 638,000	$ 316,500	$ 321,500	$ -	Design
	TOTAL	**$ 13,745,800**	**$ 4,851,400**	**$ 7,028,296**	**$ 1,866,104**	

Project Status

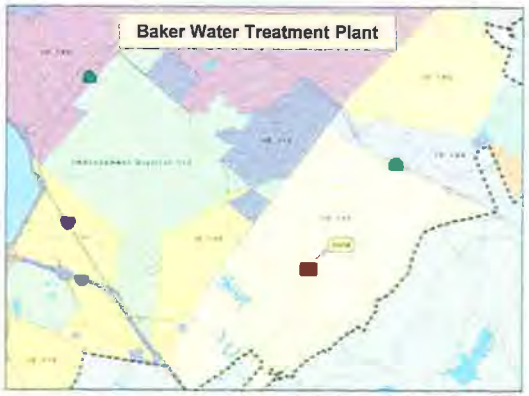
This project involves the Phase II implementation of Oracle, Enterprise Asset Management Software Assessment and Evaluation, and Planning & Budgeting Software

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

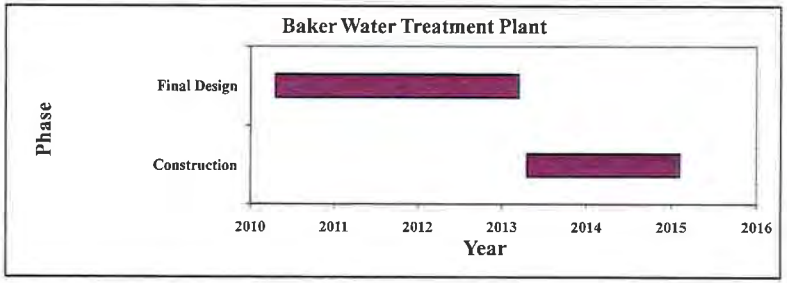
Project Group Name: Baker Water Treatment Plant

Project Description

The Baker Water Treatment Plant (WTP) will treat up to 28 mgd of raw water imported from Metropolitan Water District to drinking water standards to supply potable water to IRWD and other participating water agencies in southern Orange County. Raw water from Irvine Lake can be supplied to the plant during emergencies or when excess local runoff water is available in the lake. The raw water conveyance system consists of the Baker Pipeline and a raw water pump station near Peters Canyon Reservoir. The new treatment plant will consist of chlorine dioxide pre-treatment, pressurized membrane filtration, ultraviolet disinfection, and chloramination for residual disinfection. Product water will be stored in two existing 16 MG reservoirs at the site and pumped by a new product water pump station to participating agencies via the South County Pipeline. IRWD will take its share of treated water directly from the 16 MG reservoirs through the existing distribution system.



FY 2012/13 Key Milestones	Date
Complete Baker Plant Design	Nov-12
Begin Baker Plant Construction	Apr-13
Complete Baker Plant Construction	Mar-15



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	**$ 80,010,000**	**$ -**	**$ -**	**$ 80,010,000**	
Existing Offsets	$ (46,517,400)	$ -	$ -	$ (46,517,400)	Reimb. from partner agencies
Potential Future Offsets	$ (1,207,000)	$ -	$ -	$ (1,207,000)	IRWMP-South Prop 84, $5 mil total
Net Amounts	**$ 32,285,600**	**$ -**	**$ -**	**$ 32,285,600**	

Number 5

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1417	BAKER WATER TREATMENT PLANT (DESIGN/CONST)	$ 80,010,000	$ 4,173,900	$ 69,551,788	$ 6,284,312	Design
	Total	$ 80,010,000	$ 4,173,900	$ 69,551,788	$ 6,284,312	

Project Status

The final design of the project was substantially complete. However, in February 2012, Staff recommended that on-site residuals handling facilities be added to the overall project. Staff is working with the design consultants to complete the design and to incorporate the residuals handling facilities into the contract documents. The addition of these facilities will add about six months to the design schedule resulting in a revised bid advertisement date of November 2012.

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

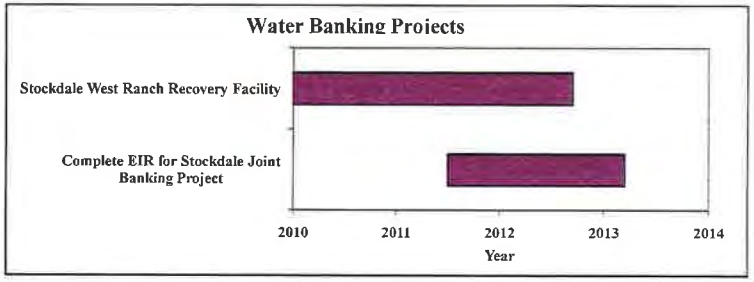
Project Group Name: Water Banking

Project Description

Water Banking projects provide IRWD with contingency water storage in Kern County to augment IRWD supply during dry-year periods. This group includes the following projects and features:

Interim Strand Ranch Recharge Project - 125 acres of recharge facilities
Strand Ranch Integrated Banking Project - 502 acres of recharge facilities, 50,000 af of storage, and 36 cfs of recovery capacity
Strand Ranch - Cross Valley Canal Turnout Construction - Two 100 cfs turnouts
Cross Valley Canal Capacity Purchase - 5 cfs capacity
Water Bank Expansion - Purchase of Stockdale West Ranch and a long-term lease of storage capacity from Rosedale-Rio Bravo Water Storage District
Jackson Ranch – 884 acres, 1757 AF Table A State Water Project entitlement, 9,495 AF minimum storage and 1,433 AF minimum recovery in Kern Water Bank
Stockdale West Ranch – 323 acres for development of future recharge and recovery facilities

FY 2012/13 Key Milestones	**Date**
Complete EIR for Stockdale Joint Banking Project	Feb-13
Complete Construction of Strand Ranch Recovery Facilities, CVC Turn-in, Pipelines	Aug-12



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	**$ 22,618,200**	**$ -**	**$ -**	**$ 22,618,200**	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	**$ 22,618,200**	**$ -**	**$ -**	**$ 22,618,200**	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	$ 17,739,700	$ 1,541,100	$ 5,000,576	$ 11,198,024	Construction
1341	STRAND RANCH CROSS VALLEY CANAL TURNOUTS (KERN CO)	$ 1,358,500	$ 173,000	$ (5,863)	$ 1,191,363	Construction
1326	STOCKDALE WEST FACILITIES	$ 3,273,600	$ 204,700	$ 101,775	$ 2,967,125	Construction
3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	$ 246,400	$ 184,900	$ 61,500	$ -	Planning
	TOTAL	**$ 22,618,200**	**$ 2,103,700**	**$ 5,157,988**	**$ 15,356,512**	

Project Status

Project Status 2012/13:

Strand Ranch Recovery Facilities project (wellheads, pipelines and turn-in structures) is nearly completed in 2011/12;
Initiated Environmental Impact Report for the Stockdale West Joint Banking Project and a Project Development Agreement was executed with Rosedale-Rio Bravo Water Storage District;
Entered into one-year pilot project agreements for unbalanced exchanges with Antelope Valley East Kern Water Agency for up to 5,000 AF and with Central Coast Water Authority for up to 1,500 to deliver State Water Project into storage in 2012;
In 2011, IRWD stored under the Buena Vista Program approximately 16,700 AF in Strand Ranch and 3,300 AF in Stockdale West Ranch;
In 2011, IRWD banked 1,420 AF in Kern Water Bank storage account.

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Project Group Name: OPA/Regional Groundwater Project

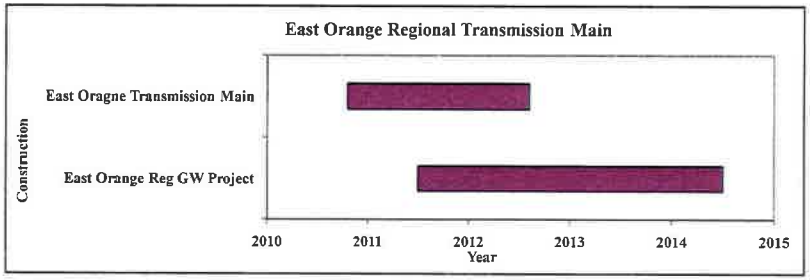
Project Description

The former Orange Park Acres Mutual Water Company is now the Orange Park Acres (OPA) Service Area within Irvine Ranch Water District.

Approximately 21,000 feet of 20-inch, 16-inch, 8-inch, and 6-inch water pipeline is proposed from the existing OPA Well at Bond and Gravier Street to the ultimate connection at the existing IRWD Zone 5 system at Chapman and Jamboree.

Additional service upgrades include a new pump station at Meads and Jons Way, five PRV's, a temporary PRV in Chapman, abandoning the existing reservoir at Calle Grande, abandoning existing booster pump stations, 4,000 linear feet of 8-inch pipeline to reach minimum fire flow requirements, meter relocations on Chapman Avenue, and various connections, tie-ins, and appurtenances.

FY 2012/13 Key Milestones	Date
Complete Transmission Main Construction	Jul-12
Complete Mechanical and Fire Flow System Improvement Design	Jul-12
Complete Mechanical and Fire Flow System Improvement Construction	Jul-12
Complete Chapman Meter Relocation Design	Jul-12
Complete Chapman Meter Relocation Construction	Jul-12



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	**$ 18,344,200**	**$ -**	**$ -**	**$ 18,344,200**	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	**$ 18,344,200**	**$ -**	**$ -**	**$ 18,344,200**	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1250	OPA/Regional Groundwater Project	$ 7,355,300	$ 2,049,200	$ 4,816,671	$ 489,429	Construction
1279	EAST ORANGE REGIONAL TRANSMISSION MAIN	$ 10,988,900	$ 48,800	$ 747,904	$ 10,192,196	Construction
	Total	**$ 18,344,200**	**$ 2,098,000**	**$ 5,564,575**	**$ 10,681,625**	

Project Status

The Orange Park Acres Project will consist of several construction contracts. The transmission main portion is currently in construction and is anticipated to be completed in July 2012.

The design of the second major construction contract, which includes the mechanical and fire flow system improvements, is anticipated to be completed in May 2011 and constructed by July 2012.

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

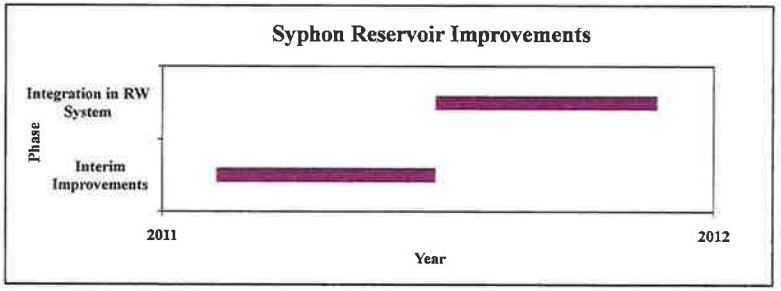
Project Group Name: Syphon Reservoir Improvements

Project Description

The project group consists of two components: 1) the interim integration of the existing reservoir into the IRWD Zone "A" recycled water system; and 2) completion of the feasibility analysis for the expansion of the reservoir.

FY 2012/13 Key Milestones

	Date
Syphon Reservoir Integration into RW System	May-13



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	$ 4,720,800	$ -	$ -	$ 4,720,800	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	$ 4,720,800	$ -	$ -	$ 4,720,800	

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	$ 1,399,800	$ 1,332,000	$ 67,800	$ -	Construction
1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	$ 3,321,000	$ 266,700	$ 1,567,613	$ 1,486,687	Construction
	TOTAL	$ 4,720,800	$ 1,598,700	$ 1,635,413	$ 1,486,687	

Project Status

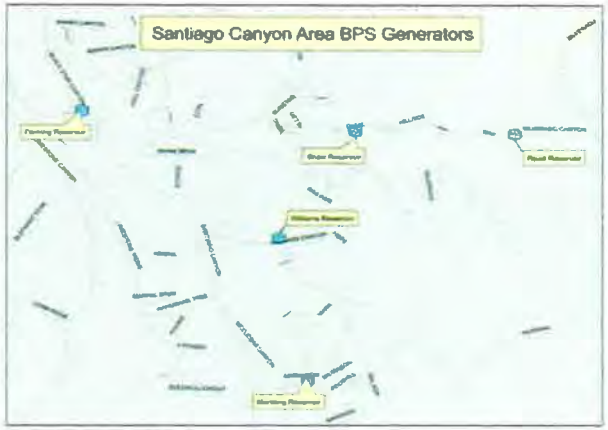
The design for the interim integration has been initiated and is scheduled for completion in May 2013.

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

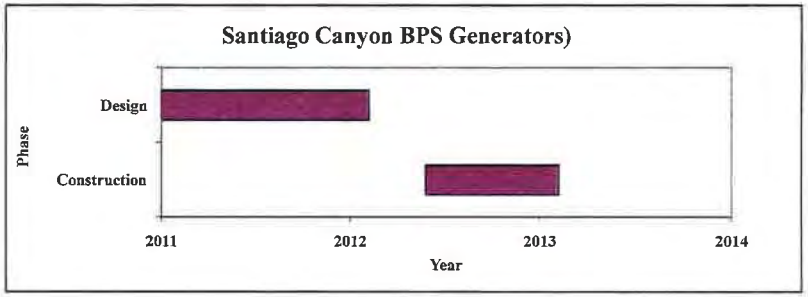
Project Group Name: Santiago Canyon Area BPS Permanent Generators

Project Description

Project involves installing permanent diesel generators at five booster pump stations at Fleming, Shaw, Reid, Williams, and Manning booster pump stations.



FY 2012/13 Key Milestones	Date
Complete Design	Apr-12
Complete Construction	Jan-13



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	**$ 1,895,400**	**$ -**	**$ -**	**$ 1,895,400**	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	**$ 1,895,400**	**$ -**	**$ -**	**$ 1,895,400**	

Number 9

Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1570	Santiago Area BPS Permanent Generators	$ 1,577,300	$ 1,023,000	$ 191,644	$ 362,656	Construction
1602	Santiago Canyon Area Read BPS MCC	$ 161,800	$ 114,400	$ 47,400	$ -	
1612	Santiago Canyon Area Shaw BPS MCC	$ 156,300	$ 110,200	$ 46,100	$ -	Construction
	TOTAL	**$ 1,895,400**	**$ 1,247,600**	**$ 285,144**	**$ 362,656**	

Project Status

The project final design was completed in April 2012. The project will be awarded to Pacific Hydrotech for construction at the June 2012 Board Meeting.

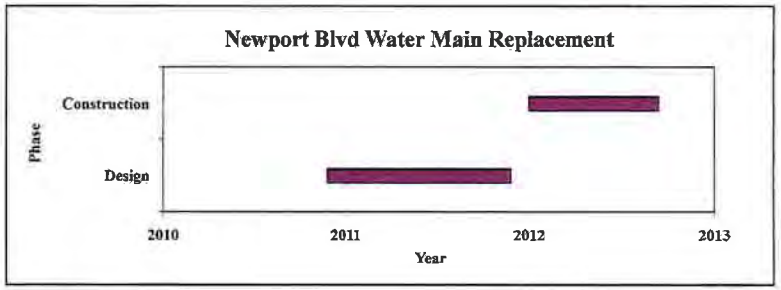
Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Project Group Name: Newport Blvd Water Main Replacement

Project Description

The Newport Boulevard Domestic Water Main Relocation project will replace approximately 5,000 linear feet of 8 and 12-inch asbestos cement water main located in Santa Ana Heights between Wilson Street and Mesa Drive, which provides drinking water, irrigation, fire services, and fire hydrants to approximately 73 customers. The work will also include water services/meters, valves, appurtenances, connections, removal of existing and installation of new fire hydrants, double check backflow assemblies, reduced pressure principle backflow assemblies, and on-site piping improvements.

FY 2012/13 Key Milestones	Date
Newport Blvd Water Main Replacement Design	Nov-11
Newport Blvd Water Main Replacement Construction	Sep-12



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Commments
Total Budget	$ -	$ 4,859,500	$ -	$ 4,859,500	
Existing Offsets	$ -	$ -	$ -	$ -	
Potential Future Offsets	$ -	$ -	$ -	$ -	
Net Amounts	$ -	$ 4,859,500	$ -	$ 4,859,500	

Number 10

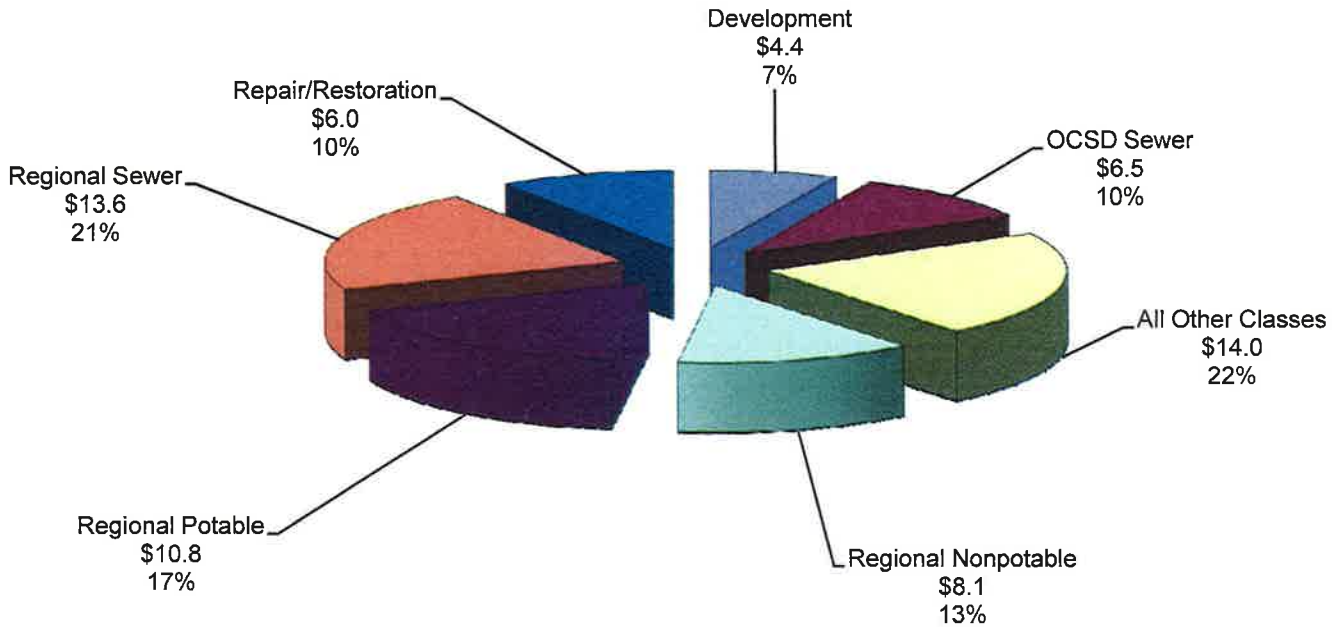
Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2012/13

Oracle No.	Project	Proj Tot Dir	FY12-13 Dir	Projected Future Expenditure	Expended to Date	Stage
1866	NEWPORT BLVD WATER MAIN REPLACEMENT	$ 4,859,500	$ 1,032,700	$ 3,079,032	$ 747,768	Construction
	TOTAL	**$ 4,859,500**	**$ 1,032,700**	**$ 3,079,032**	**$ 747,768**	

Project Status

The construction contract was awarded to Sully Miller Contracting Company in January 2012. The work will be substantially completed by September 2012.

FY 2012/13 Capital Budget Projected Expenditures
Total Funding By Class



IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Class:

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No	Planning
3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No	Planning
	Class:	**$633,000**	**$659,800**	**$1,276,000**	**$1,330,000**		

Class: Administration

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	55,000	145,000	55,000	145,000	No	Pending
1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	52,800	139,200	52,800	139,200	No	Pending
1469	OCWD ANNEXATION	276,600	314,200	992,300	1,127,300	No	Planning
3236	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No	Design
3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	615,000	838,800	1,992,100	2,712,100	No	Planning
1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	47,300	124,700	47,300	124,700	No	Pending
3237	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No	Design
3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	615,000	838,800	1,992,100	2,712,100	No	Planning
1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	47,300	124,700	47,300	124,700	No	Pending
	Class: Administration	**$4,697,400**	**$6,355,400**	**$13,664,500**	**$17,244,700**		

Class: Development

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1047	LEGACY PARK TUSTIN RANCH ROAD	417,700	443,600	946,100	1,035,700	No	Construction
1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	70,400	105,800	1,069,200	1,197,000	No	Planning
1189	LAKE FOREST DW OPPORTUNITY AREAS	55,400	146,900	5,483,300	6,305,900	No	Planning
1346	PA 40 PHASE 2 POTABLE WATER SYSTEM FACILITIES	86,200	108,700	194,700	239,700	No	Construction
1466	PA 30 AND 51 DOMESTIC FACILITIES	95,200	114,800	8,295,100	10,005,100	No	Pending
1519	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO PORTOLA	225,100	234,900	1,755,600	1,860,000	No	Design

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1520	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes	Planning
1632	PA39 DW PIPELINES (LAKE FOREST BAKE TO ROMANO)	153,300	168,200	691,900	776,500	No	Construction
1648	PA18 ZN 3-4 BPS	6,900	7,500	2,679,700	2,769,700	No	Planning
3712	BEE CANYON BPS	46,800	71,500	211,200	301,200	No	Construction
1066	LEGACY PARK TUSTIN RANCH ROAD	463,200	489,100	1,041,000	1,128,700	No	Construction
1167	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes	Planning
1445	LAKE FOREST WW OPPORTUNITY AREAS	15,100	39,900	1,647,800	1,896,200	No	Planning
1642	PA 30 AND 51 WASTEWATER FACILITIES	115,200	137,900	10,038,800	12,018,800	No	Pending
1662	PA39 SEWER PIPELINES (PHASE 1)	165,900	186,300	710,600	813,200	No	Construction
3844	PA 9B SEWER IMPROVEMENTS	194,900	219,800	238,700	283,700	No	Construction
1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	464,600	474,400	3,499,100	3,603,500	No	Design
1056	PA39 PHASE 1 RW PIPELINES	51,200	58,300	180,400	220,000	No	Design
1063	PA18 ZN B-C BPS	5,700	6,300	1,813,500	1,903,500	No	Design
1103	PA 30 AND 51 NONPOTABLE FACILITIES	116,400	138,100	10,139,600	12,029,600	No	Pending
1229	PA 40 PHASE 2 NONPOTABLE WATER SYSTEM FACILITIES	551,000	573,500	2,436,100	2,526,100	No	Construction
1236	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes	Planning
1308	PA6 PH2 NEIGHBORHOOD 3 ZONE C RW PIPELINE	379,000	404,900	857,000	931,700	No	Design
1517	LAKE FOREST RW OPPORTUNITY AREAS	40,900	108,500	4,040,500	4,648,900	No	Planning
1696	BARRANCA 16" RW RELOCATION - VESTAR	15,300	26,500	1,510,300	1,585,900	No	Construction
3435	LEGACY PARK TUSTIN RANCH ROAD	508,500	543,000	1,155,800	1,272,800	No	Construction
3778	HEALTH DEPT FEES FOR 12/13	77,000	96,500	77,000	96,500	No	Construction
	Class: Development	**$4,364,100**	**$5,025,800**	**$60,803,000**	**$69,701,900**		

Class: GIS

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1177	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No	Pending
1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No	Pending
1845	GIS VALVE AND HYDRANT APPLICATION	20,000	27,600	20,000	27,600	No	Pending
1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No	Pending
1134	GIS COLLECTIONS MAINTENANCE APPLICATION	60,000	86,100	60,000	86,100	No	Pending

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1685	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No	Pending
1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No	Pending
1079	GIS VALVE AND HYDRANT APPLICATION	20,000	27,600	20,000	27,600	No	Pending
1792	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No	Pending
	Class: GIS	**$340,000**	**$504,000**	**$340,000**	**$504,000**		

Class: Master Plans

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	183,700	237,100	401,500	518,500	No	Pending
1310	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No	Pending
1767	ENG PLANNING STUDY RESERVE 12/13	143,000	287,000	143,000	287,000	No	Pending
1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	51,100	65,500	319,000	409,000	No	Planning
1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	33,000	69,000	33,000	69,000	No	Pending
1136	LONG TERM SEWER SYSTEM FLOW MONITORING	62,200	79,100	330,000	420,000	No	Planning
1340	ENG PLANNING STUDY RESERVE 12/13	116,600	253,400	116,600	253,400	No	Pending
1727	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No	Pending
1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	18,000	26,900	236,500	353,500	No	Pending
1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	33,000	69,000	33,000	69,000	No	Pending
1565	ENG PLANNING STUDY RESERVE 12/13	116,600	224,600	116,600	224,600	No	Pending
1742	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No	Pending
	Class: Master Plans	**$889,200**	**$1,497,600**	**$1,861,200**	**$2,790,000**		

Class: Miscellaneous Projects

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	949,100	949,100	4,910,000	5,090,000	No	Planning
1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPMENT	476,800	482,400	7,732,700	7,939,700	No	Planning
1326	STOCKDALE WEST FACILITIES	204,700	233,100	3,273,600	3,363,600	No	Construction
1336	HQ LIGHTING RETROFIT	11,100	14,700	22,100	29,300	No	Planning

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1371	DEMOLITION OF HARDING TRUCK TRAIL RESERVOIR	5,900	7,900	34,700	43,700	No	Construction
1472	GREENHOUSE GAS INVENTORY	54,100	85,300	202,100	319,100	No	Planning
1578	POND 3 OBSERVATION DECK	72,600	74,600	74,800	80,700	No	Design
1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	140,500	182,600	456,400	593,200	No	Planning
1640	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	242,000	350,000	No	Design
3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	35,500	52,500	56,300	83,300	No	Planning
3667	JACKSON RANCH SOLAR PROJECT	87,100	145,700	131,600	221,600	No	Planning
3773	ENERGY EFFICIENCY PUMP REPLACEMENT	50,100	54,600	100,000	109,000	No	Design
1016	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	143,000	179,000	No	Design
1549	HQ LIGHTING RETROFIT	11,100	14,700	22,100	29,300	No	Planning
3775	MISC SEWER IMPROVEMENTS AT JAMBOREE CENTER	98,700	121,600	132,600	167,700	No	Construction
1054	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	242,000	350,000	No	Design
1257	HQ LIGHTING RETROFIT	2,500	2,900	4,800	5,500	No	Planning
1669	FILTERS FOR FIVE COMMERCIAL BUILDINGS	33,900	38,300	239,300	270,800	No	Design
1754	UCI / NIST	55,900	89,100	242,000	386,000	No	Planning
1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	85,100	129,400	683,700	773,700	No	Design
3784	ENERGY EFFICIENCY PUMP REPLACEMENT	25,100	29,600	50,000	59,000	No	Design
	Class: Miscellaneous Projects	**$2,442,400**	**$2,750,700**	**$18,995,800**	**$20,444,200**		

Class: Natural Treatment System

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	160,300	270,900	2,249,500	2,519,500	Yes	Design
	Class: Natural Treatment System	**$160,300**	**$270,900**	**$2,249,500**	**$2,519,500**		

Class: Operational Requirements

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1250	OPA / REGIONAL GROUNDWATER PROJECT	2,049,200	2,286,000	7,355,300	8,003,300	No	Construction
1279	OPA / REGIONAL TRANSMISSION MAIN	48,800	49,800	10,988,900	11,564,900	No	Construction

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IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1337	OPA - DEMOLITION OF TANK & FOUR BPS	20,900	20,900	275,000	275,000	No	Planning
1664	NEWPORT COAST CATHODIC PROTECTION	508,400	548,500	1,852,400	2,010,800	No	Construction
1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	78,300	78,300	903,100	948,100	No	Construction
1839	CPTS RESTORE AND INSTALL	77,000	113,000	221,700	365,700	No	Planning
3709	OPA - MEADS PS MODIFICATIONS	16,500	16,500	216,000	216,000	No	Design
1149	MWRP GEN SYS MODS 12/13	222,200	225,800	222,200	225,800	No	Construction
1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	110,000	110,000	110,000	110,000	No	Construction
1665	NEWPORT COAST CATHODIC PROTECTION	171,800	183,500	617,000	661,600	No	Construction
1132	CPTS RESTORE AND INSTALL	49,500	76,500	177,700	285,700	No	Planning
1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	78,300	78,300	913,000	961,600	No	Construction
1474	NEWPORT COAST CATHODIC PROTECTION	681,400	736,400	2,461,400	2,672,000	No	Construction
1643	SAND CANYON ZONE A STRAINER REPLACEMENT	118,200	140,700	845,400	1,021,800	No	Construction
	Class: Operational Requirements	**$4,230,500**	**$4,664,200**	**$27,159,100**	**$29,322,300**		

Class: OCSD Sewer

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1393	OCSD SOLIDS HANDLING 12/13	1,150,000	1,150,000	1,150,000	1,150,000	No	Construction
1485	OCSD EQUITY 11/12	2,680,800	2,680,800	8,013,000	8,013,000	No	Construction
1495	OCSD EQUITY 12/13	100	100	100	100	No	Construction
1535	OCSD CORF 11/12	1,314,800	1,314,800	6,545,000	6,545,000	No	Construction
1541	OCSD CORF 12/13	1,336,300	1,336,300	1,673,000	1,673,000	No	Construction
	Class: OCSD Sewer	**$6,482,000**	**$6,482,000**	**$17,381,100**	**$17,381,100**		

Class: Regional Nonpotable

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	144,200	155,800	731,500	812,500	No	Construction
1090	SCADA WATER SYSTEM REPLACEMENT	216,800	237,000	1,479,900	1,820,100	No	Construction
1118	MWRP FLOOD PROTECTION	267,700	287,600	3,304,500	3,691,500	No	Construction

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IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	266,700	292,500	3,321,000	3,871,600	No	Planning
1259	GEN SYS MODS 12/13	58,300	79,900	58,300	79,900	No	Pending
1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOLA RA TO LF	263,900	283,600	290,400	319,200	No	Construction
1706	MWRP EXPANSION PHASE II	4,165,000	4,412,500	44,164,200	46,786,800	No	Construction
1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	577,600	630,600	1,186,200	1,334,700	No	Construction
3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	231,600	255,000	1,052,300	1,181,900	No	Construction
3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	1,332,000	1,501,700	1,399,800	1,597,800	No	Design
3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	250,000	304,000	250,000	304,000	No	Planning
3732	RW CONVERSION FOR OFF-SITE 12/13	145,800	190,800	145,800	190,800	No	Construction
3779	SALT MANAGEMENT PLAN DEVELOPMENT	110,100	132,600	220,000	265,000	No	Planning
3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	75,100	120,100	2,500,000	2,590,000	No	Design
3788	RW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	17,500	22,900	28,600	37,600	No	Construction
	Class: Regional Nonpotable	**$8,122,300**	**$8,906,600**	**$60,132,500**	**$64,883,400**		

Class: Regional Potable

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1006	WATER BANKING EXPANSION	65,500	104,500	9,842,000	10,070,600	No	Planning
1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	637,400	692,500	39,921,300	41,271,300	Yes	Construction
1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOLA RA TO LF	538,400	596,500	601,800	691,800	No	Construction
1195	DATS & WELL 77 LEASE PAYMENT 12/13	250,000	250,000	405,700	405,700	No	Pending
1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	8,000	10,800	183,700	237,700	No	Construction
1306	RMS MIXING SYSTEM UPGRADES	22,500	22,500	360,100	369,100	No	Construction
1338	WATER BANKING AGREEMENTS	48,800	110,500	146,300	331,700	No	Planning
1341	STRAND RANCH CROSS VALLEY CANAL TURNOUTS (KERN CO)	173,000	173,000	1,358,500	1,394,500	No	Design
1345	CALTRANS SHALLOW GROUNDWATER STUDY	200	400	319,000	391,000	No	Planning
1391	CROSS VALLEY CANAL CAPACITY PURCHASE (KERN COUNTY)	95,700	95,700	656,300	683,300	No	Planning
1408	BARRANCA 54", 12" DW PIPELINE RELOCATIONS - VESTAR	27,200	44,500	3,174,100	3,291,100	No	Construction
1417	BAKER WTP	4,173,900	4,477,100	80,010,000	82,170,000	No	Design
1448	WELL 53 SITE ACQUISITION & WELL DRILLING	13,700	19,000	2,405,700	2,477,700	No	Planning
1498	LAKE FOREST WELL #2 REPLACEMENT DRILLING/WELLHEAD.	53,800	60,400	2,394,200	2,637,000	Yes	Construction

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IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1512	RMS AT 5 DW RESERVOIRS	14,100	38,100	2,501,200	2,690,200	No	Planning
1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	174,000	195,000	1,580,400	1,769,400	No	Design
1570	SANTIAGO CANYON AREA BPS PERMANENT GENERATORS	1,023,000	1,079,100	1,577,300	1,694,300	No	Construction
1646	GEN SYS MODS 12/13	135,300	174,900	135,300	174,900	No	Pending
1656	RAISE SYSTEM VALVES 12/13	170,500	179,500	170,500	179,500	No	Pending
1680	SCADA WATER SYSTEM REPLACEMENT	376,200	436,900	2,940,400	3,948,400	No	Construction
1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	12,600	19,800	157,300	171,700	No	Pending
1798	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRADES	104,700	122,700	420,200	528,200	No	Construction
1829	WEATHER-BASED IRRIG. CONTROLLER IMPLEMENTATION	44,300	53,100	429,000	519,000	No	Design
2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1,541,100	1,653,400	17,739,700	18,387,700	No	Planning
3585	BAKE PKWY SAN DIEGO CRK TO LAKE FOREST DR	216,100	245,900	470,800	541,000	No	Construction
3716	WELL 51 REPLACEMENT	2,300	6,000	2,123,000	2,321,000	No	Planning
3718	DOMESTIC AUTOMATION EQUIPMENT REPLACEMENT 12/13	22,000	22,000	22,000	22,000	No	Construction
3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	350,000	368,000	350,000	368,000	No	Design
3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	184,900	238,900	246,400	318,400	No	Planning
3786	DW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	133,800	155,400	222,200	258,200	No	Construction
1096	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRADES	57,800	75,800	271,700	433,700	No	Construction
1268	RAISE SYSTEM VALVES 12/13	170,500	179,500	170,500	179,500	No	Pending
	Class: Regional Potable	**$10,841,300**	**$11,901,400**	**$173,306,600**	**$180,927,600**		

Class: Regional Sewer

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1030	SEWER VAULT LID REHABILITATION	19,400	32,900	297,600	351,600	No	Design
1150	MWRP FLOOD PROTECTION	413,500	445,200	5,215,500	5,899,500	No	Construction
1203	RAISE MANHOLES TO GRADE 12/13	165,000	165,000	165,000	165,000	No	Pending
1221	SEWER GEN SYS MODS 12/13	275,000	275,000	275,000	275,000	No	Pending
1436	LAKE FOREST WW OFFSITE IMPROVEMENTS	78,900	208,600	4,051,000	4,659,400	No	Planning
1477	LAWRP BIOSOLIDS HANDLING FACILITY	33,800	82,900	3,659,400	3,947,400	No	Planning
1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	300	700	2,913,900	3,075,900	No	Pending
1599	MWRP EXPANSION PHASE II	6,609,800	7,000,600	66,615,300	70,591,500	No	Construction

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IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1600	PORTOLA HILLS LS ABANDONMENT	251,300	352,100	2,640,000	2,883,000	No	Design
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	5,135,200	5,483,000	174,579,000	181,447,300	Yes	Design
1629	DISTRICT WIDE SEWER REHABILITATION	85,400	131,700	749,100	875,100	No	Design
3750	SOCWA CROSSING PROTECTION	100,000	100,000	100,000	100,000	No	Planning
3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	57,700	68,500	95,700	113,700	No	Construction
3799	COATING MWRP	350,000	359,000	350,000	359,000	No	Planning
	Class: Regional Sewer	**$13,575,300**	**$14,705,200**	**$261,706,500**	**$274,743,400**		

Class: Relocations

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1245	MODJESKA CANYON PIPELINE RELOCATIONS SITES 2,8,11	1,200	1,200	794,200	866,200	No	Planning
1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	343,400	398,800	1,758,900	2,073,900	No	Construction
1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	143,000	156,900	852,500	969,500	No	Construction
	Class: Relocations	**$487,600**	**$556,900**	**$3,405,600**	**$3,909,600**		

Class: Repair/Restoration

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1108	RECOAT FLEMING RESERVOIR	31,000	40,400	61,700	80,600	No	Planning
1316	OPS CENTER HVAC CHILLER REPLACEMENT	72,200	75,800	144,500	151,700	No	Planning
1328	ROOF REPAIR AT 3 SITES	74,100	75,400	148,000	150,700	No	Planning
1347	ASPHALT REPAIR AT 15 SITES	21,700	25,900	43,400	52,000	No	Planning
1403	WELL 107 REPLACEMENT & SITE ACQUISITION	455,100	467,100	3,538,600	3,646,600	No	Construction
1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	1,600	4,100	237,600	291,600	No	Design
1427	DOMESTIC WATER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No	Design
1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	650,100	668,100	650,100	668,100	No	Pending
1496	RESIDENTIAL METER REPLACEMENT 12/13	294,100	317,500	294,100	317,500	No	Pending
1540	WELL 106 REPLACEMENT DRILLING & SITE ACQUISITION	72,300	112,700	2,021,400	2,120,400	No	Design
1602	SANTIAGO CANYON AREA READ BPS MCC	114,400	124,900	161,800	188,800	No	Construction

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IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1612	SANTIAGO CANYON AREA SHAW BPS MCC	110,200	120,700	156,300	183,300	No	Construction
1625	MECH & ELEC SYS MODS - DW 12/13	275,000	275,000	275,000	275,000	No	Pending
1637	CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS IN SCWD	32,400	35,400	96,800	105,800	No	Planning
1667	1" TO 2" METER REPLACEMENT 12/13	91,700	115,800	91,700	115,800	No	Pending
1674	CSR METER REPLACEMENT 12/13	203,500	212,500	203,500	212,500	No	Pending
1800	DOMESTIC VAULT LID REHABILITATION	120,000	149,700	297,600	378,600	No	Construction
1866	NEWPORT BLVD WATER MAIN REPLACEMENT	1,139,500	1,174,700	5,279,500	5,675,500	No	Construction
3531	PORTOLA ZONE 9 RESERVOIR ACCESS ROAD REPAIR	24,500	35,900	94,600	139,600	No	Design
3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITE ACQUIS.	277,600	322,900	3,685,600	3,820,600	No	Design
3774	WELL MAINTENANCE AND REHABILITATION	130,100	139,100	260,000	278,000	No	Design
1129	SEWER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No	Design
1251	MECH & ELEC SYS MODS - SEWER 12/13	165,000	165,000	165,000	165,000	No	Planning
1490	MWRP BACKWASH SUPPLY PUMP REPLACEMENT	197,800	197,800	396,000	396,000	No	Pending
1499	OPS CENTER HVAC CHILLER REPLACEMENT	69,000	71,500	138,200	143,200	No	Planning
1534	MWRP MPS-3 PUMP REPLACEMENT	127,400	127,400	255,000	255,000	No	Pending
1538	ROOF REPAIR AT 3 SITES	89,800	91,600	179,700	183,300	No	Planning
1556	ASPHALT REPAIR AT 15 SITES	1,000	1,300	1,800	2,400	No	Planning
1580	MWRP SECONDARY DEWATERING PUMP REPLACEMENT	30,000	30,000	60,000	60,000	No	Pending
1627	SERVICE LINE & MAIN REPLACEMENT 12/13	200,200	218,200	200,200	218,200	No	Pending
1065	RECYCLED VAULT LID REHABILITATION	130,300	155,400	297,600	351,600	No	Design
1161	RECYCLED WATER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No	Design
1248	ASPHALT REPAIR AT 15 SITES	26,300	32,900	52,600	65,900	No	Planning
1267	ROOF REPAIR AT 3 SITES	49,000	50,800	97,900	101,500	No	Planning
1276	1" TO 2" METER REPLACEMENT 12/13	120,500	134,000	120,500	134,000	No	Pending
1296	CSR METER REPLACEMENT 12/13	51,700	55,300	51,700	55,300	No	Pending
1304	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	206,800	224,800	206,800	224,800	No	Pending
1319	OPS CENTER HVAC CHILLER REPLACEMENT	15,800	16,700	31,400	33,200	No	Planning
1364	MECH & ELEC SYS MODS - RW 12/13	220,000	220,000	220,000	220,000	No	Pending
3733	RECYCLED AUTOMATION EQUIPMENT REPLACEMENT 12/13	22,000	22,000	22,000	22,000	No	Construction
	Class: Repair/Restoration	**$5,981,800**	**$6,416,900**	**$21,119,300**	**$22,581,200**		

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
FY 2012/13 Captial Budget
Project Expenditures by Class

Class: Safety Requirements

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
3772	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No	Planning
3777	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No	Planning
3783	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No	Planning
	Class: Safety Requirements	**$415,800**	**$496,800**	**$415,800**	**$496,800**		

Class: SMWD Sewer

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
1318	CHIQUITA GENERAL SYSTEM MODIFICATIONS 012/13	70,400	70,400	70,400	70,400	No	Construction
3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	286,000	304,000	286,000	304,000	No	Construction
	Class: SMWD Sewer	**$356,400**	**$374,400**	**$356,400**	**$374,400**		

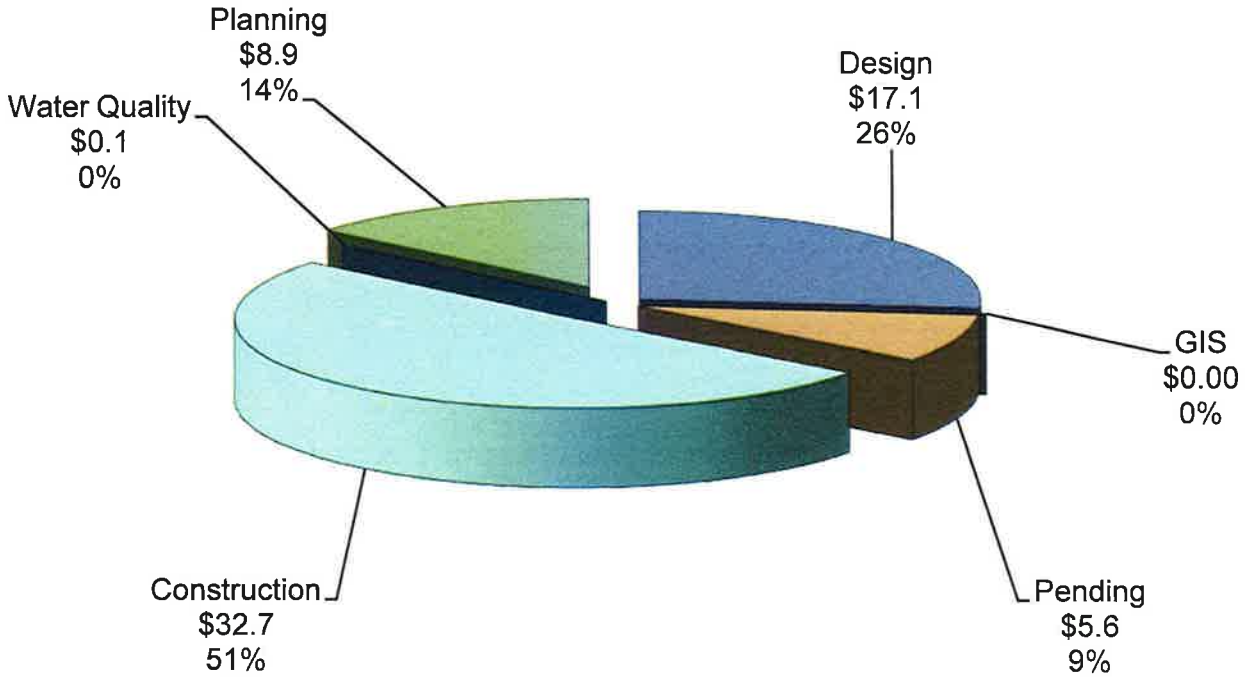
Class: Water Quality

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag	Phase**
3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	106,900	125,700	107,300	126,200	No	Planning
3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	51,500	56,900	51,700	57,100	No	Planning
1695	COOLING TOWER CONST./MONITORING	125,100	207,900	198,000	329,400	No	Water Quality
3730	WQ PLANNING RESERVES 12/13 - RECYCLED	93,100	102,100	93,500	102,500	No	Planning
	Class: Water Quality	**$376,600**	**$492,600**	**$450,500**	**$615,200**		

Grand Total:	**$64,396,000**	**$72,061,200**	**$664,623,400**	**$709,769,300**

**** "Pending" phase refers to projects not yet initiated.**

FY 2012/13 Capital Budget Projected Expenditures
Total Funding By Phase



IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Phase: Construction

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1599	MWRP EXPANSION PHASE II	6,609,800	7,000,600	66,615,300	70,591,500	No
1706	MWRP EXPANSION PHASE II	4,165,000	4,412,500	44,164,200	46,786,800	No
1485	OCSD EQUITY 11/12	2,680,800	2,680,800	8,013,000	8,013,000	No
1250	OPA / REGIONAL GROUNDWATER PROJECT	2,049,200	2,286,000	7,355,300	8,003,300	No
1541	OCSD CORF 12/13	1,336,300	1,336,300	1,673,000	1,673,000	No
1535	OCSD CORF 11/12	1,314,800	1,314,800	6,545,000	6,545,000	No
1393	OCSD SOLIDS HANDLING 12/13	1,150,000	1,150,000	1,150,000	1,150,000	No
1866	NEWPORT BLVD WATER MAIN REPLACEMENT	1,139,500	1,174,700	5,279,500	5,675,500	No
1570	SANTIAGO CANYON AREA BPS PERMANENT GENERATORS	1,023,000	1,079,100	1,577,300	1,694,300	No
1474	NEWPORT COAST CATHODIC PROTECTION	681,400	736,400	2,461,400	2,672,000	No
1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	637,400	692,500	39,921,300	41,271,300	Yes
1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	577,600	630,600	1,186,200	1,334,700	No
1229	PA 40 PHASE 2 NONPOTABLE WATER SYSTEM FACILITIES	551,000	573,500	2,436,100	2,526,100	No
1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOLA RA TO I	538,400	596,500	601,800	691,800	No
3435	LEGACY PARK TUSTIN RANCH ROAD	508,500	543,000	1,155,800	1,272,800	No
1664	NEWPORT COAST CATHODIC PROTECTION	508,400	548,500	1,852,400	2,010,800	No
1066	LEGACY PARK TUSTIN RANCH ROAD	463,200	489,100	1,041,000	1,128,700	No
1403	WELL 107 REPLACEMENT & SITE ACQUISITION	455,100	467,100	3,538,600	3,646,600	No
1047	LEGACY PARK TUSTIN RANCH ROAD	417,700	443,600	946,100	1,035,700	No
1150	MWRP FLOOD PROTECTION	413,500	445,200	5,215,500	5,899,500	No
1680	SCADA WATER SYSTEM REPLACEMENT	376,200	436,900	2,940,400	3,948,400	No
1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	343,400	398,800	1,758,900	2,073,900	No
3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	286,000	304,000	286,000	304,000	No
1118	MWRP FLOOD PROTECTION	267,700	287,600	3,304,500	3,691,500	No
1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOLA RA TO I	263,900	283,600	290,400	319,200	No
3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	231,600	255,000	1,052,300	1,181,900	No
1149	MWRP GEN SYS MODS 12/13	222,200	225,800	222,200	225,800	No
1090	SCADA WATER SYSTEM REPLACEMENT	216,800	237,000	1,479,900	1,820,100	No
3585	BAKE PKWY SAN DIEGO CRK TO LAKE FOREST DR	216,100	245,900	470,800	541,000	No
1326	STOCKDALE WEST FACILITIES	204,700	233,100	3,273,600	3,363,600	No
3844	PA 9B SEWER IMPROVEMENTS	194,900	219,800	238,700	283,700	No
1665	NEWPORT COAST CATHODIC PROTECTION	171,800	183,500	617,000	661,600	No
1662	PA39 SEWER PIPELINES (PHASE 1)	165,900	186,300	710,600	813,200	No

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1632	PA39 DW PIPELINES (LAKE FOREST BAKE TO ROMANO)	153,300	168,200	691,900	776,500	No
3732	RW CONVERSION FOR OFF-SITE 12/13	145,800	190,800	145,800	190,800	No
1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	144,200	155,800	731,500	812,500	No
1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	143,000	156,900	852,500	969,500	No
3786	DW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	133,800	155,400	222,200	258,200	No
1800	DOMESTIC VAULT LID REHABILITATION	120,000	149,700	297,600	378,600	No
1643	SAND CANYON ZONE A STRAINER REPLACEMENT	118,200	140,700	845,400	1,021,800	No
1602	SANTIAGO CANYON AREA READ BPS MCC	114,400	124,900	161,800	188,800	No
1612	SANTIAGO CANYON AREA SHAW BPS MCC	110,200	120,700	156,300	183,300	No
1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	110,000	110,000	110,000	110,000	No
1798	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRA	104,700	122,700	420,200	528,200	No
3775	MISC SEWER IMPROVEMENTS AT JAMBOREE CENTER	98,700	121,600	132,600	167,700	No
1346	PA 40 PHASE 2 POTABLE WATER SYSTEM FACILITIES	86,200	108,700	194,700	239,700	No
1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	78,300	78,300	903,100	948,100	No
1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	78,300	78,300	913,000	961,600	No
3778	HEALTH DEPT FEES FOR 12/13	77,000	96,500	77,000	96,500	No
1318	CHIQUITA GENERAL SYSTEM MODIFICATIONS 012/13	70,400	70,400	70,400	70,400	No
1096	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRA	57,800	75,800	271,700	433,700	No
3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	57,700	68,500	95,700	113,700	No
1498	LAKE FOREST WELL #2 REPLACEMENT DRILLING/WELLHEA	53,800	60,400	2,394,200	2,637,000	Yes
1279	OPA / REGIONAL TRANSMISSION MAIN	48,800	49,800	10,988,900	11,564,900	No
3712	BEE CANYON BPS	46,800	71,500	211,200	301,200	No
1408	BARRANCA 54", 12" DW PIPELINE RELOCATIONS - VESTAR	27,200	44,500	3,174,100	3,291,100	No
1306	RMS MIXING SYSTEM UPGRADES	22,500	22,500	360,100	369,100	No
3718	DOMESTIC AUTOMATION EQUIPMENT REPLACEMENT 12/13	22,000	22,000	22,000	22,000	No
3733	RECYCLED AUTOMATION EQUIPMENT REPLACEMENT 12/13	22,000	22,000	22,000	22,000	No
3788	RW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	17,500	22,900	28,600	37,600	No
1696	BARRANCA 16" RW RELOCATION - VESTAR	15,300	26,500	1,510,300	1,585,900	No
1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	8,000	10,800	183,700	237,700	No
1371	DEMOLITION OF HARDING TRUCK TRAIL RESERVOIR	5,900	7,900	34,700	43,700	No
1495	OCSD EQUITY 12/13	100	100	100	100	No
		$32,673,700	**$34,752,900**	**$245,597,400**	**$261,412,200**	

Phase: Design

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILI	5,135,200	5,483,000	174,579,000	181,447,300	Yes
1417	BAKER WTP	4,173,900	4,477,100	80,010,000	82,170,000	No
3236	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No
3237	ORACLE PHASE 2 - TECH AND UB	1,494,200	1,915,000	4,242,800	5,079,800	No
3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	1,332,000	1,501,700	1,399,800	1,597,800	No
1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	464,600	474,400	3,499,100	3,603,500	No
1308	PA6 PH2 NEIGHBORHOOD 3 ZONE C RW PIPELINE	379,000	404,900	857,000	931,700	No
3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	350,000	368,000	350,000	368,000	No
3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITE ACQUIS.	277,600	322,900	3,685,600	3,820,600	No
1600	PORTOLA HILLS LS ABANDONMENT	251,300	352,100	2,640,000	2,883,000	No
1519	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO PORTOLA	225,100	234,900	1,755,600	1,860,000	No
1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	174,000	195,000	1,580,400	1,769,400	No
1341	STRAND RANCH CROSS VALLEY CANAL TURNOUTS (KERN (	173,000	173,000	1,358,500	1,394,500	No
1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	160,300	270,900	2,249,500	2,519,500	Yes
1065	RECYCLED VAULT LID REHABILITATION	130,300	155,400	297,600	351,600	No
3774	WELL MAINTENANCE AND REHABILITATION	130,100	139,100	260,000	278,000	No
1629	DISTRICT WIDE SEWER REHABILITATION	85,400	131,700	749,100	875,100	No
1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	85,100	129,400	683,700	773,700	No
3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	75,100	120,100	2,500,000	2,590,000	No
1578	POND 3 OBSERVATION DECK	72,600	74,600	74,800	80,700	No
1540	WELL 106 REPLACEMENT DRILLING & SITE ACQUISITION	72,300	112,700	2,021,400	2,120,400	No
1056	PA39 PHASE 1 RW PIPELINES	51,200	58,300	180,400	220,000	No
3773	ENERGY EFFICIENCY PUMP REPLACEMENT	50,100	54,600	100,000	109,000	No
1829	WEATHER-BASED IRRIG. CONTROLLER IMPLEMENTATION	44,300	53,100	429,000	519,000	No
1669	FILTERS FOR FIVE COMMERCIAL BUILDINGS	33,900	38,300	239,300	270,800	No
3784	ENERGY EFFICIENCY PUMP REPLACEMENT	25,100	29,600	50,000	59,000	No
3531	PORTOLA ZONE 9 RESERVOIR ACCESS ROAD REPAIR	24,500	35,900	94,600	139,600	No
1427	DOMESTIC WATER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No
1129	SEWER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No
1161	RECYCLED WATER PIPELINE REHABILITATION	22,700	36,200	293,700	365,700	No
1030	SEWER VAULT LID REHABILITATION	19,400	32,900	297,600	351,600	No
3709	OPA - MEADS PS MODIFICATIONS	16,500	16,500	216,000	216,000	No
1640	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	242,000	350,000	No
1016	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	143,000	179,000	No
1054	AUTOMATION SYSTEM IMPROVEMENTS	14,200	14,200	242,000	350,000	No
1063	PA18 ZN B-C BPS	5,700	6,300	1,813,500	1,903,500	No

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	1,600	4,100	237,600	291,600	No
		$17,118,300	**$19,431,700**	**$294,202,800**	**$307,650,600**	

Phase: Pending

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	650,100	668,100	650,100	668,100	No
1496	RESIDENTIAL METER REPLACEMENT 12/13	294,100	317,500	294,100	317,500	No
1625	MECH & ELEC SYS MODS - DW 12/13	275,000	275,000	275,000	275,000	No
1221	SEWER GEN SYS MODS 12/13	275,000	275,000	275,000	275,000	No
1195	DATS & WELL 77 LEASE PAYMENT 12/13	250,000	250,000	405,700	405,700	No
1364	MECH & ELEC SYS MODS - RW 12/13	220,000	220,000	220,000	220,000	No
1304	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	206,800	224,800	206,800	224,800	No
1674	CSR METER REPLACEMENT 12/13	203,500	212,500	203,500	212,500	No
1627	SERVICE LINE & MAIN REPLACEMENT 12/13	200,200	218,200	200,200	218,200	No
1490	MWRP BACKWASH SUPPLY PUMP REPLACEMENT	197,800	197,800	396,000	396,000	No
1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	183,700	237,100	401,500	518,500	No
1656	RAISE SYSTEM VALVES 12/13	170,500	179,500	170,500	179,500	No
1268	RAISE SYSTEM VALVES 12/13	170,500	179,500	170,500	179,500	No
1203	RAISE MANHOLES TO GRADE 12/13	165,000	165,000	165,000	165,000	No
1767	ENG PLANNING STUDY RESERVE 12/13	143,000	287,000	143,000	287,000	No
1646	GEN SYS MODS 12/13	135,300	174,900	135,300	174,900	No
1534	MWRP MPS-3 PUMP REPLACEMENT	127,400	127,400	255,000	255,000	No
1276	1" TO 2" METER REPLACEMENT 12/13	120,500	134,000	120,500	134,000	No
1340	ENG PLANNING STUDY RESERVE 12/13	116,600	253,400	116,600	253,400	No
1565	ENG PLANNING STUDY RESERVE 12/13	116,600	224,600	116,600	224,600	No
1103	PA 30 AND 51 NONPOTABLE FACILITIES	116,400	138,100	10,139,600	12,029,600	No
1642	PA 30 AND 51 WASTEWATER FACILITIES	115,200	137,900	10,038,800	12,018,800	No
1466	PA 30 AND 51 DOMESTIC FACILITIES	95,200	114,800	8,295,100	10,005,100	No
1667	1" TO 2" METER REPLACEMENT 12/13	91,700	115,800	91,700	115,800	No
1177	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No
1134	GIS COLLECTIONS MAINTENANCE APPLICATION	60,000	86,100	60,000	86,100	No
1685	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No
1792	GIS SUPPORT APPLICATIONS 12/13	60,000	93,300	60,000	93,300	No
1259	GEN SYS MODS 12/13	58,300	79,900	58,300	79,900	No

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	55,000	145,000	55,000	145,000	No
1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	52,800	139,200	52,800	139,200	No
1296	CSR METER REPLACEMENT 12/13	51,700	55,300	51,700	55,300	No
1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	47,300	124,700	47,300	124,700	No
1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	47,300	124,700	47,300	124,700	No
1310	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No
1727	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No
1742	HYDRAULIC MODELING 12/13	44,000	62,000	44,000	62,000	No
1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	33,000	69,000	33,000	69,000	No
1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	33,000	69,000	33,000	69,000	No
1580	MWRP SECONDARY DEWATERING PUMP REPLACEMENT	30,000	30,000	60,000	60,000	No
1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No
1845	GIS VALVE AND HYDRANT APPLICATION	20,000	27,600	20,000	27,600	No
1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No
1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20,000	27,600	20,000	27,600	No
1079	GIS VALVE AND HYDRANT APPLICATION	20,000	27,600	20,000	27,600	No
1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLI	18,000	26,900	236,500	353,500	No
1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRA	12,600	19,800	157,300	171,700	No
1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	300	700	2,913,900	3,075,900	No
		$5,551,400	**$6,902,100**	**$37,704,200**	**$44,911,400**	

Phase: Planning

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1,541,100	1,653,400	17,739,700	18,387,700	No
1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	949,100	949,100	4,910,000	5,090,000	No
3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVA	615,000	838,800	1,992,100	2,712,100	No
3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVA	615,000	838,800	1,992,100	2,712,100	No
1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPMENT	476,800	482,400	7,732,700	7,939,700	No
3799	COATING MWRP	350,000	359,000	350,000	359,000	No
3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No
3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	316,500	329,900	638,000	665,000	No
1469	OCWD ANNEXATION	276,600	314,200	992,300	1,127,300	No
1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	266,700	292,500	3,321,000	3,871,600	No
3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	250,000	304,000	250,000	304,000	No

**** "Pending" phase refers to projects not yet initiated.**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	184,900	238,900	246,400	318,400	No
1251	MECH & ELEC SYS MODS - SEWER 12/13	165,000	165,000	165,000	165,000	No
1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	140,500	182,600	456,400	593,200	No
3772	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No
3777	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No
3783	SKYLIGHT PROTECTION	138,600	165,600	138,600	165,600	No
3779	SALT MANAGEMENT PLAN DEVELOPMENT	110,100	132,600	220,000	265,000	No
3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	106,900	125,700	107,300	126,200	No
3750	SOCWA CROSSING PROTECTION	100,000	100,000	100,000	100,000	No
1391	CROSS VALLEY CANAL CAPACITY PURCHASE (KERN COUNT	95,700	95,700	656,300	683,300	No
3730	WQ PLANNING RESERVES 12/13 - RECYCLED	93,100	102,100	93,500	102,500	No
1538	ROOF REPAIR AT 3 SITES	89,800	91,600	179,700	183,300	No
3667	JACKSON RANCH SOLAR PROJECT	87,100	145,700	131,600	221,600	No
1436	LAKE FOREST WW OFFSITE IMPROVEMENTS	78,900	208,600	4,051,000	4,659,400	No
1839	CPTS RESTORE AND INSTALL	77,000	113,000	221,700	365,700	No
1328	ROOF REPAIR AT 3 SITES	74,100	75,400	148,000	150,700	No
1316	OPS CENTER HVAC CHILLER REPLACEMENT	72,200	75,800	144,500	151,700	No
1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	70,400	105,800	1,069,200	1,197,000	No
1499	OPS CENTER HVAC CHILLER REPLACEMENT	69,000	71,500	138,200	143,200	No
1006	WATER BANKING EXPANSION	65,500	104,500	9,842,000	10,070,600	No
1136	LONG TERM SEWER SYSTEM FLOW MONITORING	62,200	79,100	330,000	420,000	No
1754	UCI / NIST	55,900	89,100	242,000	386,000	No
1189	LAKE FOREST DW OPPORTUNITY AREAS	55,400	146,900	5,483,300	6,305,900	No
1472	GREENHOUSE GAS INVENTORY	54,100	85,300	202,100	319,100	No
3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	51,500	56,900	51,700	57,100	No
1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	51,100	65,500	319,000	409,000	No
1132	CPTS RESTORE AND INSTALL	49,500	76,500	177,700	285,700	No
1267	ROOF REPAIR AT 3 SITES	49,000	50,800	97,900	101,500	No
1338	WATER BANKING AGREEMENTS	48,800	110,500	146,300	331,700	No
1517	LAKE FOREST RW OPPORTUNITY AREAS	40,900	108,500	4,040,500	4,648,900	No
3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	35,500	52,500	56,300	83,300	No
1477	LAWRP BIOSOLIDS HANDLING FACILITY	33,800	82,900	3,659,400	3,947,400	No
1637	CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS IN SCWD	32,400	35,400	96,800	105,800	No
1108	RECOAT FLEMING RESERVOIR	31,000	40,400	61,700	80,600	No
1248	ASPHALT REPAIR AT 15 SITES	26,300	32,900	52,600	65,900	No
1347	ASPHALT REPAIR AT 15 SITES	21,700	25,900	43,400	52,000	No

**"Pending" phase refers to projects not yet initiated.

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Project Expenditures by Project Phase

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1337	OPA - DEMOLITION OF TANK & FOUR BPS	20,900	20,900	275,000	275,000	No
1319	OPS CENTER HVAC CHILLER REPLACEMENT	15,800	16,700	31,400	33,200	No
1445	LAKE FOREST WW OPPORTUNITY AREAS	15,100	39,900	1,647,800	1,896,200	No
1520	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes
1167	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes
1236	GREAT PARK SAMP UPDATE	14,400	40,300	30,000	84,000	Yes
1512	RMS AT 5 DW RESERVOIRS	14,100	38,100	2,501,200	2,690,200	No
1448	WELL 53 SITE ACQUISITION & WELL DRILLING	13,700	19,000	2,405,700	2,477,700	No
1336	HQ LIGHTING RETROFIT	11,100	14,700	22,100	29,300	No
1549	HQ LIGHTING RETROFIT	11,100	14,700	22,100	29,300	No
1648	PA18 ZN 3-4 BPS	6,900	7,500	2,679,700	2,769,700	No
1257	HQ LIGHTING RETROFIT	2,500	2,900	4,800	5,500	No
3716	WELL 51 REPLACEMENT	2,300	6,000	2,123,000	2,321,000	No
1245	MODJESKA CANYON PIPELINE RELOCATIONS SITES 2,8,11	1,200	1,200	794,200	866,200	No
1556	ASPHALT REPAIR AT 15 SITES	1,000	1,300	1,800	2,400	No
1345	CALTRANS SHALLOW GROUNDWATER STUDY	200	400	319,000	391,000	No
		$8,927,500	**$10,766,600**	**$86,921,000**	**$95,465,700**	

Phase: Water Quality

Project	Project Title	FY Direct Cost	FY Direct + GA	Total Direct Cost	Total Direct + GA	Flag
1695	COOLING TOWER CONST./MONITORING	125,100	207,900	198,000	329,400	No
		$125,100	**$207,900**	**$198,000**	**$329,400**	

Grand Total:	**$64,396,000**	**$72,061,200**	**$664,623,400**	**$709,769,300**

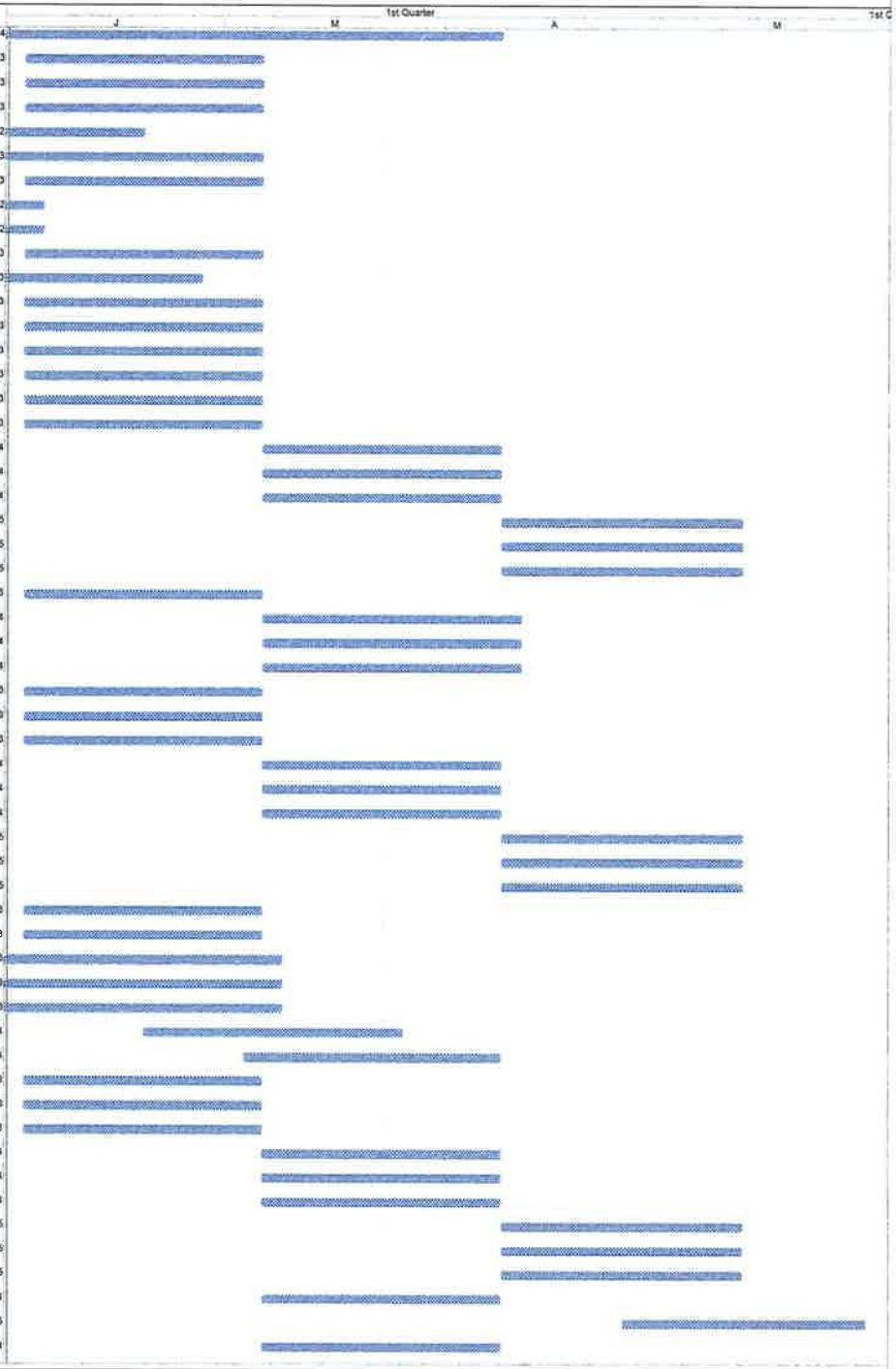
** "Pending" phase refers to projects not yet initiated.

IRVINE RANCH WATER DISTRICT
2012/13 CAPITAL BUDGET
"THREE-YEAR" LIST PLANNING SCHEDULE

ID	Proj. No.	Project Title	Manager	Engineer	Total Dir	Total Dir+G&A	Start	Finish
245	3585	BAKE PKWY SAN DIEGO CRK TO LAKE FOREST DR	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$470,800.00	$541,000.00	Fri 9/30/11	Mon 12/31/12
202	1696	BARRANCA 16" RW RELOCATION - VESTAR	CORTEZ, MALCOLM	STANEART, JEFFREY	$1,510,300.00	$1,585,900.00	Fri 12/1/06	Mon 6/30/14
120	1408	BARRANCA 54", 12" DW PIPELINE RELOCATIONS - VESTAR	CORTEZ, MALCOLM	STANEART, JEFFREY	$3,174,100.00	$3,291,100.00	Fri 12/1/06	Mon 6/30/14
249	3712	BEE CANYON BPS	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$211,200.00	$301,200.00	Thu 9/1/11	Mon 6/30/14
41	1132	CPTS RESTORE AND INSTALL	CORTEZ, MALCOLM	SMYTH, JEFFREY	$177,700.00	$265,700.00	Mon 7/2/12	Mon 6/30/14
230	1839	CPTS RESTORE AND INSTALL	CORTEZ, MALCOLM	SMYTH, JEFFREY	$221,700.00	$365,700.00	Mon 7/2/12	Mon 6/30/14
181	1629	DISTRICT WIDE SEWER REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$749,100.00	$875,100.00	Tue 5/1/12	Mon 6/30/14
226	1800	DOMESTIC VAULT LID REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$297,600.00	$378,600.00	Fri 7/1/11	Mon 6/30/14
127	1427	DOMESTIC WATER PIPELINE REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$293,700.00	$365,700.00	Fri 7/1/11	Mon 6/30/14
49	1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOLA RA TO LF	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$601,800.00	$691,800.00	Thu 7/29/10	Sun 6/30/13
281	3786	DW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	CORTEZ, MALCOLM	LEW, KELLY	$222,200.00	$258,200.00	Thu 3/1/12	Mon 12/31/12
75	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	CORTEZ, MALCOLM	CHO, HARRY	$183,700.00	$237,700.00	Mon 6/3/13	Mon 6/30/14
51	1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	CORTEZ, MALCOLM	LEW, KELLY	$1,069,200.00	$1,197,000.00	Fri 6/1/12	Tue 6/30/15
52	1189	LAKE FOREST DW OPPORTUNITY AREAS	CORTEZ, MALCOLM	LEW, KELLY	$5,483,300.00	$6,305,900.00	Fri 3/1/13	Tue 6/30/15
150	1517	LAKE FOREST RW OPPORTUNITY AREAS	CORTEZ, MALCOLM	LEW, KELLY	$4,040,500.00	$4,648,900.00	Fri 3/1/13	Tue 6/30/15
170	1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	CORTEZ, MALCOLM	CHO, HARRY	$2,913,900.00	$3,075,900.00	Fri 6/28/13	Tue 6/30/15
129	1436	LAKE FOREST WW OFFSITE IMPROVEMENTS	CORTEZ, MALCOLM	LEW, KELLY	$4,051,000.00	$4,659,400.00	Fri 6/1/12	Tue 6/30/15
130	1445	LAKE FOREST WW OPPORTUNITY AREAS	CORTEZ, MALCOLM	LEW, KELLY	$1,647,600.00	$1,898,200.00	Fri 3/1/13	Tue 6/30/15
20	1047	LEGACY PARK TUSTIN RANCH ROAD	CORTEZ, MALCOLM	LEW, KELLY	$946,100.00	$1,035,700.00	Thu 7/1/10	Mon 6/30/14
27	1066	LEGACY PARK TUSTIN RANCH ROAD	CORTEZ, MALCOLM	LEW, KELLY	$1,041,000.00	$1,128,700.00	Thu 7/1/10	Mon 6/30/14
240	3435	LEGACY PARK TUSTIN RANCH ROAD	CORTEZ, MALCOLM	LEW, KELLY	$1,155,800.00	$1,272,800.00	Thu 7/1/10	Mon 6/30/14
209	1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$1,186,200.00	$1,334,700.00	Thu 7/29/10	Tue 12/31/13
273	3775	MISC SEWER IMPROVEMENTS AT JAMBOREE CENTER	CORTEZ, MALCOLM	POPESCU, LUMINITA	$132,600.00	$167,700.00	Thu 3/1/12	Mon 12/31/12
62	1245	MODJESKA CANYON PIPELINE RELOCATIONS SITES 2,8,11	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$794,200.00	$866,200.00	Fri 7/1/11	Tue 7/1/14
236	1866	NEWPORT BLVD WATER MAIN REPLACEMENT	CORTEZ, MALCOLM	BONKOWSKI, THOMAS	$5,279,500.00	$5,675,500.00	Tue 4/1/08	Fri 8/31/12
136	1474	NEWPORT COAST CATHODIC PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$2,461,400.00	$2,672,000.00	Fri 7/1/05	Sun 6/30/13
191	1664	NEWPORT COAST CATHODIC PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$1,852,400.00	$2,010,800.00	Fri 7/1/05	Sun 6/30/13
192	1665	NEWPORT COAST CATHODIC PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$617,000.00	$661,600.00	Fri 7/1/05	Sun 6/30/13
235	1853	NTS SOUTH SAN JOAQUIN MARSH (SAMS1)	CORTEZ, MALCOLM	CHO, HARRY	$2,249,500.00	$2,519,500.00	Mon 2/1/10	Mon 6/30/14
78	1279	OPA / REGIONAL TRANSMISSION MAIN	CORTEZ, MALCOLM	STANEART, JEFFREY	$10,986,900.00	$11,584,900.00	Mon 11/3/08	Tue 7/31/12
287	3844	PA 9B SEWER IMPROVEMENTS	CORTEZ, MALCOLM	LEW, KELLY	$238,700.00	$263,700.00	Mon 1/2/12	Sun 6/30/13
241	3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	CORTEZ, MALCOLM	LEW, KELLY	$1,052,300.00	$1,181,900.00	Fri 7/1/11	Sun 9/30/12
60	1229	PA 40 PHASE 2 NONPOTABLE WATER SYSTEM FACILITIES	CORTEZ, MALCOLM	LEW, KELLY	$2,436,100.00	$2,526,100.00	Thu 9/1/11	Thu 12/31/15
105	1346	PA 40 PHASE 2 POTABLE WATER SYSTEM FACILITIES	CORTEZ, MALCOLM	LEW, KELLY	$194,700.00	$239,700.00	Thu 9/1/11	Tue 12/31/13
88	1308	PA8 PH2 NEIGHBORHOOD 3 ZONE C RW PIPELINE	CORTEZ, MALCOLM	LEW, KELLY	$857,000.00	$931,700.00	Tue 8/1/06	Tue 12/31/13
152	1519	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO PORTOLA	CORTEZ, MALCOLM	LEW, KELLY	$1,755,600.00	$1,860,000.00	Fri 9/1/06	Mon 6/30/14
13	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	CORTEZ, MALCOLM	LEW, KELLY	$3,489,100.00	$3,603,500.00	Fri 9/1/06	Mon 6/30/14
216	1762	PA9B PHASE 5 GATEWAY PARK RW PIPES	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$506,100.00	$617,700.00	Mon 6/1/15	Fri 6/30/17
182	1632	PA39 DW PIPELINES (LAKE FOREST BAKE TO ROMANO)	CORTEZ, MALCOLM	LEW, KELLY	$691,900.00	$776,500.00	Fri 7/1/11	Sun 9/30/12
23	1056	PA39 PHASE 1 RW PIPELINES	CORTEZ, MALCOLM	LEW, KELLY	$180,400.00	$220,000.00	Fri 7/1/11	Mon 6/30/14
190	1662	PA39 SEWER PIPELINES (PHASE 1)	CORTEZ, MALCOLM	LEW, KELLY	$710,600.00	$813,200.00	Fri 7/1/11	Sun 9/30/12
168	1578	POND 3 OBSERVATION DECK	CORTEZ, MALCOLM	CORTEZ, MALCOLM	$74,800.00	$80,200.00	Thu 7/1/10	Sun 6/30/13
173	1600	PORTOLA HILLS LS ABANDONMENT	CORTEZ, MALCOLM	POPESCU, LUMINITA	$2,640,000.00	$2,863,000.00	Mon 4/2/12	Sun 3/30/14
242	3531	PORTOLA ZONE 9 RESERVOIR ACCESS ROAD REPAIR	CORTEZ, MALCOLM	CHO, HARRY	$94,600.00	$139,600.00	Mon 1/2/12	Thu 2/28/13
56	1203	RAISE MANHOLES TO GRADE 12/13	CORTEZ, MALCOLM	LEW, KELLY	$165,000.00	$165,000.00	Mon 7/2/12	Sun 6/30/13
26	1065	RECYCLED VAULT LID REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$297,600.00	$351,600.00	Fri 7/1/11	Mon 6/30/14
47	1161	RECYCLED WATER PIPELINE REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$293,700.00	$365,700.00	Fri 7/1/11	Mon 6/30/14
149	1512	RMS AT 5 DW RESERVOIRS	CORTEZ, MALCOLM	CHO, HARRY	$2,501,200.00	$2,690,200.00	Thu 7/1/10	Tue 6/30/15
148	1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOLA RA TO LF	CORTEZ, MALCOLM	SUNDBERG, RANDALL	$290,400.00	$319,200.00	Thu 7/29/10	Sun 6/30/13
283	3788	RW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	CORTEZ, MALCOLM	LEW, KELLY	$28,600.00	$37,600.00	Thu 3/1/12	Mon 12/31/12
123	1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	CORTEZ, MALCOLM	SMYTH, JEFFREY	$237,600.00	$291,600.00	Mon 6/3/13	Tue 12/31/13
166	1570	SANTIAGO CANYON AREA BPS PERMANENT GENERATORS	CORTEZ, MALCOLM	CHO, HARRY	$1,577,300.00	$1,694,300.00	Thu 7/1/10	Thu 1/31/13
174	1602	SANTIAGO CANYON AREA READ BPS MCC	CORTEZ, MALCOLM	CHO, HARRY	$161,800.00	$188,800.00	Tue 3/1/11	Thu 1/31/13
176	1612	SANTIAGO CANYON AREA SHAW BPS MCC	CORTEZ, MALCOLM	CHO, HARRY	$156,300.00	$183,300.00	Tue 3/1/11	Thu 1/31/13
40	1129	SEWER PIPELINE REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$293,700.00	$365,700.00	Fri 7/1/11	Mon 6/30/14

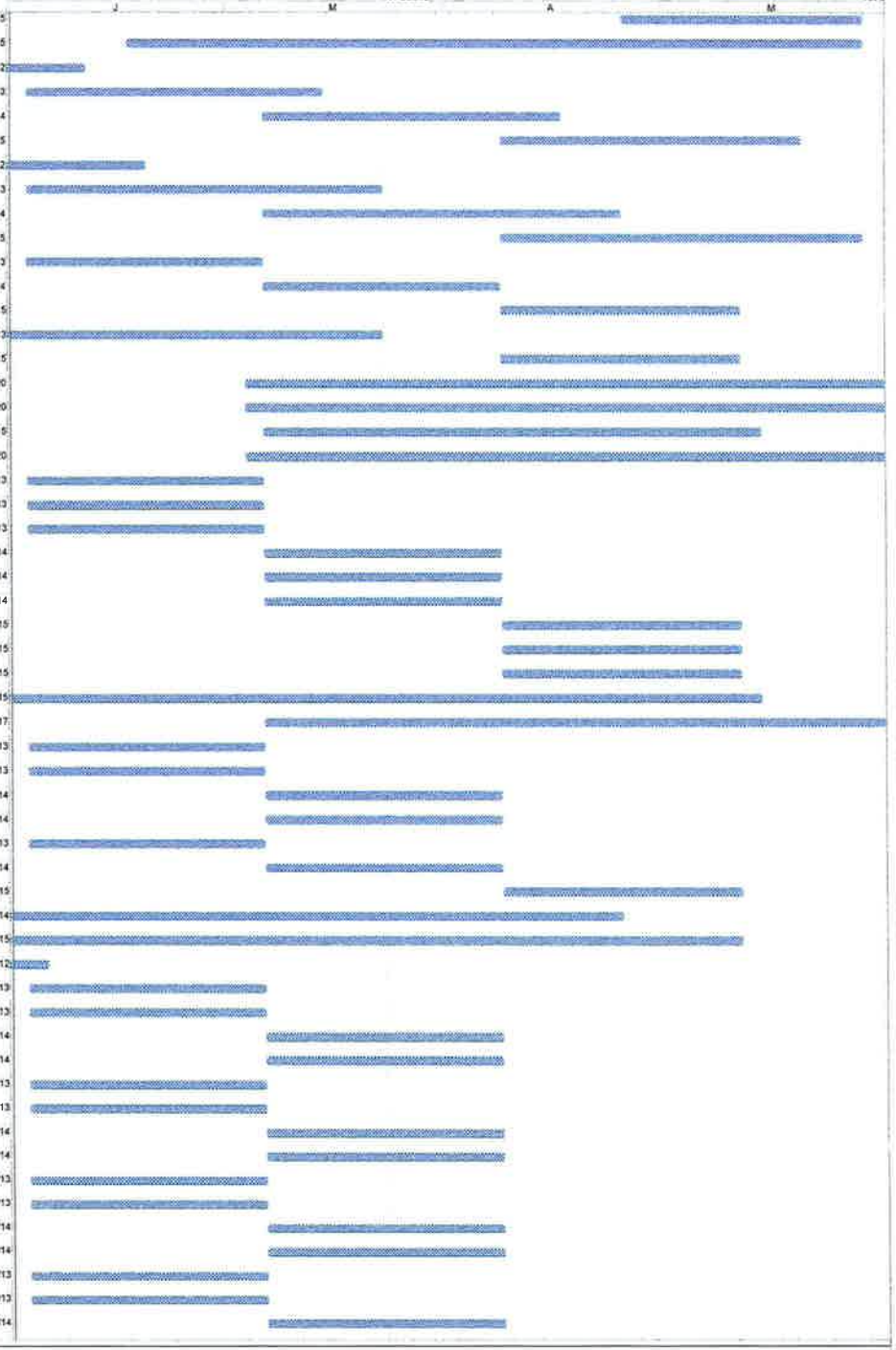
IRVINE RANCH WATER DISTRICT
2012/13 CAPITAL BUDGET
"THREE-YEAR" LIST PLANNING SCHEDULE

ID	Proj. No.	Project Title	Manager	Engineer	Total Dir.	Total Dir+G&A	Start	Finish
15	1030	SEWER VAULT LID REHABILITATION	CORTEZ, MALCOLM	CHO, HARRY	$297,600.00	$351,600.00	Fri 7/1/11	Mon 6/30/14
270	3772	SKYLIGHT PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$138,600.00	$165,600.00	Mon 7/2/12	Sun 6/30/13
274	3777	SKYLIGHT PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$138,600.00	$165,600.00	Mon 7/2/12	Sun 6/30/13
279	3783	SKYLIGHT PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$138,600.00	$165,600.00	Mon 7/2/12	Sun 6/30/13
282	3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	CORTEZ, MALCOLM	LEW, KELLY	$95,700.00	$113,700.00	Thu 3/1/12	Mon 12/31/12
258	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	CORTEZ, MALCOLM	CHO, HARRY	$1,399,800.00	$1,597,800.00	Tue 5/1/12	Sun 6/30/13
255	3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	CORTEZ, MALCOLM	LEW, KELLY	$286,000.00	$304,000.00	Mon 7/2/12	Sun 6/30/13
70	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$913,000.00	$961,600.00	Mon 7/3/06	Tue 7/31/12
228	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	CORTEZ, MALCOLM	SMYTH, JEFFREY	$903,100.00	$948,100.00	Mon 7/3/06	Tue 7/31/12
284	3799	COATING MWRP	DAYER, JOHN	DAYER, JOHN	$350,000.00	$359,000.00	Mon 7/2/12	Sun 6/30/13
215	1754	UCI / NIST	HEIERTZ, GREGORY	AKIYOSHI, ERIC	$242,000.00	$386,000.00	Fri 1/1/10	Sat 3/30/13
18	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	HOOLIHAN, MICHAEL	WILLIAMS, SCOTT	$20,000.00	$27,600.00	Mon 7/2/12	Sun 6/30/13
28	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	HOOLIHAN, MICHAEL	WILLIAMS, SCOTT	$20,000.00	$27,600.00	Mon 7/2/12	Sun 6/30/13
231	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$20,000.00	$27,600.00	Mon 7/2/12	Sun 6/30/13
102	1340	ENG PLANNING STUDY RESERVE 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$116,600.00	$253,400.00	Mon 7/2/12	Sun 6/30/13
165	1565	ENG PLANNING STUDY RESERVE 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$116,600.00	$224,600.00	Mon 7/2/12	Sun 6/30/13
217	1767	ENG PLANNING STUDY RESERVE 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$143,000.00	$287,000.00	Mon 7/2/12	Sun 6/30/13
107	1350	ENG PLANNING STUDY RESERVE 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$116,600.00	$253,400.00	Mon 7/1/13	Mon 6/30/14
167	1575	ENG PLANNING STUDY RESERVE 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$116,600.00	$224,600.00	Mon 7/1/13	Mon 6/30/14
220	1780	ENG PLANNING STUDY RESERVE 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$143,000.00	$287,000.00	Mon 7/1/13	Mon 6/30/14
110	1366	ENG PLANNING STUDY RESERVE 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$116,600.00	$253,400.00	Tue 7/1/14	Tue 6/30/15
171	1593	ENG PLANNING STUDY RESERVE 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$116,600.00	$224,600.00	Tue 7/1/14	Tue 6/30/15
222	1790	ENG PLANNING STUDY RESERVE 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$143,000.00	$287,000.00	Tue 7/1/14	Tue 6/30/15
42	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$80,000.00	$86,100.00	Mon 7/2/12	Sun 6/30/13
21	1048	GIS INTEGRATION WITH CMMS	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$66,000.00	$102,000.00	Mon 7/1/13	Thu 7/31/14
175	1608	GIS INTEGRATION WITH CMMS	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$66,000.00	$102,000.00	Mon 7/1/13	Thu 7/31/14
214	1743	GIS INTEGRATION WITH CMMS	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$33,000.00	$51,000.00	Mon 7/1/13	Thu 7/31/14
50	1177	GIS SUPPORT APPLICATIONS 12/13	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Mon 7/2/12	Sun 6/30/13
197	1685	GIS SUPPORT APPLICATIONS 12/13	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Mon 7/2/12	Sun 6/30/13
223	1792	GIS SUPPORT APPLICATIONS 12/13	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Mon 7/2/12	Sun 6/30/13
53	1190	GIS SUPPORT APPLICATIONS 13/14	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Mon 7/1/13	Mon 6/30/14
199	1691	GIS SUPPORT APPLICATIONS 13/14	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Mon 7/1/13	Mon 6/30/14
224	1795	GIS SUPPORT APPLICATIONS 13/14	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Mon 7/1/13	Mon 6/30/14
55	1200	GIS SUPPORT APPLICATIONS 14/15	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Tue 7/1/14	Tue 6/30/15
200	1694	GIS SUPPORT APPLICATIONS 14/15	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Tue 7/1/14	Tue 6/30/15
221	1785	GIS SUPPORT APPLICATIONS 14/15	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$60,000.00	$93,300.00	Tue 7/1/14	Tue 6/30/15
29	1079	GIS VALVE AND HYDRANT APPLICATION	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$20,000.00	$27,600.00	Mon 7/2/12	Sun 6/30/13
233	1845	GIS VALVE AND HYDRANT APPLICATION	HOOLIHAN, MICHAEL	SHIH, HAN-TSUEI	$20,000.00	$27,600.00	Mon 7/2/12	Sun 6/30/13
48	1167	GREAT PARK SAMP UPDATE	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$30,000.00	$84,000.00	Fri 7/1/11	Wed 7/31/13
61	1236	GREAT PARK SAMP UPDATE	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$30,000.00	$84,000.00	Fri 7/1/11	Wed 7/31/13
153	1520	GREAT PARK SAMP UPDATE	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$30,000.00	$84,000.00	Fri 7/1/11	Wed 7/31/13
32	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$401,500.00	$518,500.00	Tue 1/1/13	Fri 1/31/14
36	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$236,500.00	$353,500.00	Mon 6/3/13	Mon 6/30/14
59	1310	HYDRAULIC MODELING 12/13	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Mon 7/2/12	Sun 6/30/13
208	1727	HYDRAULIC MODELING 12/13	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Mon 7/2/12	Sun 6/30/13
213	1742	HYDRAULIC MODELING 12/13	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Mon 7/2/12	Sun 6/30/13
93	1323	HYDRAULIC MODELING 13/14	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Mon 7/1/13	Mon 6/30/14
210	1734	HYDRAULIC MODELING 13/14	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Mon 7/1/13	Mon 6/30/14
211	1738	HYDRAULIC MODELING 13/14	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Mon 7/1/13	Mon 6/30/14
96	1332	HYDRAULIC MODELING 14/15	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Tue 7/1/14	Tue 6/30/15
207	1721	HYDRAULIC MODELING 14/15	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Tue 7/1/14	Tue 6/30/15
212	1740	HYDRAULIC MODELING 14/15	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$44,000.00	$62,000.00	Tue 7/1/14	Tue 6/30/15
34	1100	LAKE FOREST WELL 6 REPLACEMENT DRILLING	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$435,600.00	$453,600.00	Mon 7/1/13	Mon 6/30/14
38	1117	LAKE FOREST WELL 6 WELLHEAD	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$437,800.00	$488,200.00	Thu 1/1/15	Thu 12/31/15
14	1028	LAKE FOREST WELL 8 REPLACEMENT DRILLING	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$435,600.00	$453,600.00	Mon 7/1/13	Mon 6/30/14



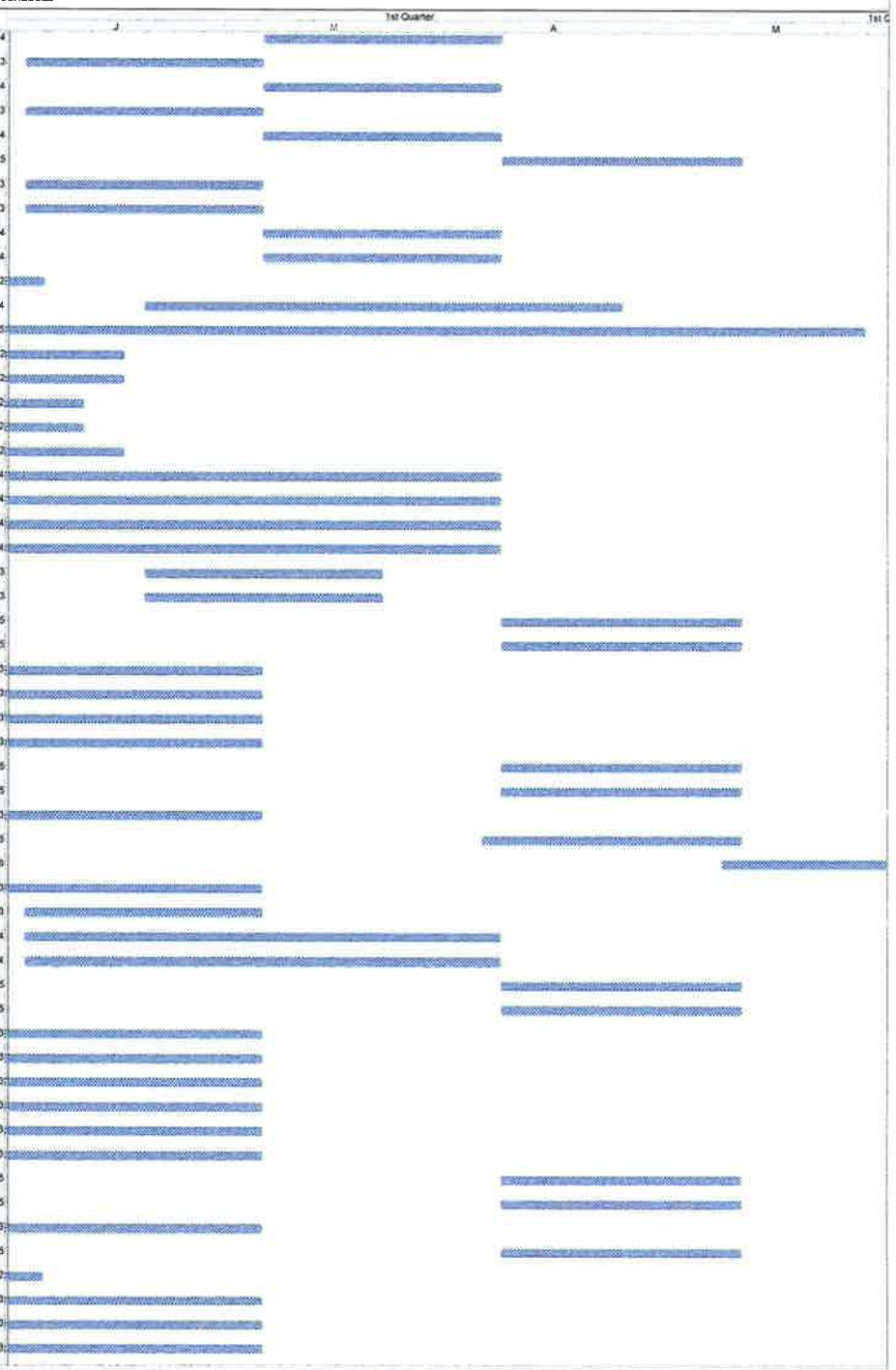
IRVINE RANCH WATER DISTRICT
2012/13 CAPITAL BUDGET
"THREE-YEAR" LIST PLANNING SCHEDULE

ID	Proj. No.	Project Title	Manager	Engineer	Total Dir	Total Dir+G&A	Start	Finish
16	1031	LAKE FOREST WELL 8 WELLHEAD	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$437,800.00	$488,200.00	Thu 1/1/15	Thu 12/31/15
43	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$330,000.00	$420,000.00	Mon 12/3/12	Thu 12/31/15
155	1535	OCSD CORF 11/12	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$6,545,000.00	$6,545,000.00	Fri 7/1/11	Sun 9/30/12
158	1541	OCSD CORF 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,673,000.00	$1,673,000.00	Mon 7/2/12	Mon 9/30/13
159	1543	OCSD CORF 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,877,000.00	$1,877,000.00	Mon 7/1/13	Tue 9/30/14
162	1552	OCSD CORF 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$2,005,000.00	$2,005,000.00	Tue 7/1/14	Wed 9/30/15
138	1485	OCSD EQUITY 11/12	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$8,013,000.00	$8,013,000.00	Fri 7/1/11	Mon 12/31/12
142	1495	OCSD EQUITY 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$100.00	$100.00	Mon 7/2/12	Tue 12/31/13
146	1504	OCSD EQUITY 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$100.00	$100.00	Mon 7/1/13	Wed 12/31/14
147	1508	OCSD EQUITY 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,111,000.00	$1,111,000.00	Tue 7/1/14	Thu 12/31/15
115	1393	OCSD SOLIDS HANDLING 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,150,000.00	$1,150,000.00	Mon 7/2/12	Sun 6/30/13
116	1400	OCSD SOLIDS HANDLING 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,264,000.00	$1,264,000.00	Mon 7/1/13	Mon 6/30/14
122	1410	OCSD SOLIDS HANDLING 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,391,000.00	$1,391,000.00	Tue 7/1/14	Tue 6/30/15
134	1469	OCWD ANNEXATION	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$992,300.00	$1,127,300.00	Tue 6/1/10	Tue 12/31/13
98	1334	OCWD ANNEXATION FEE 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$1,115,000.00	$1,115,000.00	Tue 7/1/14	Tue 6/30/15
133	1466	PA 30 AND 51 DOMESTIC FACILITIES	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$8,295,100.00	$10,005,100.00	Mon 6/3/13	Thu 7/30/20
35	1103	PA 30 AND 51 NONPOTABLE FACILITIES	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$10,139,600.00	$12,029,600.00	Mon 6/3/13	Thu 7/30/20
266	3811	PA 30 AND 51 REGIONAL ZN B-C BPS	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$3,052,500.00	$3,151,500.00	Mon 7/1/13	Fri 7/31/15
185	1842	PA 30 AND 51 WASTEWATER FACILITIES	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$10,038,800.00	$12,018,800.00	Mon 6/3/13	Thu 7/30/20
10	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	HOOLIHAN, MICHAEL	SUTTON, PAUL	$55,000.00	$145,000.00	Mon 7/2/12	Sun 6/30/13
128	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	HOOLIHAN, MICHAEL	SUTTON, PAUL	$47,300.00	$124,700.00	Mon 7/2/12	Sun 6/30/13
203	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	HOOLIHAN, MICHAEL	SUTTON, PAUL	$47,300.00	$124,700.00	Mon 7/2/12	Sun 6/30/13
17	1040	RECORD DRAWINGS AND ATLAS MAP UPDATE 13/14	HOOLIHAN, MICHAEL	SUTTON, PAUL	$55,000.00	$145,000.00	Mon 7/1/13	Mon 6/30/14
160	1544	RECORD DRAWINGS AND ATLAS MAP UPDATE 13/14	HOOLIHAN, MICHAEL	SUTTON, PAUL	$47,300.00	$124,700.00	Mon 7/1/13	Mon 6/30/14
205	1710	RECORD DRAWINGS AND ATLAS MAP UPDATE 13/14	HOOLIHAN, MICHAEL	SUTTON, PAUL	$47,300.00	$124,700.00	Mon 7/1/13	Mon 6/30/14
19	1048	RECORD DRAWINGS AND ATLAS MAP UPDATE 14/15	HOOLIHAN, MICHAEL	SUTTON, PAUL	$55,000.00	$145,000.00	Tue 7/1/14	Tue 6/30/15
163	1555	RECORD DRAWINGS AND ATLAS MAP UPDATE 14/15	HOOLIHAN, MICHAEL	SUTTON, PAUL	$47,300.00	$124,700.00	Tue 7/1/14	Tue 6/30/15
208	1718	RECORD DRAWINGS AND ATLAS MAP UPDATE 14/15	HOOLIHAN, MICHAEL	SUTTON, PAUL	$47,300.00	$124,700.00	Tue 7/1/14	Tue 6/30/15
57	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$3,321,000.00	$3,871,600.00	Tue 7/1/08	Fri 7/31/15
285	3808	SYPHON RESERVOIR EXPANSION PROJECT	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$71,137,500.00	$72,127,500.00	Mon 7/1/13	Sun 12/31/17
112	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	HOOLIHAN, MICHAEL	WELCH, KELLY	$33,000.00	$69,000.00	Mon 7/2/12	Sun 6/30/13
232	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	HOOLIHAN, MICHAEL	WELCH, KELLY	$33,000.00	$69,000.00	Mon 7/2/12	Sun 6/30/13
113	1390	WATER SUPPLY ASSESSMENT/VERIF 13/14	HOOLIHAN, MICHAEL	WELCH, KELLY	$33,000.00	$69,000.00	Mon 7/1/13	Mon 6/30/14
234	1847	WATER SUPPLY ASSESSMENT/VERIF 13/14	HOOLIHAN, MICHAEL	WELCH, KELLY	$33,000.00	$69,000.00	Mon 7/1/13	Mon 6/30/14
59	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$52,800.00	$139,200.00	Mon 7/2/12	Sun 6/30/13
63	1246	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 13/14	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$52,800.00	$139,200.00	Mon 7/1/13	Mon 6/30/14
67	1254	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 14/15	HOOLIHAN, MICHAEL	JOSHI, RAGHAVENDER	$52,800.00	$139,200.00	Tue 7/1/14	Tue 6/30/15
131	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	HOOLIHAN, MICHAEL	AKIYOSHI, ERIC	$2,405,700.00	$2,477,700.00	Tue 1/1/02	Wed 12/31/14
71	1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	JACOBSON, ROBERT	FOURNIER, TANJA	$4,910,000.00	$5,060,000.00	Mon 7/3/06	Tue 6/30/15
80	1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPMENT	JACOBSON, ROBERT	FOURNIER, TANJA	$7,732,700.00	$7,939,700.00	Mon 7/3/06	Tue 7/31/12
76	1276	1" TO 2" METER REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$120,500.00	$134,000.00	Mon 7/2/12	Sun 6/30/13
193	1667	1" TO 2" METER REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$91,700.00	$115,800.00	Mon 7/2/12	Sun 6/30/13
9	1011	1" TO 2" METER REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$120,500.00	$134,000.00	Mon 7/1/13	Mon 6/30/14
77	1277	1" TO 2" METER REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$91,700.00	$115,800.00	Mon 7/1/13	Mon 6/30/14
84	1296	CSR METER REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$51,700.00	$55,300.00	Mon 7/2/12	Sun 6/30/13
195	1674	CSR METER REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$203,500.00	$212,500.00	Mon 7/2/12	Sun 6/30/13
85	1300	CSR METER REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$203,500.00	$212,500.00	Mon 7/1/13	Mon 6/30/14
108	1357	CSR METER REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$51,700.00	$55,300.00	Mon 7/1/13	Mon 6/30/14
69	1259	GEN SYS MODS 12/13	KILANI, ABDEL	KILANI, ABDEL	$56,300.00	$79,900.00	Mon 7/2/12	Sun 6/30/13
187	1646	GEN SYS MODS 12/13	KILANI, ABDEL	KILANI, ABDEL	$135,300.00	$174,900.00	Mon 7/2/12	Sun 6/30/13
81	1285	GEN SYS MODS 13/14	KILANI, ABDEL	KILANI, ABDEL	$135,300.00	$174,900.00	Mon 7/1/13	Mon 6/30/14
119	1406	GEN SYS MODS 13/14	KILANI, ABDEL	KILANI, ABDEL	$56,300.00	$79,900.00	Mon 7/1/13	Mon 6/30/14
74	1268	RAISE SYSTEM VALVES 12/13	KILANI, ABDEL	KILANI, ABDEL	$170,500.00	$179,500.00	Mon 7/2/12	Sun 6/30/13
189	1656	RAISE SYSTEM VALVES 12/13	KILANI, ABDEL	KILANI, ABDEL	$170,500.00	$179,500.00	Mon 7/2/12	Sun 6/30/13
82	1292	RAISE SYSTEM VALVES 13/14	KILANI, ABDEL	KILANI, ABDEL	$170,500.00	$179,500.00	Mon 7/1/13	Mon 6/30/14



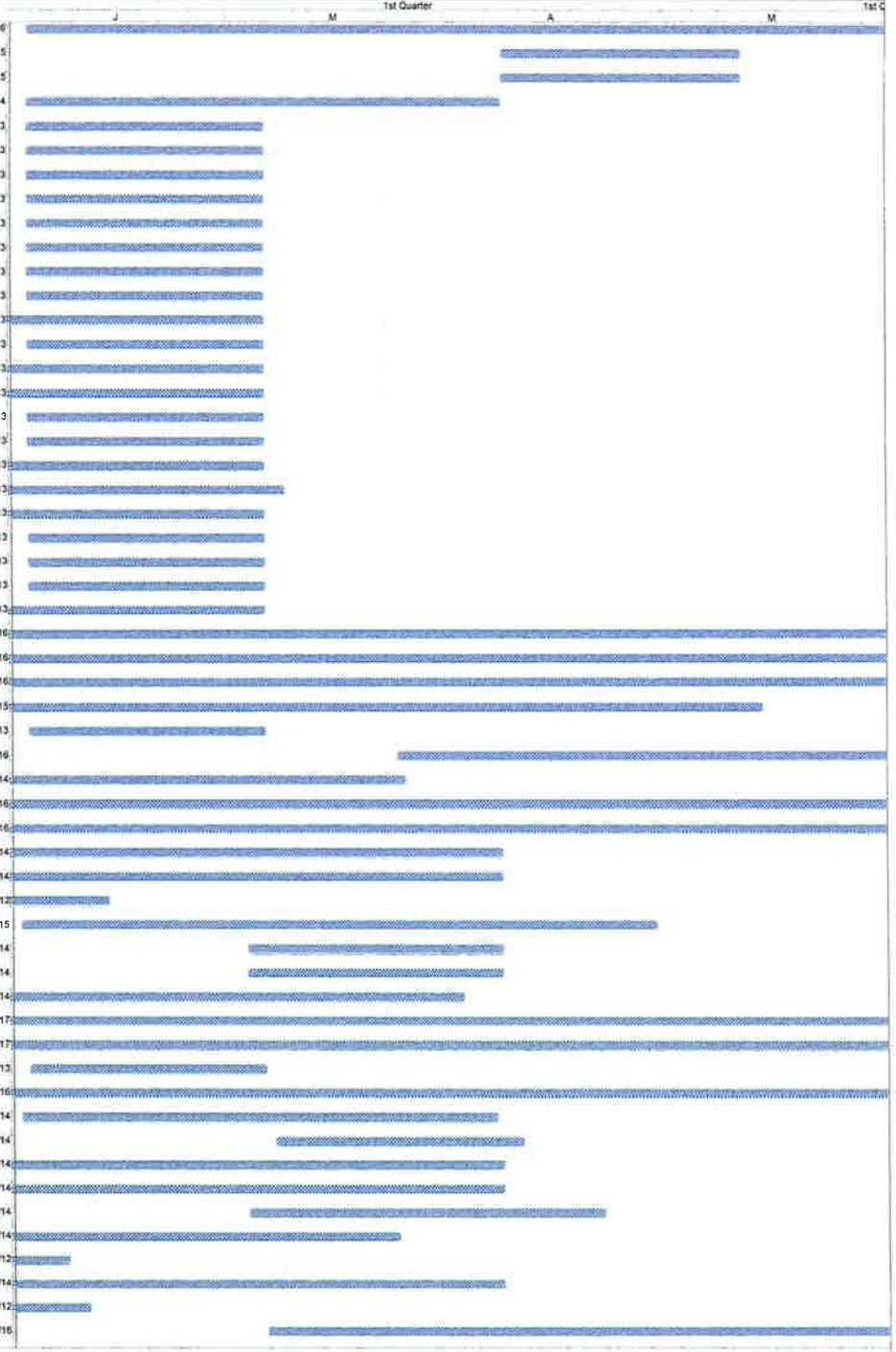
IRVINE RANCH WATER DISTRICT
2012/13 CAPITAL BUDGET
"THREE-YEAR" LIST PLANNING SCHEDULE

ID	Proj. No.	Project Title	Manager	Engineer	Total Dir	Total Dir+G&A	Start	Finish
124	1415	RAISE SYSTEM VALVES 13/14	KILANI, ABDEL	KILANI, ABDEL	$170,500.00	$179,500.00	Mon 7/1/13	Mon 6/30/14
143	1496	RESIDENTIAL METER REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$294,100.00	$317,500.00	Mon 7/2/12	Sun 6/30/13
79	1282	RESIDENTIAL METER REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$294,100.00	$317,500.00	Mon 7/1/13	Mon 6/30/14
150	1627	SERVICE LINE & MAIN REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$200,200.00	$218,200.00	Mon 7/2/12	Sun 6/30/13
141	1491	SERVICE LINE & MAIN REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$200,200.00	$218,200.00	Mon 7/1/13	Mon 6/30/14
4		SERVICE LINE & MAIN REPLACEMENT 14/15	KILANI, ABDEL	KILANI, ABDEL	$200,200.00	$218,200.00	Tue 7/1/14	Tue 6/30/15
86	1304	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$206,800.00	$224,800.00	Mon 7/2/12	Sun 6/30/13
139	1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	KILANI, ABDEL	KILANI, ABDEL	$650,100.00	$688,100.00	Mon 7/2/12	Sun 6/30/13
83	1295	SERVICE LINE, VALVE & MAIN REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$650,100.00	$668,100.00	Mon 7/1/13	Mon 6/30/14
97	1333	SERVICE LINE, VALVE & MAIN REPLACEMENT 13/14	KILANI, ABDEL	KILANI, ABDEL	$206,800.00	$224,800.00	Mon 7/1/13	Mon 6/30/14
104	1345	CALTRANS SHALLOW GROUNDWATER STUDY	MALLOY, STEVEN	SPANGENBERG, CARL	$319,000.00	$391,000.00	Tue 7/1/08	Tue 7/31/12
137	1477	LAWRP BIOSOLIDS HANDLING FACILITY	MALLOY, STEVEN	SPANGENBERG, CARL	$3,659,400.00	$3,947,400.00	Tue 1/1/13	Wed 12/31/14
177	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	MALLOY, STEVEN	SPANGENBERG, CARL	$174,579,000.00	$161,447,300.00	Thu 7/1/10	Thu 12/31/15
172	1599	MWRP EXPANSION PHASE II	MALLOY, STEVEN	STEWART, WILLIAM	$66,815,300.00	$70,591,500.00	Mon 6/12/06	Fri 11/30/12
204	1705	MWRP EXPANSION PHASE II	MALLOY, STEVEN	STEWART, WILLIAM	$44,164,200.00	$46,786,800.00	Fri 9/1/06	Fri 11/30/12
39	1116	MWRP FLOOD PROTECTION	MALLOY, STEVEN	STEWART, WILLIAM	$3,304,500.00	$3,691,500.00	Thu 3/1/07	Sun 9/30/12
45	1150	MWRP FLOOD PROTECTION	MALLOY, STEVEN	STEWART, WILLIAM	$5,215,500.00	$5,899,500.00	Thu 3/1/07	Sun 9/30/12
186	1643	SAND CANYON ZONE A STRAINER REPLACEMENT	MALLOY, STEVEN	STEWART, WILLIAM	$545,400.00	$1,021,800.00	Tue 1/1/08	Fri 11/30/12
243	3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	MOSSBARGER, ANTHONY	MOSSBARGER, ANTHONY	$1,992,100.00	$2,712,100.00	Mon 10/3/11	Mon 6/30/14
244	3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	MOSSBARGER, ANTHONY	MOSSBARGER, ANTHONY	$1,992,100.00	$2,712,100.00	Mon 10/3/11	Mon 6/30/14
238	3236	ORACLE PHASE 2 - TECH AND UB	MOSSBARGER, ANTHONY	MOSSBARGER, ANTHONY	$4,242,800.00	$5,079,800.00	Mon 1/2/12	Mon 6/30/14
239	3237	ORACLE PHASE 2 - TECH AND UB	MOSSBARGER, ANTHONY	MOSSBARGER, ANTHONY	$4,242,800.00	$5,079,800.00	Mon 1/2/12	Mon 6/30/14
254	3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	MOSSBARGER, ANTHONY	MOSSBARGER, ANTHONY	$638,000.00	$665,000.00	Tue 1/1/13	Tue 12/31/13
257	3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	MOSSBARGER, ANTHONY	MOSSBARGER, ANTHONY	$638,000.00	$665,000.00	Tue 1/1/13	Tue 12/31/13
6		1" - 2" METER REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$29,700.00	$33,300.00	Tue 7/1/14	Tue 6/30/15
7		1" - 2" METER REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$58,300.00	$72,700.00	Tue 7/1/14	Tue 6/30/15
64	1248	ASPHALT REPAIR AT 15 SITES	PEDERSEN, DAVID	DAYER, JOHN	$52,600.00	$85,900.00	Fri 7/1/11	Sun 6/30/13
105	1347	ASPHALT REPAIR AT 15 SITES	PEDERSEN, DAVID	DAYER, JOHN	$43,400.00	$52,000.00	Fri 7/1/11	Sun 6/30/13
164	1556	ASPHALT REPAIR AT 15 SITES	PEDERSEN, DAVID	DAYER, JOHN	$1,800.00	$2,400.00	Fri 7/1/11	Sun 6/30/13
183	1637	CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS IN SCWD	PEDERSEN, DAVID	DAYER, JOHN	$96,800.00	$105,800.00	Thu 7/1/10	Sun 6/30/13
1		CSR METER REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$51,700.00	$55,300.00	Tue 7/1/14	Tue 6/30/15
268	3769	CSR METER REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$203,500.00	$212,500.00	Tue 7/1/14	Tue 6/30/15
54	1195	DATS & WELL 77 LEASE PAYMENT 12/13	PEDERSEN, DAVID	PEDERSEN, DAVID	$405,700.00	$405,700.00	Fri 6/1/12	Sun 6/30/13
121	1409	DATS & WELL 77 LEASE PAYMENT 14/15	PEDERSEN, DAVID	PEDERSEN, DAVID	$445,000.00	$445,000.00	Mon 6/2/14	Tue 6/30/15
126	1421	DATS & WELL 77 LEASE PAYMENT 15/16	PEDERSEN, DAVID	PEDERSEN, DAVID	$465,100.00	$465,100.00	Mon 6/1/15	Thu 6/30/16
111	1371	DEMOLITION OF HARDING TRUCK TRAIL RESERVOIR	PEDERSEN, DAVID	DAYER, JOHN	$34,700.00	$43,700.00	Mon 10/2/06	Sun 6/30/13
254	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	PEDERSEN, DAVID	FIKE, CHRISTOPHER	$350,000.00	$388,000.00	Mon 7/2/12	Sun 6/30/13
271	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	PEDERSEN, DAVID	FIKE, CHRISTOPHER	$100,000.00	$109,000.00	Mon 7/2/12	Mon 6/30/14
280	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	PEDERSEN, DAVID	FIKE, CHRISTOPHER	$50,000.00	$59,000.00	Mon 7/2/12	Mon 6/30/14
2		GEN SYS MODS 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$58,300.00	$79,900.00	Tue 7/1/14	Tue 6/30/15
267	3768	GEN SYS MODS 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$135,300.00	$174,900.00	Tue 7/1/14	Tue 6/30/15
68	1257	HQ LIGHTING RETROFIT	PEDERSEN, DAVID	DAYER, JOHN	$4,600.00	$5,500.00	Fri 7/1/11	Sun 6/30/13
99	1338	HQ LIGHTING RETROFIT	PEDERSEN, DAVID	DAYER, JOHN	$22,100.00	$29,300.00	Fri 7/1/11	Sun 6/30/13
161	1549	HQ LIGHTING RETROFIT	PEDERSEN, DAVID	DAYER, JOHN	$22,100.00	$29,300.00	Fri 7/1/11	Sun 6/30/13
90	1316	OPS CENTER HVAC CHILLER REPLACEMENT	PEDERSEN, DAVID	DAYER, JOHN	$144,500.00	$151,700.00	Fri 7/1/11	Sun 6/30/13
92	1319	OPS CENTER HVAC CHILLER REPLACEMENT	PEDERSEN, DAVID	DAYER, JOHN	$31,400.00	$33,200.00	Fri 7/1/11	Sun 6/30/13
145	1499	OPS CENTER HVAC CHILLER REPLACEMENT	PEDERSEN, DAVID	DAYER, JOHN	$138,200.00	$143,200.00	Fri 7/1/11	Sun 6/30/13
3		RAISE SYSTEM VALVES 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$170,500.00	$179,500.00	Tue 7/1/14	Tue 6/30/15
266	3767	RAISE SYSTEM VALVES 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$170,500.00	$179,500.00	Tue 7/1/14	Tue 6/30/15
37	1108	RECOAT FLEMING RESERVOIR	PEDERSEN, DAVID	DAYER, JOHN	$61,700.00	$80,600.00	Fri 7/1/11	Sun 6/30/13
269	3770	RESIDENTIAL METER REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$138,600.00	$149,400.00	Tue 7/1/14	Tue 6/30/15
87	1306	RMS MIXING SYSTEM UPGRADES	PEDERSEN, DAVID	ROBERTS, THOMAS	$360,100.00	$369,100.00	Fri 7/1/11	Mon 7/30/12
73	1267	ROOF REPAIR AT 3 SITES	PEDERSEN, DAVID	DAYER, JOHN	$97,900.00	$101,500.00	Fri 7/1/11	Sun 6/30/13
95	1328	ROOF REPAIR AT 3 SITES	PEDERSEN, DAVID	DAYER, JOHN	$146,000.00	$150,700.00	Fri 7/1/11	Sun 6/30/13
156	1538	ROOF REPAIR AT 3 SITES	PEDERSEN, DAVID	DAYER, JOHN	$179,700.00	$183,300.00	Fri 7/1/11	Sun 6/30/13



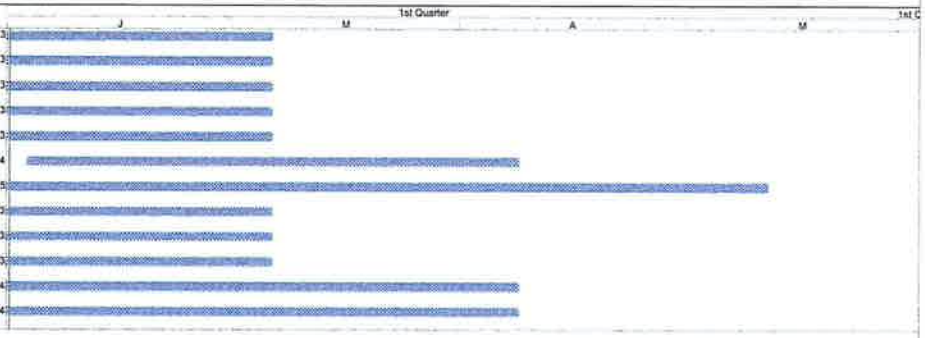
IRVINE RANCH WATER DISTRICT
2012/13 CAPITAL BUDGET
"THREE-YEAR" LIST PLANNING SCHEDULE

ID	Proj. No.	Project Title	Manager	Engineer	Total Dir	Total Dir+G&A	Start	Finish
277	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	PEDERSEN, DAVID	ROBERTS, THOMAS	$2,500,000.00	$2,590,000.00	Mon 7/2/12	Thu 6/30/16
5		SERVICE LINE VALVE & MAIN REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$650,100.00	$668,100.00	Tue 7/1/14	Tue 6/30/15
276	3781	SERVICE LINE VALVE & MAIN REPLACEMENT 14/15	PEDERSEN, DAVID	KILANI, ABDEL	$206,800.00	$224,800.00	Tue 7/1/14	Tue 6/30/15
272	3774	WELL MAINTENANCE AND REHABILITATION	PEDERSEN, DAVID	FIKE, CHRISTOPHER	$260,000.00	$278,000.00	Mon 7/2/12	Mon 6/30/14
253	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	PEDERSEN, DAVID	KALINSKY, ARSENY	$107,300.00	$126,200.00	Mon 7/2/12	Mon 7/1/13
259	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	PEDERSEN, DAVID	KALINSKY, ARSENY	$83,500.00	$102,500.00	Mon 7/2/12	Mon 7/1/13
256	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	PEDERSEN, DAVID	KALINSKY, ARSENY	$51,700.00	$57,100.00	Mon 7/2/12	Mon 7/1/13
91	1318	CHIQUITA GENERAL SYSTEM MODIFICATIONS 012/13	POSEY, WAYNE	POSEY, WAYNE	$70,400.00	$70,400.00	Mon 7/2/12	Sun 6/30/13
72	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	POSEY, WAYNE	SANCHEZ, NOAH	$110,000.00	$110,000.00	Mon 7/2/12	Sun 6/30/13
179	1825	MECH & ELEC SYS MODS - DW 12/13	POSEY, WAYNE	FIKE, CHRISTOPHER	$275,000.00	$275,000.00	Mon 7/2/12	Sun 6/30/13
109	1364	MECH & ELEC SYS MODS - RW 12/13	POSEY, WAYNE	FIKE, CHRISTOPHER	$220,000.00	$220,000.00	Mon 7/2/12	Sun 6/30/13
66	1251	MECH & ELEC SYS MODS - SEWER 12/13	POSEY, WAYNE	FIKE, CHRISTOPHER	$165,000.00	$165,000.00	Mon 7/2/12	Sun 6/30/13
140	1490	MWRP BACKWASH SUPPLY PUMP REPLACEMENT	POSEY, WAYNE	GINGRAS, MARK	$396,000.00	$396,000.00	Fri 7/1/11	Sun 6/30/13
44	1149	MWRP GEN SYS MODS 12/13	POSEY, WAYNE	GINGRAS, MARK	$222,200.00	$225,800.00	Mon 7/2/12	Sun 6/30/13
154	1534	MWRP MPS-3 PUMP REPLACEMENT	POSEY, WAYNE	GINGRAS, MARK	$255,000.00	$255,000.00	Fri 7/1/11	Sun 6/30/13
169	1580	MWRP SECONDARY DEWATERING PUMP REPLACEMENT	POSEY, WAYNE	GINGRAS, MARK	$60,000.00	$60,000.00	Fri 7/1/11	Sun 6/30/13
58	1221	SEWER GEN SYS MODS 12/13	POSEY, WAYNE	SPRINGMAN, GREGORY	$275,000.00	$275,000.00	Mon 7/2/12	Sun 6/30/13
263	3750	SOCWA CROSSING PROTECTION	POSEY, WAYNE	POSEY, WAYNE	$100,000.00	$100,000.00	Mon 7/2/12	Sun 6/30/13
227	1829	WEATHER-BASED IRRIG. CONTROLLER IMPLEMENTATION	SANCHEZ, FIONA	SANCHEZ, FIONA	$429,000.00	$519,000.00	Thu 5/1/03	Sun 6/30/13
201	1695	COOLING TOWER CONST./MONITORING	TETTEMER, JOHN	HARRIS, ALEX	$196,000.00	$329,400.00	Mon 1/2/12	Wed 7/31/13
194	1669	FILTERS FOR FIVE COMMERCIAL BUILDINGS	TETTEMER, JOHN	HARRIS, ALEX	$239,300.00	$270,800.00	Thu 6/1/06	Sun 6/30/13
275	3778	HEALTH DEPT FEES FOR 12/13	TETTEMER, JOHN	HARRIS, ALEX	$77,000.00	$95,000.00	Mon 7/2/12	Sun 6/30/13
261	3732	RW CONVERSION FOR OFF-SITE 12/13	TETTEMER, JOHN	HERR, GREGORY	$145,600.00	$190,800.00	Mon 7/2/12	Sun 6/30/13
260	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	TETTEMER, JOHN	HERR, GREGORY	$250,000.00	$304,000.00	Mon 7/2/12	Sun 6/30/13
229	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	TETTEMER, JOHN	TETTEMER, JOHN	$319,000.00	$409,000.00	Mon 4/2/07	Sun 6/30/13
12	1016	AUTOMATION SYSTEM IMPROVEMENTS	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$143,000.00	$179,000.00	Tue 11/1/11	Thu 6/30/16
22	1054	AUTOMATION SYSTEM IMPROVEMENTS	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$242,000.00	$350,000.00	Tue 11/1/11	Thu 6/30/16
184	1640	AUTOMATION SYSTEM IMPROVEMENTS	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$242,000.00	$350,000.00	Tue 11/1/11	Thu 6/30/16
125	1417	BAKER WTP	UEMATSU, PATRICIA	MORI, RICHARD	$80,010,000.00	$82,170,000.00	Tue 7/1/08	Fri 7/31/15
252	3718	DOMESTIC AUTOMATION EQUIPMENT REPLACEMENT 12/13	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$22,000.00	$22,000.00	Mon 7/2/12	Sun 6/30/13
24	1060	FOOTHILL SEWER DIVERSION TO LAWRP	UEMATSU, PATRICIA	UEMATSU, PATRICIA	$854,700.00	$998,700.00	Mon 1/20/14	Wed 4/20/16
151	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	UEMATSU, PATRICIA	SPANGENBERG, CARL	$1,560,400.00	$1,769,400.00	Wed 10/1/08	Fri 1/31/14
46	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	UEMATSU, PATRICIA	MCGEHEE, JOSEPH	$852,500.00	$969,500.00	Wed 7/1/09	Fri 3/25/16
132	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	UEMATSU, PATRICIA	MCGEHEE, JOSEPH	$1,758,900.00	$2,073,900.00	Wed 7/1/09	Fri 3/25/16
33	1096	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRADES	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$271,700.00	$433,700.00	Fri 4/1/05	Mon 6/30/14
225	1798	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRADES	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$420,200.00	$528,200.00	Fri 4/1/05	Mon 6/30/14
144	1498	LAKE FOREST WELL #2 REPLACEMENT DRILLING/WELLHEAD	UEMATSU, PATRICIA	MOEDER, JACOB	$2,394,200.00	$2,637,000.00	Tue 9/1/09	Thu 11/1/12
218	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	UEMATSU, PATRICIA	MOEDER, JACOB	$683,700.00	$773,700.00	Wed 6/20/12	Fri 2/20/15
100	1337	OPA - DEMOLITION OF TANK & FOUR BPS	UEMATSU, PATRICIA	UEMATSU, PATRICIA	$275,000.00	$275,000.00	Mon 6/3/13	Mon 6/30/14
245	3709	OPA - MEADS PS MODIFICATIONS	UEMATSU, PATRICIA	UEMATSU, PATRICIA	$216,000.00	$216,000.00	Mon 6/3/13	Mon 6/30/14
65	1250	OPA / REGIONAL GROUNDWATER PROJECT	UEMATSU, PATRICIA	MOEDER, JACOB	$7,355,300.00	$8,003,300.00	Thu 1/1/09	Wed 4/30/14
168	1648	PA18 ZN 3-4 BPS	UEMATSU, PATRICIA	MORI, RICHARD	$2,679,700.00	$2,769,700.00	Mon 1/1/07	Wed 5/31/17
25	1063	PA18 ZN B-C BPS	UEMATSU, PATRICIA	MORI, RICHARD	$1,813,500.00	$1,903,500.00	Mon 1/1/07	Wed 5/31/17
262	3733	RECYCLED AUTOMATION EQUIPMENT REPLACEMENT 12/13	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$22,000.00	$22,000.00	Mon 7/2/12	Sun 6/30/13
11	1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	UEMATSU, PATRICIA	MCGEHEE, JOSEPH	$731,500.00	$812,500.00	Fri 4/1/11	Fri 3/25/16
219	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$157,300.00	$171,700.00	Wed 6/20/12	Fri 6/20/14
196	1657	SCADA RESERVOIR LEVEL BACKUP COMMUNICATIONS	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$217,200.00	$230,700.00	Mon 7/15/13	Wed 7/30/14
31	1090	SCADA WATER SYSTEM REPLACEMENT	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$1,479,900.00	$1,820,100.00	Thu 4/1/04	Mon 6/30/14
196	1680	SCADA WATER SYSTEM REPLACEMENT	UEMATSU, PATRICIA	MAZZARELLA, DAVID	$2,940,400.00	$3,948,400.00	Thu 4/1/04	Mon 6/30/14
250	3716	WELL 51 REPLACEMENT	UEMATSU, PATRICIA	MOEDER, JACOB	$2,123,000.00	$2,321,000.00	Mon 6/3/13	Mon 12/1/14
157	1540	WELL 106 REPLACEMENT DRILLING & SITE ACQUISITION	UEMATSU, PATRICIA	MOEDER, JACOB	$2,021,400.00	$2,120,400.00	Fri 6/1/12	Mon 1/20/14
118	1403	WELL 107 REPLACEMENT & SITE ACQUISITION	UEMATSU, PATRICIA	MOEDER, JACOB	$3,538,600.00	$3,648,600.00	Thu 7/1/10	Thu 8/30/12
251	3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITE ACQUIS.	UEMATSU, PATRICIA	MOEDER, JACOB	$3,685,600.00	$3,820,600.00	Mon 1/2/12	Mon 6/30/14
30	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	UEMATSU, PATRICIA	MORI, RICHARD	$39,921,300.00	$41,271,300.00	Mon 6/1/09	Sun 9/30/12
117	1402	WELLS 51 & 52 PDR	UEMATSU, PATRICIA	SPANGENBERG, CARL	$2,697,600.00	$2,967,600.00	Mon 7/1/13	Thu 6/30/16



IRVINE RANCH WATER DISTRICT
2012/13 CAPITAL BUDGET
"THREE-YEAR" LIST PLANNING SCHEDULE

ID	Proj. No	Project Title	Manager	Engineer	Total Dir.	Total Dir+G&A	Start	Finish
114	1391	CROSS VALLEY CANAL CAPACITY PURCHASE (KERN COUNTY)	WEGHORST, PAUL	WELCH, KELLY	$656,300.00	$683,300.00	Thu 11/30/06	Sun 6/30/13
178	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	WEGHORST, PAUL	BENNETT, RAY	$456,400.00	$593,200.00	Thu 4/1/10	Sun 6/30/13
135	1472	GREENHOUSE GAS INVENTORY	WEGHORST, PAUL	BENNETT, RAY	$202,100.00	$319,100.00	Thu 10/1/09	Sun 6/30/13
246	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	WEGHORST, PAUL	BENNETT, RAY	$56,300.00	$83,300.00	Mon 11/28/11	Sun 6/30/13
247	3667	JACKSON RANCH SOLAR PROJECT	WEGHORST, PAUL	BENNETT, RAY	$131,600.00	$221,600.00	Mon 1/2/12	Sun 6/30/13
276	3779	SALT MANAGEMENT PLAN DEVELOPMENT	WEGHORST, PAUL	SANCHEZ, FIONA	$220,000.00	$285,000.00	Mon 7/2/12	Mon 6/30/14
94	1326	STOCKDALE WEST FACILITIES	WEGHORST, PAUL	WELCH, KELLY	$3,273,600.00	$3,363,600.00	Mon 5/2/11	Tue 6/30/15
265	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	WEGHORST, PAUL	WELCH, KELLY	$246,400.00	$318,400.00	Thu 3/1/12	Sun 6/30/13
103	1341	STRAND RANCH CROSS VALLEY CANAL TURNOUTS (KERN CO)	WEGHORST, PAUL	WELCH, KELLY	$1,358,500.00	$1,394,500.00	Mon 5/1/06	Sun 6/30/13
237	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	WEGHORST, PAUL	WELCH, KELLY	$17,739,700.00	$18,387,700.00	Mon 4/3/00	Sun 6/30/13
101	1338	WATER BANKING AGREEMENTS	WEGHORST, PAUL	WELCH, KELLY	$146,300.00	$331,700.00	Fri 7/1/11	Mon 6/30/14
6	1006	WATER BANKING EXPANSION	WEGHORST, PAUL	WELCH, KELLY	$9,842,000.00	$10,070,600.00	Tue 7/1/08	Mon 6/30/14



IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
WATER IMPROVEMENT DISTRICT (ID) ALLOCATIONS

Oracle No.	Project Title	FY Direct	FY Dir+GA	Total Direct	Total Dir+GA	Improvement District (ID) Allocation - % of Total Budget																	
						101	112	113	115	121	130	135	140	150	153	154	155	156	161	182	184	186	188	199
1006	WATER BANKING EXPANSION	65500	104500	9842000	10070600		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/1	55000	145000	55000	145000		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1047	LEGACY PARK TUSTIN RANCH ROAD	417700	443600	946100	1035700			100.0																
1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMEN	637400	692500	39921300	41271300		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOI	183700	237100	401500	518500		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1108	RECOAT FLEMING RESERVOIR	31000	40400	61700	80600	100.0																		
1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOL	538400	596500									100.0												
1177	GIS SUPPORT APPLICATIONS 12/13	60000	93300	60000	93300		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	70400	105800	1069200	1197000							100.0												
1189	LAKE FOREST DW OPPORTUNITY AREAS	55400	146900	5483300	6305900							100.0												
1195	DATS & WELL 77 LEASE PAYMENT 12/13	250000	250000	405700	405700		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWD	52800	139200	52800	139200		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1245	MODJESKA CANYON PIPELINE RELOCATIONS SITE	1200	1200	794200	866200	75.0									25.0									
1250	OPA / REGIONAL GROUNDWATER PROJECT	2049200	2286000	7355300	8003300		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMI	949100	949100	4910000	5090000	100.0																		
1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALU/	8000	10800	183700	237700		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1279	OPA / REGIONAL TRANSMISSION MAIN	48800	49800	10988900	11564900		3.2	3.9	5.5	11.4	8.9		3.2	23.2	2.6	1.1		25.0	6.0	2.3	2.1	0.8	0.8	
1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPM	476800	482400	7732700	7939700	100.0																		
1306	RMS MIXING SYSTEM UPGRADES	22500	22500	360100	369100		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1310	HYDRAULIC MODELING 12/13	44000	62000	44000	62000		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1316	OPS CENTER HVAC CHILLER REPLACEMENT	72200	75800	144500	151700	100.0																		
1326	STOCKDALE WEST FACILITIES	204700	233100	3273600	3363600		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1328	ROOF REPAIR AT 3 SITES	74100	75400	148000	150700	100.0																		
1336	HQ LIGHTING RETROFIT	11100	14700	22100	29300	100.0																		
1337	OPA - DEMOLITION OF TANK & FOUR BPS	20900	20900	275000	275000													100.0						
1338	WATER BANKING AGREEMENTS	48800	110500	146300	331700		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1341	STRAND RANCH CROSS VALLEY CANAL TURNOUT	173000	173000	1358500	1394500	100.0																		
1345	CALTRANS SHALLOW GROUNDWATER STUDY	200	400	319000	391000		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1346	PA 40 PHASE 2 POTABLE WATER SYSTEM FACILITI	86200	108700	194700	239700									100.0										
1347	ASPHALT REPAIR AT 15 SITES	21700	25900	43400	52000	100.0																		
1371	DEMOLITION OF HARDING TRUCK TRAIL RESERVC	5900	7900	34700	43700												100.0							
1391	CROSS VALLEY CANAL CAPACITY PURCHASE (KEI	95700	95700	656300	683300	100.0																		
1403	WELL 107 REPLACEMENT & SITE ACQUISITION	455100	467100	3538600	3646600	100.0																		
1408	BARRANCA 54", 12" DW PIPELINE RELOCATIONS - \	27200	44500	3174100	3291100	100.0																		
1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEI	1600	4100	237600	291600	100.0																		
1417	BAKER WTP	4173900	4477100	80010000	82170000		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1427	DOMESTIC WATER PIPELINE REHABILITATION	22700	36200	293700	365700	100.0																		
1448	WELL 53 SITE ACQUISITION & WELL DRILLING	13700	19000	2405700	2477700		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEP/	343400	398800	1758900	2073900		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1466	PA 30 AND 51 DOMESTIC FACILITIES	95200	114800	8295100	10005100		90.0							10.0										
1469	OCWD ANNEXATION	276600	314200	992300	1127300		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
WATER IMPROVEMENT DISTRICT (ID) ALLOCATIONS

Oracle No.	Project Title	FY Direct	FY Dir+GA	Total Direct	Total Dir+GA	Improvement District (ID) Allocation - % of Total Budget																	
						101	112	113	115	121	130	135	140	150	153	154	155	156	161	182	184	186	188	199
1472	GREENHOUSE GAS INVENTORY	54100	85300	202100	319100		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/1	650100	668100	650100	668100	100.0																	
1496	RESIDENTIAL METER REPLACEMENT 12/13	294100	317500	294100	317500	100.0																	
1498	LAKE FOREST WELL #2 REPLACEMENT DRILLING/	53800	60400	2394200	2637000							100.0											
1512	RMS AT 5 DW RESERVOIRS	14100	38100	2501200	2690200		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DES	174000	195000	1580400	1769400		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1519	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO POR	225100	234900	1755600	1860000									100.0									
1520	GREAT PARK SAMP UPDATE	14400	40300	30000	84000		100.0																
1540	WELL 106 REPLACEMENT DRILLING & SITE ACQUI	72300	112700	2021400	2120400	100.0																	
1570	SANTIAGO CANYON AREA BPS PERMANENT GENE	1023000	1079100	1577300	1694300										####								
1578	POND 3 OBSERVATION DECK	72600	74600	74800	80200		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1602	SANTIAGO CANYON AREA READ BPS MCC	114400	124900	161800	188800	100.0																	
1612	SANTIAGO CANYON AREA SHAW BPS MCC	110200	120700	156300	183300	100.0																	
1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMI	140500	182600	456400	593200		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1625	MECH & ELEC SYS MODS - DW 12/13	275000	275000	275000	275000	100.0																	
1632	PA39 DW PIPELINES (LAKE FOREST BAKE TO ROM/	153300	168200	691900	776500						100.0												
1637	CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS	32400	35400	96800	105800	100.0																	
1640	AUTOMATION SYSTEM IMPROVEMENTS	14200	14200	242000	350000		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1646	GEN SYS MODS 12/13	135300	174900	135300	174900		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1648	PA18 ZN 3-4 BPS	6900	7500	2679700	2769700						100.0												
1656	RAISE SYSTEM VALVES 12/13	170500	179500	170500	179500	100.0																	
1664	NEWPORT COAST CATHODIC PROTECTION	508400	548500	1852400	2010800								100.0										
1667	1" TO 2" METER REPLACEMENT 12/13	91700	115800	91700	115800	100.0																	
1674	CSR METER REPLACEMENT 12/13	203500	212500	203500	212500	100.0																	
1680	SCADA WATER SYSTEM REPLACEMENT	376200	436900	2940400	3948400	100.0																	
1767	ENG PLANNING STUDY RESERVE 12/13	143000	287000	143000	287000		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1779	SCADA DYER ROAD WELL FIELD COMMUNICATIOI	12600	19800	157300	171700		1.2	1.4	2.0	4.1	3.2		1.1	8.5	0.9	0.4			2.2	0.8	0.8	0.3	0.3	72.8
1798	LAKE FOREST CONTROL AND TELEMETRY SYSTEN	104700	122700	420200	528200							100.0											
1800	DOMESTIC VAULT LID REHABILITATION	120000	149700	297600	378600	100.0																	
1829	WEATHER-BASED IRRIG. CONTROLLER IMPLEMEN	44300	53100	429000	519000	100.0																	
1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTIO	78300	78300	903100	948100		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	51100	65500	319000	409000		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1839	CPTS RESTORE AND INSTALL	77000	113000	221700	365700	100.0																	
1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20000	27600	20000	27600		1.0	1.2	1.7	3.5	2.7	4.4	0.9	7.1	0.8	0.3			1.8	0.7	0.6	0.2	0.2	72.9
1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	33000	69000	33000	69000		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
1845	GIS VALVE AND HYDRANT APPLICATION	20000	27600	20000	27600		1.2	1.4	2.0	4.1	3.2		1.1	8.5	0.9	0.4			2.2	0.8	0.8	0.3	0.3	72.8
1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	160300	270900	2249500	2519500		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
1866	NEWPORT BLVD WATER MAIN REPLACEMENT	1139500	1174700	5279500	5675500	100.0																	
2812	STRAND RANCH FACILITIES AND MONITORING PR	1541100	1653400	17739700	18387700		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3236	ORACLE PHASE 2 - TECH AND UB	1494200	1915000	4242800	5079800	100.0																	
3531	PORTOLA ZONE 9 RESERVOIR ACCESS ROAD REPA	24500	35900	94600	139600	100.0																	

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
WATER IMPROVEMENT DISTRICT (ID) ALLOCATIONS

Oracle No.	Project Title	FY Direct	FY Dir+GA	Total Direct	Total Dir+GA	Improvement District (ID) Allocation - % of Total Budget																	
						101	112	113	115	121	130	135	140	150	153	154	155	156	161	182	184	186	188	199
3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE AS	615000	838800	1992100	2712100	100.0																	
3585	BAKE PKWY SAN DIEGO CRK TO LAKE FOREST DR	216100	245900	470800	541000						100.0												
3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STU	35500	52500	56300	83300		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3667	JACKSON RANCH SOLAR PROJECT	87100	145700	131600	221600		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3709	OPA - MEADS PS MODIFICATIONS	16500	16500	216000	216000													100.0					
3716	WELL 51 REPLACEMENT	2300	6000	2123000	2321000	100.0																	
3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITI	277600	322900	3685600		100.0																	
3718	DOMESTIC AUTOMATION EQUIPMENT REPLACEMI	22000	22000	22000	22000	100.0																	
3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	106900	125700	107300	126200		3.6	4.4	6.2	12.8	10.0	16.2	3.5	26.1	2.9	1.2			6.7	2.5	2.3	0.8	0.8	
3723	PLANNING AND BUDGETING SOFTWARE REPLACE	316500	329900	638000	665000	100.0																	
3727	PLANNING AND BUDGETING SOFTWARE REPLACE	316500	329900	638000	665000	0.0																	
3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	350000	368000	350000	368000		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3766	STOCKDALE WEST RANCH JOINT BANKING PROJE	184900	238900	246400	318400		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3772	SKYLIGHT PROTECTION	138600	165600	138600	165600		1.2	1.4	2.0	4.1	3.2		1.1	8.5	0.9	0.4			2.2	0.8	0.8	0.3	0.3	72.8
3773	ENERGY EFFICIENCY PUMP REPLACEMENT	50100	54600	100000	109000		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3774	WELL MAINTENANCE AND REHABILITATION	130100	139100	260000	278000		4.3	5.2	7.3	15.3	11.8		4.2	31.2	3.4	1.5			8.0	3.0	2.8	1.0	1.0	
3786	DW ANNUAL SLURRY SEAL AND PAVEMENT REHA	133800	155400	222200	258200	100.0																	
	Total	**$25,284,000**	**$28,799,600**	**$265,192,400**	**$278,679,300**																		
	Total FY Direct Impact to ID ($M)					**$9.1**	**$0.6**	**$1.0**	**$0.8**	**$1.6**	**$1.6**	**$1.7**	**$1.0**	**$3.7**	**$1.4**	**$0.2**	**$0.0**	**$0.0**	**$0.9**	**$0.3**	**$0.3**	**$0.1**	**$0.1**	**$0.6**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
SEWER IMPROVEMENT DISTRICT (ID) ALLOCATIONS

						Improvement District (ID) Allocation - % of Total Budget																
Oracle No.	Project Title	FY Direct	FY Dir+GA	Total Direct	Total Dir+GA	210	211	212	213	215	221	230	235	240	250	253	261	282	284	286	288	290	299
1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPAR	144200	155800	731500	812500			21.0			21.0	8.0			50.0								
1016	AUTOMATION SYSTEM IMPROVEMENTS	14200	14200	143000	179000		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		143.0
1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZN/	464600	474400	3499100	3603500		2.1	13.2	4.8	0.7	13.2	9.6	7.9	7.7	31.7		9.1						
1030	SEWER VAULT LID REHABILITATION	19400	32900	297600	351600	100.0																	
1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20000	27600	20000	27600		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1054	AUTOMATION SYSTEM IMPROVEMENTS	14200	14200	242000	350000		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						134.6
1056	PA39 PHASE 1 RW PIPELINES	51200	58300	180400	220000							100.0											
1063	PA18 ZN B-C BPS	5700	6300	1813500	1903500							100.0											
1065	RECYCLED VAULT LID REHABILITATION	130300	155400	297600	351600	100.0																	
1066	LEGACY PARK TUSTIN RANCH ROAD	463200	489100	1041000	1128700				100.0														
1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	20000	27600	20000	27600		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						134.6
1079	GIS VALVE AND HYDRANT APPLICATION	20000	27600	20000	27600		0.7	4.7	1.7	0.3	4.7	3.4		2.7	11.2		3.2						67.4
1090	SCADA WATER SYSTEM REPLACEMENT	216800	237000	1479900	1820100	100.0																	
1096	LAKE FOREST CONTROL AND TELEMETRY SYSTEM	57800	75800	271700	433700								100.0										
1103	PA 30 AND 51 NONPOTABLE FACILITIES	116400	138100	10139600	12029600			90.0							10.0								
1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NON	18000	26900	236500	353500		1.9	15.7	5.5		14.7	8.7	6.4	7.7	25.6		9.6					4.2	
1118	MWRP FLOOD PROTECTION	267700	287600	3304500	3691500		0.7	4.7	1.7	0.3	4.7	3.4		2.7	11.2		3.2						67.4
1129	SEWER PIPELINE REHABILITATION	22700	36200	293700	365700	100.0																	
1132	CPTS RESTORE AND INSTALL	49500	76500	177700	285700	100.0																	
1134	GIS COLLECTIONS MAINTENANCE APPLICATION	60000	86100	60000	86100		2.5	1.1	1.4	2.4	5.1	3.3		0.9	7.9	0.3	2.1	0.6	0.6	0.2	0.2		71.4
1136	LONG TERM SEWER SYSTEM FLOW MONITORING	62200	79100	330000	420000		7.7	3.3	4.4	7.2	15.4	10.1	13.3	2.9	24.0	0.9	6.3	1.7	1.8	0.5	0.5		
1149	MWRP GEN SYS MODS 12/13	222200	225800	222200	225800		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1150	MWRP FLOOD PROTECTION	413500	445200	5215500	5899500		2.5	1.1	1.4	2.4	5.1	3.3		0.9	7.9	0.3	2.1	0.6	0.6	0.2	0.2		71.4
1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPA	143000	156900	852500	969500		10.8	4.6	0.3		21.6	14.2			33.5	1.2	8.8	2.4	2.6				
1161	RECYCLED WATER PIPELINE REHABILITATION	22700	36200	293700	365700	100.0																	
1167	GREAT PARK SAMP UPDATE	14400	40300	30000	84000			100.0															
1203	RAISE MANHOLES TO GRADE 12/13	165000	165000	165000	165000	100.0																	
1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	266700	292500	3321000	3871600		2.1	13.2	4.8	0.7	13.2	9.6	7.9	7.7	31.7		9.1						
1221	SEWER GEN SYS MODS 12/13	275000	275000	275000	275000		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1229	PA 40 PHASE 2 NONPOTABLE WATER SYSTEM FACI	551000	573500	2436100	2526100										100.0								
1236	GREAT PARK SAMP UPDATE	14400	40300	30000	84000			100.0															
1248	ASPHALT REPAIR AT 15 SITES	26300	32900	52600	65900	100.0																	
1251	MECH & ELEC SYS MODS - SEWER 12/13	165000	165000	165000	165000	100.0																	
1257	HQ LIGHTING RETROFIT	2500	2900	4800	5500	100.0																	
1259	GEN SYS MODS 12/13	58300	79900	58300	79900		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						67.3
1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTIOI	78300	78300	913000	961600		2.1	13.2	4.8	0.7	13.2	9.6	7.9	7.7	31.7		9.1						
1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	110000	110000	110000	110000		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1267	ROOF REPAIR AT 3 SITES	49000	50800	97900	101500	100.0																	
1268	RAISE SYSTEM VALVES 12/13	170500	179500	170500	179500	100.0																	
1276	1" TO 2" METER REPLACEMENT 12/13	120500	134000	120500	134000	100.0																	

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
SEWER IMPROVEMENT DISTRICT (ID) ALLOCATIONS

Oracle No.	Project Title	FY Direct	FY Dir+GA	Total Direct	Total Dir+GA	Improvement District (ID) Allocation - % of Total Budget																
						210	211	212	213	215	221	230	235	240	250	253	261	282	284	286	288	290	299
1296	CSR METER REPLACEMENT 12/13	51700	55300	51700	55300	100.0																	
1304	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	206800	224800	206800	224800	100.0																	
1308	PA6 PH2 NEIGHBORHOOD 3 ZONE C RW PIPELINE	379000	404900	857000	931700										100.0								
1318	CHIQUITA GENERAL SYSTEM MODIFICATIONS 012/	70400	70400	70400	70400	100.0																	
1319	OPS CENTER HVAC CHILLER REPLACEMENT	15800	16700	31400	33200	100.0																	
1340	ENG PLANNING STUDY RESERVE 12/13	116600	253400	116600	253400		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1364	MECH & ELEC SYS MODS - RW 12/13	220000	220000	220000	220000	100.0																	
1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	33000	69000	33000	69000		2.1	13.2	4.8	0.7	13.2	9.6	7.9	7.7	31.7		9.1						
1393	OCSD SOLIDS HANDLING 12/13	1150000	1150000	1150000	1150000	49.9	2.2	1.1	3.3		10.5	7.1			18.7		4.4	1.1	1.7				
1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/1	47300	124700	47300	124700		7.7	3.3	4.4	7.2	15.4	10.1	13.3	2.9	24.0	0.9	6.3	1.7	1.8	0.5	0.5		
1436	LAKE FOREST WW OFFSITE IMPROVEMENTS	78900	208600	4051000	4659400								100.0										
1445	LAKE FOREST WW OPPORTUNITY AREAS	15100	39900	1647800	1896200								100.0										
1474	NEWPORT COAST CATHODIC PROTECTION	681400	736400	2461400	2672000									100.0									
1477	LAWRP BIOSOLIDS HANDLING FACILITY	33800	82900	3659400	3947400		10.8	4.6	0.3		21.6	14.2			33.5	1.2	8.8	2.4	2.6				
1485	OCSD EQUITY 11/12	2680800	2680800	8013000	8013000		10.8	4.6	0.3		21.6	14.2			33.5	1.2	8.8	2.4	2.6				
1490	MWRP BACKWASH SUPPLY PUMP REPLACEMENT	197800	197800	396000	396000	100.0																	
1495	OCSD EQUITY 12/13	100	100	100	100		10.8	4.6	0.3		21.6	14.2			33.5	1.2	8.8	2.4	2.6				
1499	OPS CENTER HVAC CHILLER REPLACEMENT	69000	71500	138200	143200	100.0																	
1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOL/	263900	283600	290400	319200								100.0										
1517	LAKE FOREST RW OPPORTUNITY AREAS	40900	108500	4040500	4648900								100.0										
1534	MWRP MPS-3 PUMP REPLACEMENT	127400	127400	255000	255000	100.0																	
1535	OCSD CORF 11/12	1314800	1314800	6545000	6545000	49.9	2.2	1.1	3.3		10.5	7.1			18.7		4.4	1.1	1.7				
1538	ROOF REPAIR AT 3 SITES	89800	91600	179700	183300	100.0																	
1541	OCSD CORF 12/13	1336300	1336300	1673000	1673000	49.9	2.2	1.1	3.3		10.5	7.1			18.7		4.4	1.1	1.7				
1549	HQ LIGHTING RETROFIT	11100	14700	22100	29300	100.0																	
1556	ASPHALT REPAIR AT 15 SITES	1000	1300	1800	2400	100.0																	
1565	ENG PLANNING STUDY RESERVE 12/13	116600	224600	116600	224600		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						67.3
1580	MWRP SECONDARY DEWATERING PUMP REPLACEI	30000	30000	60000	60000	100.0																	
1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LA	300	700	2913900	3075900	75.0							23.7							0.9	0.4		
1599	MWRP EXPANSION PHASE II	6609800	7000600	66615300	70591500		10.8	4.6	0.3		21.6	14.2			33.5	1.2	8.8	2.4	2.6				
1600	PORTOLA HILLS LS ABANDONMENT	251300	352100	2640000	2883000															50.0	50.0		
1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVER	5135200	5483000	174579000	181447300		10.5	4.5	0.3		20.9	13.7	3.2		32.4	1.2	8.5	2.3	2.5				
1627	SERVICE LINE & MAIN REPLACEMENT 12/13	200200	218200	200200	218200	100.0																	
1629	DISTRICT WIDE SEWER REHABILITATION	85400	131700	749100	875100		7.7	3.3	4.4	7.2	15.4	10.1	13.3	2.9	24.0	0.9	6.3	1.7	1.8	0.5	0.5		
1642	PA 30 AND 51 WASTEWATER FACILITIES	115200	137900	10038800	12018800			90.0							10.0								
1643	SAND CANYON ZONE A STRAINER REPLACEMENT	118200	140700	845400	1021800	100.0																	
1662	PA39 SEWER PIPELINES (PHASE 1)	165900	186300	710600	813200							100.0											
1665	NEWPORT COAST CATHODIC PROTECTION	171800	183500	617000	661600									100.0									
1669	FILTERS FOR FIVE COMMERCIAL BUILDINGS	33900	38300	239300	270800	100.0																	
1674	CSR METER REPLACEMENT 12/13	203500	212500	203500	212500	0.0																	

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
SEWER IMPROVEMENT DISTRICT (ID) ALLOCATIONS

						Improvement District (ID) Allocation - % of Total Budget																
Oracle No.	Project Title	FY Direct	FY Dir+GA	Total Direct	Total Dir+GA	210	211	212	213	215	221	230	235	240	250	253	261	282	284	286	288	290	299
1685	GIS SUPPORT APPLICATIONS 12/13	60000	93300	60000	93300		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1695	COOLING TOWER CONST./MONITORING	125100	207900	198000	329400	100.0																	
1696	BARRANCA 16" RW RELOCATION - VESTAR	15300	26500	1510300	1585900	100.0																	
1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/1	47300	124700	47300	124700		2.1	13.2	4.8	0.7	13.2	9.6	7.9	7.7	31.7		9.1						
1706	MWRP EXPANSION PHASE II	4165000	4412500	44164200	46786800		2.3	14.3	5.2	0.8	14.3	10.4		8.4	34.4		9.9						
1727	HYDRAULIC MODELING 12/13	44000	62000	44000	62000		2.2	0.9	1.3	2.1	4.4	2.9	3.8	0.8	6.8	0.3	1.8	0.5	0.5	0.1	0.1		71.5
1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	577600	630600	1186200	1334700								100.0										
1742	HYDRAULIC MODELING 12/13	44000	62000	44000	62000		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						67.3
1754	UCI / NIST	55900	89100	242000	386000		2.3	14.3	5.2	0.8	14.3	10.4		8.4	34.4		9.9						
1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSIC	85100	129400	683700	773700		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						67.3
1792	GIS SUPPORT APPLICATIONS 12/13	60000	93300	60000	93300		0.7	4.3	1.6	0.2	4.3	3.2	2.6	2.5	10.3		3.0						67.3
3237	ORACLE PHASE 2 - TECH AND UB	1494200	1915000	4242800	5079800	100.0																	
3435	LEGACY PARK TUSTIN RANCH ROAD	508500	543000	1155800	1272800				100.0														
3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	231600	255000	1052300	1181900			29.2			29.3	21.3					20.2						
3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASS	615000	838800	1992100	2712100	100.0																	
3712	BEE CANYON BPS	46800	71500	211200	301200	100.0																	0.0
3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD	286000	304000	286000	304000															78.0	22.0		
3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	51500	56900	51700	57100	50.0	1.0	7.8	2.8		7.3	6.5	3.2	3.8	12.8		4.8						
3727	PLANNING AND BUDGETING SOFTWARE REPLACEI	316500	329900	638000	665000	100.0																	
3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	1332000	1501700	1399800	1597800		2.1	13.2	4.8	0.7	13.2	9.6	7.9	7.7	31.7		9.1						
3730	WQ PLANNING RESERVES 12/13 - RECYCLED	93100	102100	93500	102500	50.0	1.0	7.8	2.8		7.3	6.5	3.2	3.8	12.8		4.8						
3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	250000	304000	250000	304000	50.0	1.0	8.4	2.9		7.9	6.8		4.2	13.7		5.1						
3732	RW CONVERSION FOR OFF-SITE 12/13	145800	190800	145800	190800	50.0	1.0	7.8	2.8		7.3	6.5	3.2	3.8	12.8		4.8						
3733	RECYCLED AUTOMATION EQUIPMENT REPLACEMI	22000	22000	22000	22000	100.0																	
3750	SOCWA CROSSING PROTECTION	100000	100000	100000	100000		3.1	1.3	0.1		6.2	4.0			9.5	0.3	2.5	0.7	0.7				71.6
3775	MISC SEWER IMPROVEMENTS AT JAMBOREE CENT	98700	121600	132600	167700	100.0																	
3777	SKYLIGHT PROTECTION	138600	165600	138600	165600		2.5	1.1	1.4	2.4	5.1	3.3		0.9	7.9	0.3	2.1	0.6	0.6	0.2	0.2		71.4
3778	HEALTH DEPT FEES FOR 12/13	77000	96500	77000	95000		1.9	15.7	5.5		14.7	8.7	6.4	7.7	25.6		9.6					4.2	
3779	SALT MANAGEMENT PLAN DEVELOPMENT	110100	132600	220000	265000		2.3	14.3	5.2	0.8	14.3	10.4		8.4	34.4		9.9						
3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	75100	120100	2500000	2590000		2.3	14.3	5.2	0.8	14.3	10.4		8.4	34.4		9.9						
3783	SKYLIGHT PROTECTION	138600	165600	138600	165600		0.7	4.7	1.7	0.3	4.7	3.4		2.7	11.2		3.2						67.4
3784	ENERGY EFFICIENCY PUMP REPLACEMENT	25100	29600	50000	59000		2.3	14.3	5.2	0.8	14.3	10.4		8.4	34.4		9.9						
3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB	57700	68500	95700	113700	100.0																	
	Total	**$39,011,900**	**$43,133,800**	**$398,957,700**	**$426,659,100**																		
	Total FY Direct Impact to ID ($M)					**$7.5**	**$1.9**	**$2.1**	**$1.5**	**$0.1**	**$4.7**	**$3.4**	**$1.5**	**$1.5**	**$9.1**	**$0.2**	**$2.2**	**$0.4**	**$0.5**	**$0.4**	**$0.2**	**$0.0**	**$1.7**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
101	3236	ORACLE PHASE 2 - TECH AND UB	100.0	1,494,200	1,915,000	REPLACEMENT FUND**
	1866	NEWPORT BLVD WATER MAIN REPLACEMENT	100.0	1,139,500	1,174,700	REPLACEMENT FUND**
	1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	100.0	949,100	949,100	REPLACEMENT FUND
	3566	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	100.0	615,000	838,800	REPLACEMENT FUND**
	1486	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	100.0	650,100	668,100	REPLACEMENT FUND**
	1284	ASSET OPTIMIZATION - SAND CANYON DEVELOPMENT	100.0	476,800	482,400	REPLACEMENT FUND
	1403	WELL 107 REPLACEMENT & SITE ACQUISITION	100.0	455,100	467,100	REPLACEMENT FUND**
	1680	SCADA WATER SYSTEM REPLACEMENT	100.0	376,200	436,900	REPLACEMENT FUND**
	3723	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	100.0	316,500	329,900	REPLACEMENT FUND**
	3717	WELL 115 REPLACEMENT WELL/WELLHEAD & SITE ACQUIS.	100.0	277,600	322,900	REPLACEMENT FUND**
	1496	RESIDENTIAL METER REPLACEMENT 12/13	100.0	294,100	317,500	REPLACEMENT FUND**
	1625	MECH & ELEC SYS MODS - DW 12/13	100.0	275,000	275,000	REPLACEMENT FUND**
	1674	CSR METER REPLACEMENT 12/13	100.0	203,500	212,500	REPLACEMENT FUND
	1656	RAISE SYSTEM VALVES 12/13	100.0	170,500	179,500	REPLACEMENT FUND**
	1341	STRAND RANCH CROSS VALLEY CANAL TURNOUTS (KERN CO)	100.0	173,000	173,000	REPLACEMENT FUND**
	3786	DW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	100.0	133,800	155,400	REPLACEMENT FUND**
	1800	DOMESTIC VAULT LID REHABILITATION	100.0	120,000	149,700	REPLACEMENT FUND**
	1602	SANTIAGO CANYON AREA READ BPS MCC	100.0	114,400	124,900	REPLACEMENT FUND**
	1612	SANTIAGO CANYON AREA SHAW BPS MCC	100.0	110,200	120,700	REPLACEMENT FUND**
	1667	1" TO 2" METER REPLACEMENT 12/13	100.0	91,700	115,800	REPLACEMENT FUND**
	1839	CPTS RESTORE AND INSTALL	100.0	77,000	113,000	REPLACEMENT FUND**
	1540	WELL 106 REPLACEMENT DRILLING & SITE ACQUISITION	100.0	72,300	112,700	REPLACEMENT FUND**
	1391	CROSS VALLEY CANAL CAPACITY PURCHASE (KERN COUNTY)	100.0	95,700	95,700	REPLACEMENT FUND**
	1316	OPS CENTER HVAC CHILLER REPLACEMENT	100.0	72,200	75,800	REPLACEMENT FUND**
	1328	ROOF REPAIR AT 3 SITES	100.0	74,100	75,400	REPLACEMENT FUND**
	1829	WEATHER-BASED IRRIG. CONTROLLER IMPLEMENTATION	100.0	44,300	53,100	CONSERVATION FUND
	1408	BARRANCA 54", 12" DW PIPELINE RELOCATIONS - VESTAR	100.0	27,200	44,500	REPLACEMENT FUND**
	1108	RECOAT FLEMING RESERVOIR	100.0	31,000	40,400	REPLACEMENT FUND**
	1427	DOMESTIC WATER PIPELINE REHABILITATION	100.0	22,700	36,200	REPLACEMENT FUND**
	3531	PORTOLA ZONE 9 RESERVOIR ACCESS ROAD REPAIR	100.0	24,500	35,900	REPLACEMENT FUND
	3712	BEE CANYON BPS	50.0	23,400	35,750	REPLACEMENT FUND**
	1637	CATHODIC PROTECTION FOR 6 STEEL RESERVOIRS IN SCWD	100.0	32,400	35,400	REPLACEMENT FUND
	1347	ASPHALT REPAIR AT 15 SITES	100.0	21,700	25,900	REPLACEMENT FUND**
	3718	DOMESTIC AUTOMATION EQUIPMENT REPLACEMENT 12/13	100.0	22,000	22,000	REPLACEMENT FUND
	1336	HQ LIGHTING RETROFIT	100.0	11,100	14,700	REPLACEMENT FUND
	3716	WELL 51 REPLACEMENT	100.0	2,300	6,000	REPLACEMENT FUND**
	1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	100.0	1,600	4,100	REPLACEMENT FUND**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
101	1245	MODJESKA CANYON PIPELINE RELOCATIONS SITES 2,8,11	75.0	900	900	REPLACEMENT FUND**
	3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	0.0	0	0	REPLACEMENT FUND**
	3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	0.0	0	0	REPLACEMENT FUND**
	3788	RW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	0.0	0	0	REPLACEMENT FUND**
				$9,092,700	**$10,236,350**	
112	1417	BAKER WTP	3.6	150,260	161,176	BONDS YET TO BE SOLD**
	1466	PA 30 AND 51 DOMESTIC FACILITIES	90.0	85,680	103,320	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	4.3	88,116	98,298	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	4.3	66,267	71,096	BONDS YET TO BE SOLD**
	1520	GREAT PARK SAMP UPDATE	100.0	14,400	40,300	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	4.3	27,408	29,778	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	4.3	15,050	15,824	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	3.6	12,362	14,357	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	4.3	10,750	10,750	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	4.3	7,951	10,273	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	4.3	8,802	10,023	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	3.6	5,771	9,752	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	3.6	6,613	8,536	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	4.3	7,482	8,385	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	3.6	5,058	6,574	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	4.3	3,745	6,265	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	4.3	2,270	5,986	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	4.3	5,594	5,981	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	3.6	1,980	5,220	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	4.3	2,098	4,752	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	3.6	3,848	4,525	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	4.3	2,817	4,494	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	4.3	3,122	3,208	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	1.0	2,766	3,142	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	3.6	1,948	3,071	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	4.3	1,419	2,967	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	1.0	1,430	2,870	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	3.6	2,819	2,819	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	4.3	2,197	2,817	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	4.3	2,154	2,348	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
112	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	4.3	1,527	2,258	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	1.2	1,663	1,987	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	1.0	1,353	1,749	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	3.2	1,562	1,594	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	3.6	508	1,372	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	1.0	600	933	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	4.3	589	817	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	1.0	440	620	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	3.6	288	389	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	1.2	240	331	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.0	200	276	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	1.2	151	238	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	1.0	225	225	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	1.0	142	142	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	4.3	9	17	BONDS YET TO BE SOLD**
				$561,674	**$671,855**	
113	1047	LEGACY PARK TUSTIN RANCH ROAD	100.0	417,700	443,600	BONDS YET TO BE SOLD**
	1417	BAKER WTP	4.4	183,652	196,992	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	5.2	106,558	118,872	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	5.2	80,137	85,977	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	5.2	33,145	36,010	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	5.2	18,200	19,136	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	4.4	15,110	17,547	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	5.2	13,000	13,000	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	5.2	9,615	12,423	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	5.2	10,644	12,121	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	4.4	7,053	11,920	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	4.4	8,083	10,432	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	5.2	9,048	10,140	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	4.4	6,182	8,034	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	5.2	4,529	7,576	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	5.2	2,746	7,238	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	5.2	6,765	7,233	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	4.4	2,420	6,380	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	5.2	2,538	5,746	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
113	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	4.4	4,704	5,531	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	5.2	3,406	5,434	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	5.2	3,775	3,879	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	1.2	3,319	3,770	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	4.4	2,380	3,753	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	5.2	1,716	3,588	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	4.4	3,445	3,445	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	1.2	1,716	3,444	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	5.2	2,657	3,406	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	5.2	2,605	2,839	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	5.2	1,846	2,730	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	1.4	1,940	2,318	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	1.2	1,624	2,099	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	3.9	1,903	1,942	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	4.4	620	1,676	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	1.2	720	1,120	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	5.2	712	988	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	1.2	528	744	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	4.4	352	475	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	1.4	280	386	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.2	240	331	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	1.4	176	277	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	1.2	270	270	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	1.2	170	170	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	5.2	10	21	BONDS YET TO BE SOLD**
				$978,239	**$1,085,013**	
115	1417	BAKER WTP	6.2	258,782	277,580	CAPITAL FUND
	1250	OPA / REGIONAL GROUNDWATER PROJECT	7.3	149,592	166,878	CAPITAL FUND
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	7.3	112,500	120,698	CAPITAL FUND
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	7.3	46,530	50,553	CAPITAL FUND
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	7.3	25,550	26,864	CAPITAL FUND
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	6.2	21,291	24,726	CAPITAL FUND
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	7.3	18,250	18,250	CAPITAL FUND
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	7.3	13,498	17,440	CAPITAL FUND
	1326	STOCKDALE WEST FACILITIES	7.3	14,943	17,016	CAPITAL FUND

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
115	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	6.2	9,939	16,796	CAPITAL FUND
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	6.2	11,389	14,700	CAPITAL FUND
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	7.3	12,702	14,235	CAPITAL FUND
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	6.2	8,711	11,321	CAPITAL FUND
	3667	JACKSON RANCH SOLAR PROJECT	7.3	6,358	10,636	CAPITAL FUND
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	7.3	3,854	10,162	CAPITAL FUND
	3774	WELL MAINTENANCE AND REHABILITATION	7.3	9,497	10,154	CAPITAL FUND
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	6.2	3,410	8,990	CAPITAL FUND
	1338	WATER BANKING AGREEMENTS	7.3	3,562	8,067	CAPITAL FUND
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	6.2	6,628	7,793	CAPITAL FUND
	1006	WATER BANKING EXPANSION	7.3	4,782	7,629	CAPITAL FUND
	1578	POND 3 OBSERVATION DECK	7.3	5,300	5,446	CAPITAL FUND
	1469	OCWD ANNEXATION	1.7	4,702	5,341	CAPITAL FUND
	1472	GREENHOUSE GAS INVENTORY	6.2	3,354	5,289	CAPITAL FUND
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	7.3	2,409	5,037	CAPITAL FUND
	1767	ENG PLANNING STUDY RESERVE 12/13	1.7	2,431	4,879	CAPITAL FUND
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	6.2	4,855	4,855	CAPITAL FUND
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	7.3	3,730	4,782	CAPITAL FUND
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	7.3	3,657	3,986	CAPITAL FUND
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	7.3	2,592	3,833	CAPITAL FUND
	3772	SKYLIGHT PROTECTION	2.0	2,772	3,312	CAPITAL FUND
	1646	GEN SYS MODS 12/13	1.7	2,300	2,973	CAPITAL FUND
	1279	OPA / REGIONAL TRANSMISSION MAIN	5.5	2,684	2,739	CAPITAL FUND
	1512	RMS AT 5 DW RESERVOIRS	6.2	874	2,362	CAPITAL FUND
	1177	GIS SUPPORT APPLICATIONS 12/13	1.7	1,020	1,586	CAPITAL FUND
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	7.3	1,000	1,387	CAPITAL FUND
	1310	HYDRAULIC MODELING 12/13	1.7	748	1,054	CAPITAL FUND
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	6.2	496	670	CAPITAL FUND
	1845	GIS VALVE AND HYDRANT APPLICATION	2.0	400	552	CAPITAL FUND
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.7	340	469	CAPITAL FUND
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	2.0	252	396	CAPITAL FUND
	1306	RMS MIXING SYSTEM UPGRADES	1.7	383	383	CAPITAL FUND
	1640	AUTOMATION SYSTEM IMPROVEMENTS	1.7	241	241	CAPITAL FUND
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	7.3	15	29	CAPITAL FUND
				$788,323	**$902,089**	

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ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
121	1417	BAKER WTP	12.8	534,259	573,069	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	15.3	313,528	349,758	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	15.3	235,788	252,970	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	15.3	97,522	105,953	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	15.3	53,550	56,304	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	12.8	43,955	51,046	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	15.3	38,250	38,250	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	15.3	28,290	36,552	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	15.3	31,319	35,664	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	12.8	20,518	34,675	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	12.8	23,514	30,349	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	15.3	26,622	29,835	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	12.8	17,984	23,373	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	15.3	13,326	22,292	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	15.3	8,078	21,298	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	15.3	19,905	21,282	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	12.8	7,040	18,560	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	15.3	7,466	16,907	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	12.8	13,683	16,090	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	15.3	10,022	15,989	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	15.3	11,108	11,414	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	3.5	9,681	10,997	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	12.8	6,925	10,918	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	15.3	5,049	10,557	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	3.5	5,005	10,045	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	12.8	10,022	10,022	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	15.3	7,818	10,022	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	15.3	7,665	8,354	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	15.3	5,432	8,033	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	4.1	5,683	6,790	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	3.5	4,736	6,122	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	11.4	5,563	5,677	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	12.8	1,805	4,877	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	3.5	2,100	3,266	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	15.3	2,096	2,907	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	3.5	1,540	2,170	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	12.8	1,024	1,382	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
121	1845	GIS VALVE AND HYDRANT APPLICATION	4.1	820	1,132	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	3.5	700	966	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	4.1	517	812	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	3.5	788	788	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	3.5	497	497	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	15.3	31	61	BONDS YET TO BE SOLD**
				$1,641,224	**$1,878,025**	
130	1417	BAKER WTP	10.0	417,390	447,710	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	11.8	241,806	269,748	BONDS YET TO BE SOLD**
	3585	BAKE PKWY SAN DIEGO CRK TO LAKE FOREST DR	100.0	216,100	245,900	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	11.8	181,850	195,101	BONDS YET TO BE SOLD**
	1632	PA39 DW PIPELINES (LAKE FOREST BAKE TO ROMANO)	100.0	153,300	168,200	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	11.8	75,213	81,715	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	11.8	41,300	43,424	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	10.0	34,340	39,880	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	11.8	29,500	29,500	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	11.8	21,818	28,190	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	11.8	24,155	27,506	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	10.0	16,030	27,090	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	10.0	18,370	23,710	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	11.8	20,532	23,010	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	10.0	14,050	18,260	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	11.8	10,278	17,193	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	11.8	6,230	16,426	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	11.8	15,352	16,414	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	10.0	5,500	14,500	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	11.8	5,758	13,039	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	10.0	10,690	12,570	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	11.8	7,729	12,331	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	11.8	8,567	8,803	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	10.0	5,410	8,530	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	2.7	7,468	8,483	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	11.8	3,894	8,142	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	10.0	7,830	7,830	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	2.7	3,861	7,749	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
130	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	11.8	6,030	7,729	BONDS YET TO BE SOLD**
	1648	PA18 ZN 3-4 BPS	100.0	6,900	7,500	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	11.8	5,912	6,443	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	11.8	4,189	6,195	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	3.2	4,435	5,299	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	2.7	3,653	4,722	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	8.9	4,343	4,432	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	10.0	1,410	3,810	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	2.7	1,620	2,519	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	11.8	1,617	2,242	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	2.7	1,188	1,674	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	10.0	800	1,080	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	3.2	640	883	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	2.7	540	745	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	3.2	403	634	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	2.7	608	608	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	2.7	383	383	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	11.8	24	47	BONDS YET TO BE SOLD**
				$1,649,016	**$1,877,899**	
135	1417	BAKER WTP	16.2	676,172	725,290	PREVIOUSLY SOLD BONDS
	1172	DW 16"& 12 RANCHO PKWY HERMANA TO PORTOLA RA TO LF	100.0	538,400	596,500	CAPITAL FUND
	1189	LAKE FOREST DW OPPORTUNITY AREAS	100.0	55,400	146,900	CAPITAL FUND
	1798	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRADES	100.0	104,700	122,700	CAPITAL FUND
	1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	100.0	70,400	105,800	CAPITAL FUND
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	16.2	55,631	64,606	PREVIOUSLY SOLD BONDS
	1498	LAKE FOREST WELL #2 REPLACEMENT DRILLING/WELLHEAD.	100.0	53,800	60,400	REPLACEMENT FUND**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	16.2	25,969	43,886	PREVIOUSLY SOLD BONDS
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	16.2	29,759	38,410	PREVIOUSLY SOLD BONDS
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	16.2	22,761	29,581	PREVIOUSLY SOLD BONDS
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	16.2	8,910	23,490	PREVIOUSLY SOLD BONDS
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	16.2	17,318	20,363	PREVIOUSLY SOLD BONDS
	1469	OCWD ANNEXATION	4.4	12,170	13,825	PREVIOUSLY SOLD BONDS
	1472	GREENHOUSE GAS INVENTORY	16.2	8,764	13,819	PREVIOUSLY SOLD BONDS
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	16.2	12,685	12,685	PREVIOUSLY SOLD BONDS
	1767	ENG PLANNING STUDY RESERVE 12/13	4.4	6,292	12,628	PREVIOUSLY SOLD BONDS

IRVINE RANCH WATER DISTRICT
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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
135	1646	GEN SYS MODS 12/13	4.4	5,953	7,696	PREVIOUSLY SOLD BONDS
	1512	RMS AT 5 DW RESERVOIRS	16.2	2,284	6,172	PREVIOUSLY SOLD BONDS
	1177	GIS SUPPORT APPLICATIONS 12/13	4.4	2,640	4,105	PREVIOUSLY SOLD BONDS
	1310	HYDRAULIC MODELING 12/13	4.4	1,936	2,728	PREVIOUSLY SOLD BONDS
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	16.2	1,296	1,750	PREVIOUSLY SOLD BONDS
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	4.4	880	1,214	PREVIOUSLY SOLD BONDS
	1306	RMS MIXING SYSTEM UPGRADES	4.4	990	990	PREVIOUSLY SOLD BONDS
	1640	AUTOMATION SYSTEM IMPROVEMENTS	4.4	625	625	PREVIOUSLY SOLD BONDS
				$1,715,735	**$2,056,163**	
140	1664	NEWPORT COAST CATHODIC PROTECTION	100.0	508,400	548,500	BONDS YET TO BE SOLD**
	1417	BAKER WTP	3.5	146,087	156,699	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	4.2	86,066	96,012	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	4.2	64,726	69,443	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	4.2	26,771	29,085	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	4.2	14,700	15,456	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	3.5	12,019	13,958	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	4.2	10,500	10,500	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	4.2	7,766	10,034	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	4.2	8,597	9,790	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	3.5	5,611	9,482	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	3.5	6,430	8,299	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	4.2	7,308	8,190	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	3.5	4,918	6,391	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	4.2	3,658	6,119	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	4.2	2,218	5,846	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	4.2	5,464	5,842	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	3.5	1,925	5,075	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	4.2	2,050	4,641	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	3.5	3,742	4,400	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	4.2	2,751	4,389	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	4.2	3,049	3,133	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	3.5	1,894	2,986	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	4.2	1,386	2,898	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.9	2,489	2,828	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	4.2	2,146	2,751	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
140	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	3.5	2,741	2,741	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.9	1,287	2,583	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	4.2	2,104	2,293	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	4.2	1,491	2,205	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	1.1	1,525	1,822	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	3.2	1,562	1,594	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	0.9	1,218	1,574	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	3.5	494	1,334	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.9	540	840	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	4.2	575	798	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.9	396	558	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	3.5	280	378	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	1.1	220	304	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.9	180	248	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	1.1	139	218	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	0.9	203	203	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.9	128	128	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	4.2	8	17	BONDS YET TO BE SOLD**
				$957,762	**$1,062,585**	
150	1417	BAKER WTP	26.1	1,089,388	1,168,523	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	31.2	639,350	713,232	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	31.2	480,823	515,861	BONDS YET TO BE SOLD**
	1519	PA9 JEFFREY RD 12" ZONE 3 - IRVINE BLVD TO PORTOLA	100.0	225,100	234,900	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	31.2	198,869	216,060	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	31.2	109,200	114,816	BONDS YET TO BE SOLD**
	1346	PA 40 PHASE 2 POTABLE WATER SYSTEM FACILITIES	100.0	86,200	108,700	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	26.1	89,627	104,087	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	31.2	78,000	78,000	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	31.2	57,689	74,537	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	31.2	63,866	72,727	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	26.1	41,838	70,705	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	26.1	47,946	61,883	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	31.2	54,288	60,840	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	26.1	36,671	47,659	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	31.2	27,175	45,458	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
150	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	31.2	16,474	43,430	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	31.2	40,591	43,399	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	26.1	14,355	37,845	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	31.2	15,226	34,476	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	26.1	27,901	32,808	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	31.2	20,436	32,604	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	31.2	22,651	23,275	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	7.1	19,639	22,308	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	26.1	14,120	22,263	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	31.2	10,296	21,528	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	26.1	20,436	20,436	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	31.2	15,943	20,436	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	7.1	10,153	20,377	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	31.2	15,631	17,035	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	31.2	11,076	16,380	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	8.5	11,781	14,076	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	7.1	9,606	12,418	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	23.2	11,322	11,554	BONDS YET TO BE SOLD**
	1466	PA 30 AND 51 DOMESTIC FACILITIES	10.0	9,520	11,480	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	26.1	3,680	9,944	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	7.1	4,260	6,624	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	31.2	4,274	5,928	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	7.1	3,124	4,402	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	26.1	2,088	2,819	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	8.5	1,700	2,346	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	7.1	1,420	1,960	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	8.5	1,071	1,683	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	7.1	1,598	1,598	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	7.1	1,008	1,008	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	31.2	62	125	BONDS YET TO BE SOLD**
				$3,667,472	**$4,184,553**	
153	1570	SANTIAGO CANYON AREA BPS PERMANENT GENERATORS	100.0	1,023,000	1,079,100	BONDS YET TO BE SOLD**
	1417	BAKER WTP	2.9	121,043	129,836	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	3.4	69,673	77,724	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	3.4	52,397	56,216	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
153	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	3.4	21,672	23,545	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	3.4	11,900	12,512	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	2.9	9,959	11,565	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	3.4	8,500	8,500	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	3.4	6,287	8,123	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	3.4	6,960	7,925	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	2.9	4,649	7,856	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	2.9	5,327	6,876	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	3.4	5,916	6,630	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	2.9	4,075	5,295	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	3.4	2,961	4,954	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	3.4	1,795	4,733	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	3.4	4,423	4,729	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	2.9	1,595	4,205	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	3.4	1,659	3,757	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	2.9	3,100	3,645	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	3.4	2,227	3,553	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	3.4	2,468	2,536	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.8	2,213	2,514	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	2.9	1,569	2,474	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	3.4	1,122	2,346	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.8	1,144	2,296	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	2.9	2,271	2,271	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	3.4	1,737	2,227	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	3.4	1,703	1,856	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	3.4	1,207	1,785	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	0.9	1,247	1,490	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	0.8	1,082	1,399	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	2.6	1,269	1,295	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	2.9	409	1,105	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.8	480	746	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	3.4	466	646	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.8	352	496	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	2.9	232	313	BONDS YET TO BE SOLD**
	1245	MODJESKA CANYON PIPELINE RELOCATIONS SITES 2,8,11	25.0	300	300	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	0.9	180	248	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.8	160	221	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
153	1306	RMS MIXING SYSTEM UPGRADES	0.8	180	180	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	0.9	113	178	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.8	114	114	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	3.4	7	14	BONDS YET TO BE SOLD**
				$1,391,143	**$1,500,329**	
154	1417	BAKER WTP	1.2	50,087	53,725	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	1.5	30,738	34,290	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1.5	23,117	24,801	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	1.5	9,561	10,388	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	1.5	5,250	5,520	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	1.2	4,121	4,786	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	1.5	3,750	3,750	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	1.5	2,774	3,584	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	1.5	3,071	3,497	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	1.2	1,924	3,251	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	1.5	2,610	2,925	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	1.2	2,204	2,845	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	1.2	1,686	2,191	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	1.5	1,307	2,186	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	1.5	792	2,088	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	1.5	1,952	2,087	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	1.2	660	1,740	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	1.5	732	1,658	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	1.5	983	1,568	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	1.2	1,283	1,508	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	1.5	1,089	1,119	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	1.5	495	1,035	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	1.2	649	1,024	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	1.5	767	983	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.3	830	943	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	1.2	940	940	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.3	429	861	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	1.5	752	819	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	1.5	533	788	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	0.4	554	662	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
154	1279	OPA / REGIONAL TRANSMISSION MAIN	1.1	537	548	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	0.3	406	525	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	1.2	169	457	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	1.5	206	285	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.3	180	280	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.3	132	186	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	1.2	96	130	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	0.4	80	110	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.3	60	83	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	0.4	50	79	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	0.3	68	68	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.3	43	43	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	1.5	3	6	BONDS YET TO BE SOLD**
				$157,670	**$180,362**	
155	1371	DEMOLITION OF HARDING TRUCK TRAIL RESERVOIR	100.0	5,900	7,900	CAPITAL FUND
				$5,900	**$7,900**	
156	1337	OPA - DEMOLITION OF TANK & FOUR BPS	100.0	20,900	20,900	CAPITAL FUND
	3709	OPA - MEADS PS MODIFICATIONS	100.0	16,500	16,500	CAPITAL FUND
	1279	OPA / REGIONAL TRANSMISSION MAIN	25.0	12,200	12,450	CAPITAL FUND
				$49,600	**$49,850**	
161	1417	BAKER WTP	6.7	279,651	299,966	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	8.0	163,936	182,880	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	8.0	123,288	132,272	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	8.0	50,992	55,400	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	8.0	28,000	29,440	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	6.7	23,008	26,720	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	8.0	20,000	20,000	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	8.0	14,792	19,112	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	8.0	16,376	18,648	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	6.7	10,740	18,150	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	6.7	12,308	15,886	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
161	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	8.0	13,920	15,600	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	6.7	9,414	12,234	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	8.0	6,968	11,656	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	8.0	4,224	11,136	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	8.0	10,408	11,128	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	6.7	3,685	9,715	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	8.0	3,904	8,840	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	6.7	7,162	8,422	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	8.0	5,240	8,360	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	8.0	5,808	5,968	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	6.7	3,625	5,715	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	1.8	4,979	5,656	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	8.0	2,640	5,520	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	6.7	5,246	5,246	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	8.0	4,088	5,240	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	1.8	2,574	5,166	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	8.0	4,008	4,368	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	8.0	2,840	4,200	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	2.2	3,049	3,643	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	1.8	2,435	3,148	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	6.0	2,928	2,988	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	6.7	945	2,553	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	1.8	1,080	1,679	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	8.0	1,096	1,520	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	1.8	792	1,116	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	6.7	536	724	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	2.2	440	607	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.8	360	497	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	2.2	277	436	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	1.8	405	405	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	1.8	256	256	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	8.0	16	32	BONDS YET TO BE SOLD**
				$858,439	**$982,248**	
182	1417	BAKER WTP	2.5	104,348	111,928	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	3.0	61,476	68,580	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
182	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	3.0	46,233	49,602	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	3.0	19,122	20,775	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	3.0	10,500	11,040	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	2.5	8,585	9,970	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	3.0	7,500	7,500	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	3.0	5,547	7,167	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	3.0	6,141	6,993	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	2.5	4,008	6,773	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	2.5	4,593	5,928	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	3.0	5,220	5,850	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	2.5	3,513	4,565	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	3.0	2,613	4,371	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	3.0	1,584	4,176	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	3.0	3,903	4,173	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	2.5	1,375	3,625	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	3.0	1,464	3,315	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	2.5	2,673	3,143	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	3.0	1,965	3,135	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	3.0	2,178	2,238	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.7	1,936	2,199	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	2.5	1,353	2,133	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	3.0	990	2,070	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.7	1,001	2,009	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	3.0	1,533	1,965	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	2.5	1,958	1,958	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	3.0	1,503	1,638	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	3.0	1,065	1,575	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	0.8	1,109	1,325	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	0.7	947	1,224	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	2.3	1,122	1,145	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	2.5	353	953	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.7	420	653	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	3.0	411	570	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.7	308	434	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	2.5	200	270	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	0.8	160	221	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.7	140	193	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
182	1306	RMS MIXING SYSTEM UPGRADES	0.7	158	158	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	0.8	101	158	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.7	99	99	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	3.0	6	12	BONDS YET TO BE SOLD**
				$321,414	**$367,809**	
184	1417	BAKER WTP	2.3	96,000	102,973	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	2.8	57,378	64,008	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	2.8	43,151	46,295	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	2.8	17,847	19,390	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	2.8	9,800	10,304	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	2.3	7,898	9,172	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	2.8	7,000	7,000	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	2.8	5,177	6,689	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	2.8	5,732	6,527	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	2.3	3,687	6,231	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	2.8	4,872	5,460	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	2.3	4,225	5,453	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	2.3	3,232	4,200	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	2.8	2,439	4,080	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	2.8	1,478	3,898	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	2.8	3,643	3,895	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	2.3	1,265	3,335	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	2.8	1,366	3,094	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	2.8	1,834	2,926	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	2.3	2,459	2,891	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	2.8	2,033	2,089	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	2.3	1,244	1,962	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	2.8	924	1,932	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.6	1,660	1,885	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	2.8	1,431	1,834	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	2.3	1,801	1,801	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.6	858	1,722	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	2.8	1,403	1,529	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	2.8	994	1,470	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	0.8	1,109	1,325	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
184	1646	GEN SYS MODS 12/13	0.6	812	1,049	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	2.1	1,025	1,046	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	2.3	324	876	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.6	360	560	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	2.8	384	532	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.6	264	372	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	2.3	184	248	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	0.8	160	221	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.6	120	166	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	0.8	101	158	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	0.6	135	135	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.6	85	85	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	2.8	6	11	BONDS YET TO BE SOLD**
				$297,900	**$340,829**	
186	1417	BAKER WTP	0.8	33,391	35,817	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	1.0	20,492	22,860	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1.0	15,411	16,534	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	1.0	6,374	6,925	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	1.0	3,500	3,680	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	0.8	2,747	3,190	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	1.0	2,500	2,500	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	1.0	1,849	2,389	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	1.0	2,047	2,331	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	0.8	1,282	2,167	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	1.0	1,740	1,950	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	0.8	1,470	1,897	BONDS YET TO BE SOLD**
	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	0.8	1,124	1,461	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	1.0	871	1,457	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	1.0	528	1,392	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	1.0	1,301	1,391	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	0.8	440	1,160	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	1.0	488	1,105	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	1.0	655	1,045	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	0.8	855	1,006	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	1.0	726	746	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
186	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	1.0	330	690	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	0.8	433	682	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	1.0	511	655	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.2	553	628	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	0.8	626	626	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.2	286	574	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	1.0	501	546	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	1.0	355	525	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	0.3	416	497	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	0.8	390	398	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	0.2	271	350	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	0.8	113	305	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	1.0	137	190	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.2	120	187	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.2	88	124	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	0.8	64	86	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	0.3	60	83	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	0.3	38	59	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.2	40	55	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	0.2	45	45	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.2	28	28	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	1.0	2	4	BONDS YET TO BE SOLD**
				$105,198	**$120,340**	
188	1417	BAKER WTP	0.8	33,391	35,817	BONDS YET TO BE SOLD**
	1250	OPA / REGIONAL GROUNDWATER PROJECT	1.0	20,492	22,860	BONDS YET TO BE SOLD**
	2812	STRAND RANCH FACILITIES AND MONITORING PROGRAM	1.0	15,411	16,534	BONDS YET TO BE SOLD**
	1081	WELLS 21 & 22 WELLHEAD, PIPELINE & TREATMENT PLANT	1.0	6,374	6,925	BONDS YET TO BE SOLD**
	3765	EAST IRVINE ZONE 1 TO 3 PUMP REPLACEMENT	1.0	3,500	3,680	BONDS YET TO BE SOLD**
	1459	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	0.8	2,747	3,190	BONDS YET TO BE SOLD**
	1195	DATS & WELL 77 LEASE PAYMENT 12/13	1.0	2,500	2,500	BONDS YET TO BE SOLD**
	3766	STOCKDALE WEST RANCH JOINT BANKING PROJECT	1.0	1,849	2,389	BONDS YET TO BE SOLD**
	1326	STOCKDALE WEST FACILITIES	1.0	2,047	2,331	BONDS YET TO BE SOLD**
	1853	NTS: SOUTH SAN JOAQUIN MARSH (SAMS1)	0.8	1,282	2,167	BONDS YET TO BE SOLD**
	1518	IDP WELLS,PIPELINES,TREATMENT PLNT IMPR DESIGN	1.0	1,740	1,950	BONDS YET TO BE SOLD**
	1095	HYDRAULIC MODEL UPDATE / CALIBRATION - DOMESTIC	0.8	1,470	1,897	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
188	1620	ENERGY AND CLIMATE ACTION PLAN DEVELOPMENT	0.8	1,124	1,461	BONDS YET TO BE SOLD**
	3667	JACKSON RANCH SOLAR PROJECT	1.0	871	1,457	BONDS YET TO BE SOLD**
	1225	WATER SUPPLY CAPITAL FACILITIES (OCWD/MWDOC) 12/13	1.0	528	1,392	BONDS YET TO BE SOLD**
	3774	WELL MAINTENANCE AND REHABILITATION	1.0	1,301	1,391	BONDS YET TO BE SOLD**
	1013	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	0.8	440	1,160	BONDS YET TO BE SOLD**
	1338	WATER BANKING AGREEMENTS	1.0	488	1,105	BONDS YET TO BE SOLD**
	1006	WATER BANKING EXPANSION	1.0	655	1,045	BONDS YET TO BE SOLD**
	3721	WQ PLANNING RESERVES 12/13 - DOMESTIC	0.8	855	1,006	BONDS YET TO BE SOLD**
	1578	POND 3 OBSERVATION DECK	1.0	726	746	BONDS YET TO BE SOLD**
	1844	WATER SUPPLY ASSESSMENT/VERIF 12/13	1.0	330	690	BONDS YET TO BE SOLD**
	1472	GREENHOUSE GAS INVENTORY	0.8	433	682	BONDS YET TO BE SOLD**
	1836	SD CREEK INTEGRATED REG WATER MGMT PLAN	1.0	511	655	BONDS YET TO BE SOLD**
	1469	OCWD ANNEXATION	0.2	553	628	BONDS YET TO BE SOLD**
	1833	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	0.8	626	626	BONDS YET TO BE SOLD**
	1767	ENG PLANNING STUDY RESERVE 12/13	0.2	286	574	BONDS YET TO BE SOLD**
	3773	ENERGY EFFICIENCY PUMP REPLACEMENT	1.0	501	546	BONDS YET TO BE SOLD**
	3633	GROUNDWATER DISPOSAL SYSTEM CONCEPT STUDY	1.0	355	525	BONDS YET TO BE SOLD**
	3772	SKYLIGHT PROTECTION	0.3	416	497	BONDS YET TO BE SOLD**
	1279	OPA / REGIONAL TRANSMISSION MAIN	0.8	390	398	BONDS YET TO BE SOLD**
	1646	GEN SYS MODS 12/13	0.2	271	350	BONDS YET TO BE SOLD**
	1512	RMS AT 5 DW RESERVOIRS	0.8	113	305	BONDS YET TO BE SOLD**
	1448	WELL 53 SITE ACQUISITION & WELL DRILLING	1.0	137	190	BONDS YET TO BE SOLD**
	1177	GIS SUPPORT APPLICATIONS 12/13	0.2	120	187	BONDS YET TO BE SOLD**
	1310	HYDRAULIC MODELING 12/13	0.2	88	124	BONDS YET TO BE SOLD**
	1271	EAST IRVINE ZN 4 TO 6 BPS CHECK VALVE EVALUATION	0.8	64	86	BONDS YET TO BE SOLD**
	1845	GIS VALVE AND HYDRANT APPLICATION	0.3	60	83	BONDS YET TO BE SOLD**
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	0.3	38	59	BONDS YET TO BE SOLD**
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.2	40	55	BONDS YET TO BE SOLD**
	1306	RMS MIXING SYSTEM UPGRADES	0.2	45	45	BONDS YET TO BE SOLD**
	1640	AUTOMATION SYSTEM IMPROVEMENTS	0.2	28	28	BONDS YET TO BE SOLD**
	1345	CALTRANS SHALLOW GROUNDWATER STUDY	1.0	2	4	BONDS YET TO BE SOLD**
				$105,198	**$120,340**	
199	1469	OCWD ANNEXATION	72.9	201,641	229,052	CAPITAL FUND ENHANCEMENT*
	1767	ENG PLANNING STUDY RESERVE 12/13	72.9	104,247	209,223	CAPITAL FUND ENHANCEMENT*
	1646	GEN SYS MODS 12/13	72.9	98,634	127,502	CAPITAL FUND ENHANCEMENT*

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
199	3772	SKYLIGHT PROTECTION	72.8	100,901	120,557	CAPITAL FUND ENHANCEMENT*
	1177	GIS SUPPORT APPLICATIONS 12/13	72.9	43,740	68,016	CAPITAL FUND ENHANCEMENT*
	1310	HYDRAULIC MODELING 12/13	72.9	32,076	45,198	CAPITAL FUND ENHANCEMENT*
	3712	BEE CANYON BPS	50.0	23,400	35,750	CAPITAL FUND ENHANCEMENT*
	1842	DEVELOPMENT SERVICES PLANCHECK UPGRADE	72.9	14,580	20,120	CAPITAL FUND ENHANCEMENT*
	1845	GIS VALVE AND HYDRANT APPLICATION	72.8	14,560	20,093	CAPITAL FUND ENHANCEMENT*
	1306	RMS MIXING SYSTEM UPGRADES	72.9	16,403	16,403	CAPITAL FUND ENHANCEMENT*
	1779	SCADA DYER ROAD WELL FIELD COMMUNICATIONS UPGRADE	72.8	9,173	14,414	CAPITAL FUND ENHANCEMENT*
	1640	AUTOMATION SYSTEM IMPROVEMENTS	72.9	10,352	10,352	CAPITAL FUND ENHANCEMENT*
				$669,707	**$916,680**	
210	3237	ORACLE PHASE 2 - TECH AND UB	100.0	1,494,200	1,915,000	REPLACEMENT FUND**
	3567	ENTERPRISE ASSET MANAGEMENT SOFTWARE ASSESS/EVAL	100.0	615,000	838,800	REPLACEMENT FUND**
	1541	OCSD CORF 12/13	49.9	666,814	666,814	REPLACEMENT FUND**
	1535	OCSD CORF 11/12	49.9	656,085	656,085	REPLACEMENT FUND**
	1393	OCSD SOLIDS HANDLING 12/13	49.9	573,850	573,850	REPLACEMENT FUND**
	3727	PLANNING AND BUDGETING SOFTWARE REPLACEMENT	100.0	316,500	329,900	REPLACEMENT FUND**
	1090	SCADA WATER SYSTEM REPLACEMENT	100.0	216,800	237,000	REPLACEMENT FUND**
	1304	SERVICE LINE VALVE & MAIN REPLACEMENT 12/13	100.0	206,800	224,800	REPLACEMENT FUND**
	1364	MECH & ELEC SYS MODS - RW 12/13	100.0	220,000	220,000	REPLACEMENT FUND**
	1627	SERVICE LINE & MAIN REPLACEMENT 12/13	100.0	200,200	218,200	REPLACEMENT FUND**
	1695	COOLING TOWER CONST./MONITORING	100.0	125,100	207,900	REPLACEMENT FUND**
	1490	MWRP BACKWASH SUPPLY PUMP REPLACEMENT	100.0	197,800	197,800	REPLACEMENT FUND**
	1268	RAISE SYSTEM VALVES 12/13	100.0	170,500	179,500	REPLACEMENT FUND**
	1203	RAISE MANHOLES TO GRADE 12/13	100.0	165,000	165,000	REPLACEMENT FUND**
	1251	MECH & ELEC SYS MODS - SEWER 12/13	100.0	165,000	165,000	REPLACEMENT FUND**
	1065	RECYCLED VAULT LID REHABILITATION	100.0	130,300	155,400	REPLACEMENT FUND**
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	50.0	125,000	152,000	REPLACEMENT FUND**
	1643	SAND CANYON ZONE A STRAINER REPLACEMENT	100.0	118,200	140,700	REPLACEMENT FUND**
	1276	1" TO 2" METER REPLACEMENT 12/13	100.0	120,500	134,000	REPLACEMENT FUND**
	1534	MWRP MPS-3 PUMP REPLACEMENT	100.0	127,400	127,400	REPLACEMENT FUND**
	3775	MISC SEWER IMPROVEMENTS AT JAMBOREE CENTER	100.0	98,700	121,600	CAPITAL FUND
	3732	RW CONVERSION FOR OFF-SITE 12/13	50.0	72,900	95,400	REPLACEMENT FUND**
	1538	ROOF REPAIR AT 3 SITES	100.0	89,800	91,600	REPLACEMENT FUND**
	1132	CPTS RESTORE AND INSTALL	100.0	49,500	76,500	REPLACEMENT FUND**
	1499	OPS CENTER HVAC CHILLER REPLACEMENT	100.0	69,000	71,500	REPLACEMENT FUND**

IRVINE RANCH WATER DISTRICT
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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
210	1318	CHIQUITA GENERAL SYSTEM MODIFICATIONS 012/13	100.0	70,400	70,400	REPLACEMENT FUND**
	3787	SS ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	100.0	57,700	68,500	REPLACEMENT FUND**
	1296	CSR METER REPLACEMENT 12/13	100.0	51,700	55,300	REPLACEMENT FUND**
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	50.0	46,550	51,050	REPLACEMENT FUND**
	1267	ROOF REPAIR AT 3 SITES	100.0	49,000	50,800	REPLACEMENT FUND**
	1669	FILTERS FOR FIVE COMMERCIAL BUILDINGS	100.0	33,900	38,300	REPLACEMENT FUND**
	1129	SEWER PIPELINE REHABILITATION	100.0	22,700	36,200	REPLACEMENT FUND**
	1161	RECYCLED WATER PIPELINE REHABILITATION	100.0	22,700	36,200	REPLACEMENT FUND**
	1030	SEWER VAULT LID REHABILITATION	100.0	19,400	32,900	REPLACEMENT FUND**
	1248	ASPHALT REPAIR AT 15 SITES	100.0	26,300	32,900	REPLACEMENT FUND**
	1580	MWRP SECONDARY DEWATERING PUMP REPLACEMENT	100.0	30,000	30,000	REPLACEMENT FUND**
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	50.0	25,750	28,450	REPLACEMENT FUND**
	1696	BARRANCA 16" RW RELOCATION - VESTAR	100.0	15,300	26,500	REPLACEMENT FUND**
	3788	RW ANNUAL SLURRY SEAL AND PAVEMENT REHAB, IRVINE	100.0	17,500	22,900	REPLACEMENT FUND**
	3733	RECYCLED AUTOMATION EQUIPMENT REPLACEMENT 12/13	100.0	22,000	22,000	REPLACEMENT FUND
	1319	OPS CENTER HVAC CHILLER REPLACEMENT	100.0	15,800	16,700	REPLACEMENT FUND**
	1549	HQ LIGHTING RETROFIT	100.0	11,100	14,700	REPLACEMENT FUND**
	1257	HQ LIGHTING RETROFIT	100.0	2,500	2,900	REPLACEMENT FUND**
	1556	ASPHALT REPAIR AT 15 SITES	100.0	1,000	1,300	REPLACEMENT FUND**
	1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	75.0	225	525	REPLACEMENT FUND**
	1674	CSR METER REPLACEMENT 12/13	0.0	0	0	REPLACEMENT FUND
				$7,532,474	**$8,600,274**	
211	1599	MWRP EXPANSION PHASE II	10.8	713,858	756,065	CAPITAL FUND
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	10.5	539,196	575,715	CAPITAL FUND
	1485	OCSD EQUITY 11/12	10.8	289,526	289,526	CAPITAL FUND
	1706	MWRP EXPANSION PHASE II	2.3	95,795	101,488	CAPITAL FUND
	3799	COATING MWRP	8.9	31,150	31,951	CAPITAL FUND
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	2.1	27,972	31,536	CAPITAL FUND
	1541	OCSD CORF 12/13	2.2	29,399	29,399	CAPITAL FUND
	1535	OCSD CORF 11/12	2.2	28,926	28,926	CAPITAL FUND
	1393	OCSD SOLIDS HANDLING 12/13	2.2	25,300	25,300	CAPITAL FUND
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	10.8	15,444	16,945	CAPITAL FUND
	1150	MWRP FLOOD PROTECTION	2.5	10,338	11,130	CAPITAL FUND
	1629	DISTRICT WIDE SEWER REHABILITATION	7.7	6,576	10,141	CAPITAL FUND
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	2.1	9,757	9,962	CAPITAL FUND

IRVINE RANCH WATER DISTRICT
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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
211	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	7.7	3,642	9,602	CAPITAL FUND
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	10.8	3,650	8,953	CAPITAL FUND
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	2.1	5,601	6,143	CAPITAL FUND
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	7.7	4,789	6,091	CAPITAL FUND
	1221	SEWER GEN SYS MODS 12/13	2.2	6,050	6,050	CAPITAL FUND
	1340	ENG PLANNING STUDY RESERVE 12/13	2.2	2,565	5,575	CAPITAL FUND
	1149	MWRP GEN SYS MODS 12/13	2.2	4,888	4,968	CAPITAL FUND
	3777	SKYLIGHT PROTECTION	2.5	3,465	4,140	CAPITAL FUND
	3750	SOCWA CROSSING PROTECTION	3.1	3,100	3,100	CAPITAL FUND
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	2.3	2,532	3,050	CAPITAL FUND
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	1.0	2,500	3,040	CAPITAL FUND
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	2.3	1,727	2,762	CAPITAL FUND
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	2.1	993	2,619	CAPITAL FUND
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	2.2	2,420	2,420	CAPITAL FUND
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	2.5	1,500	2,153	CAPITAL FUND
	1685	GIS SUPPORT APPLICATIONS 12/13	2.2	1,320	2,053	CAPITAL FUND
	1754	UCI / NIST	2.3	1,286	2,049	CAPITAL FUND
	1118	MWRP FLOOD PROTECTION	0.7	1,874	2,013	CAPITAL FUND
	3732	RW CONVERSION FOR OFF-SITE 12/13	1.0	1,458	1,908	CAPITAL FUND
	3778	HEALTH DEPT FEES FOR 12/13	1.9	1,463	1,834	CAPITAL FUND
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	2.1	1,644	1,644	CAPITAL FUND
	1565	ENG PLANNING STUDY RESERVE 12/13	0.7	816	1,572	CAPITAL FUND
	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	2.1	693	1,449	CAPITAL FUND
	1727	HYDRAULIC MODELING 12/13	2.2	968	1,364	CAPITAL FUND
	3783	SKYLIGHT PROTECTION	0.7	970	1,159	CAPITAL FUND
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	1.0	931	1,021	CAPITAL FUND
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	0.7	596	906	CAPITAL FUND
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	2.3	577	681	CAPITAL FUND
	1792	GIS SUPPORT APPLICATIONS 12/13	0.7	420	653	CAPITAL FUND
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	2.2	440	607	CAPITAL FUND
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	1.0	515	569	CAPITAL FUND
	1259	GEN SYS MODS 12/13	0.7	408	559	CAPITAL FUND
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	1.9	342	511	CAPITAL FUND
	1742	HYDRAULIC MODELING 12/13	0.7	308	434	CAPITAL FUND
	1016	AUTOMATION SYSTEM IMPROVEMENTS	2.2	312	312	CAPITAL FUND
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.7	140	193	CAPITAL FUND
	1079	GIS VALVE AND HYDRANT APPLICATION	0.7	140	193	CAPITAL FUND

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ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
211	1054	AUTOMATION SYSTEM IMPROVEMENTS	0.7	99	99	CAPITAL FUND
	1495	OCSD EQUITY 12/13	10.8	11	11	CAPITAL FUND
				$1,890,390	**$2,012,544**	
212	1706	MWRP EXPANSION PHASE II	14.3	595,595	630,988	BONDS YET TO BE SOLD**
	1599	MWRP EXPANSION PHASE II	4.6	304,051	322,028	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	4.5	231,084	246,735	BONDS YET TO BE SOLD**
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	13.2	175,824	198,224	BONDS YET TO BE SOLD**
	1103	PA 30 AND 51 NONPOTABLE FACILITIES	90.0	104,760	124,290	BONDS YET TO BE SOLD**
	1642	PA 30 AND 51 WASTEWATER FACILITIES	90.0	103,680	124,110	BONDS YET TO BE SOLD**
	1485	OCSD EQUITY 11/12	4.6	123,317	123,317	BONDS YET TO BE SOLD**
	3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	29.2	67,627	74,460	BONDS YET TO BE SOLD**
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	13.2	61,327	62,621	BONDS YET TO BE SOLD**
	1167	GREAT PARK SAMP UPDATE	100.0	14,400	40,300	BONDS YET TO BE SOLD**
	1236	GREAT PARK SAMP UPDATE	100.0	14,400	40,300	BONDS YET TO BE SOLD**
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	13.2	35,204	38,610	BONDS YET TO BE SOLD**
	1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	21.0	30,282	32,718	BONDS YET TO BE SOLD**
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	8.4	21,000	25,536	BONDS YET TO BE SOLD**
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	14.3	15,744	18,962	BONDS YET TO BE SOLD**
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	14.3	10,739	17,174	BONDS YET TO BE SOLD**
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	13.2	6,244	16,460	BONDS YET TO BE SOLD**
	3778	HEALTH DEPT FEES FOR 12/13	15.7	12,089	15,151	BONDS YET TO BE SOLD**
	3732	RW CONVERSION FOR OFF-SITE 12/13	7.8	11,372	14,882	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	1.1	14,699	14,699	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	1.1	14,463	14,463	BONDS YET TO BE SOLD**
	3799	COATING MWRP	3.8	13,300	13,642	BONDS YET TO BE SOLD**
	1118	MWRP FLOOD PROTECTION	4.7	12,582	13,517	BONDS YET TO BE SOLD**
	1754	UCI / NIST	14.3	7,994	12,741	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	1.1	12,650	12,650	BONDS YET TO BE SOLD**
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	13.2	10,336	10,336	BONDS YET TO BE SOLD**
	1565	ENG PLANNING STUDY RESERVE 12/13	4.3	5,014	9,658	BONDS YET TO BE SOLD**
	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	13.2	4,356	9,108	BONDS YET TO BE SOLD**
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	7.8	7,262	7,964	BONDS YET TO BE SOLD**
	3783	SKYLIGHT PROTECTION	4.7	6,514	7,783	BONDS YET TO BE SOLD**
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	4.6	6,578	7,217	BONDS YET TO BE SOLD**
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	4.3	3,659	5,564	BONDS YET TO BE SOLD**

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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
212	1150	MWRP FLOOD PROTECTION	1.1	4,549	4,897	BONDS YET TO BE SOLD**
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	7.8	4,017	4,438	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	3.3	2,818	4,346	BONDS YET TO BE SOLD**
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	14.3	3,589	4,233	BONDS YET TO BE SOLD**
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	15.7	2,826	4,223	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	3.3	1,561	4,115	BONDS YET TO BE SOLD**
	1792	GIS SUPPORT APPLICATIONS 12/13	4.3	2,580	4,012	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	4.6	1,555	3,813	BONDS YET TO BE SOLD**
	1259	GEN SYS MODS 12/13	4.3	2,507	3,436	BONDS YET TO BE SOLD**
	1742	HYDRAULIC MODELING 12/13	4.3	1,892	2,666	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	3.3	2,053	2,610	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	0.9	2,475	2,475	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	0.9	1,049	2,281	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	0.9	2,000	2,032	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	1.1	1,525	1,822	BONDS YET TO BE SOLD**
	3750	SOCWA CROSSING PROTECTION	1.3	1,300	1,300	BONDS YET TO BE SOLD**
	1079	GIS VALVE AND HYDRANT APPLICATION	4.7	940	1,297	BONDS YET TO BE SOLD**
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	4.3	860	1,187	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	0.9	990	990	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	1.1	660	947	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	0.9	540	840	BONDS YET TO BE SOLD**
	1054	AUTOMATION SYSTEM IMPROVEMENTS	4.3	611	611	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	0.9	396	558	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.9	180	248	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	0.9	128	128	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	4.6	5	5	BONDS YET TO BE SOLD**
				$2,101,752	**$2,365,718**	
213	3435	LEGACY PARK TUSTIN RANCH ROAD	100.0	508,500	543,000	BONDS YET TO BE SOLD**
	1066	LEGACY PARK TUSTIN RANCH ROAD	100.0	463,200	489,100	BONDS YET TO BE SOLD**
	1706	MWRP EXPANSION PHASE II	5.2	216,580	229,450	BONDS YET TO BE SOLD**
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	4.8	63,936	72,082	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	3.3	44,098	44,098	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	3.3	43,388	43,388	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	3.3	37,950	37,950	BONDS YET TO BE SOLD**
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	4.8	22,301	22,771	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
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ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
213	1599	MWRP EXPANSION PHASE II	0.3	19,829	21,002	BONDS YET TO BE SOLD**
	3799	COATING MWRP	5.0	17,500	17,950	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	0.3	15,406	16,449	BONDS YET TO BE SOLD**
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	4.8	12,802	14,040	BONDS YET TO BE SOLD**
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	2.9	7,250	8,816	BONDS YET TO BE SOLD**
	1485	OCSD EQUITY 11/12	0.3	8,042	8,042	BONDS YET TO BE SOLD**
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	5.2	5,725	6,895	BONDS YET TO BE SOLD**
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	5.2	3,905	6,245	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	1.4	5,789	6,233	BONDS YET TO BE SOLD**
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	4.8	2,270	5,986	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	4.4	3,758	5,795	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	4.4	2,081	5,487	BONDS YET TO BE SOLD**
	3732	RW CONVERSION FOR OFF-SITE 12/13	2.8	4,082	5,342	BONDS YET TO BE SOLD**
	3778	HEALTH DEPT FEES FOR 12/13	5.5	4,235	5,308	BONDS YET TO BE SOLD**
	1118	MWRP FLOOD PROTECTION	1.7	4,551	4,889	BONDS YET TO BE SOLD**
	1754	UCI / NIST	5.2	2,907	4,633	BONDS YET TO BE SOLD**
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	4.8	3,758	3,758	BONDS YET TO BE SOLD**
	1565	ENG PLANNING STUDY RESERVE 12/13	1.6	1,866	3,594	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	1.3	3,575	3,575	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	4.4	2,737	3,480	BONDS YET TO BE SOLD**
	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	4.8	1,584	3,312	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	1.3	1,516	3,294	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	1.3	2,889	2,935	BONDS YET TO BE SOLD**
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	2.8	2,607	2,859	BONDS YET TO BE SOLD**
	3783	SKYLIGHT PROTECTION	1.7	2,356	2,815	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	1.4	1,940	2,318	BONDS YET TO BE SOLD**
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	1.6	1,362	2,070	BONDS YET TO BE SOLD**
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	2.8	1,442	1,593	BONDS YET TO BE SOLD**
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	5.2	1,305	1,539	BONDS YET TO BE SOLD**
	1792	GIS SUPPORT APPLICATIONS 12/13	1.6	960	1,493	BONDS YET TO BE SOLD**
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	5.5	990	1,480	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	1.3	1,430	1,430	BONDS YET TO BE SOLD**
	1259	GEN SYS MODS 12/13	1.6	933	1,278	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	1.3	780	1,213	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	1.4	840	1,205	BONDS YET TO BE SOLD**
	1742	HYDRAULIC MODELING 12/13	1.6	704	992	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	1.3	572	806	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
213	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	0.3	429	471	BONDS YET TO BE SOLD**
	1079	GIS VALVE AND HYDRANT APPLICATION	1.7	340	469	BONDS YET TO BE SOLD**
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.6	320	442	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.3	260	359	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	0.3	101	249	BONDS YET TO BE SOLD**
	1054	AUTOMATION SYSTEM IMPROVEMENTS	1.6	227	227	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	1.3	185	185	BONDS YET TO BE SOLD**
	3750	SOCWA CROSSING PROTECTION	0.1	100	100	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	0.3	0	0	BONDS YET TO BE SOLD**
				$1,558,193	**$1,674,492**	
215	1706	MWRP EXPANSION PHASE II	0.8	33,320	35,300	CAPITAL FUND
	3799	COATING MWRP	8.3	29,050	29,797	CAPITAL FUND
	1150	MWRP FLOOD PROTECTION	2.4	9,924	10,685	CAPITAL FUND
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	0.7	9,324	10,512	CAPITAL FUND
	1629	DISTRICT WIDE SEWER REHABILITATION	7.2	6,149	9,482	CAPITAL FUND
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	7.2	3,406	8,978	CAPITAL FUND
	1221	SEWER GEN SYS MODS 12/13	2.1	5,775	5,775	CAPITAL FUND
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	7.2	4,478	5,695	CAPITAL FUND
	1340	ENG PLANNING STUDY RESERVE 12/13	2.1	2,449	5,321	CAPITAL FUND
	1149	MWRP GEN SYS MODS 12/13	2.1	4,666	4,742	CAPITAL FUND
	3777	SKYLIGHT PROTECTION	2.4	3,326	3,974	CAPITAL FUND
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	0.7	3,252	3,321	CAPITAL FUND
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	2.1	2,310	2,310	CAPITAL FUND
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	2.4	1,440	2,066	CAPITAL FUND
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	0.7	1,867	2,048	CAPITAL FUND
	1685	GIS SUPPORT APPLICATIONS 12/13	2.1	1,260	1,959	CAPITAL FUND
	1727	HYDRAULIC MODELING 12/13	2.1	924	1,302	CAPITAL FUND
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	0.8	881	1,061	CAPITAL FUND
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	0.8	601	961	CAPITAL FUND
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	0.7	331	873	CAPITAL FUND
	1118	MWRP FLOOD PROTECTION	0.3	803	863	CAPITAL FUND
	1754	UCI / NIST	0.8	447	713	CAPITAL FUND
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	2.1	420	580	CAPITAL FUND
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	0.7	548	548	CAPITAL FUND
	3783	SKYLIGHT PROTECTION	0.3	416	497	CAPITAL FUND

IRVINE RANCH WATER DISTRICT
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Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
215	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	0.7	231	483	CAPITAL FUND
	1565	ENG PLANNING STUDY RESERVE 12/13	0.2	233	449	CAPITAL FUND
	1016	AUTOMATION SYSTEM IMPROVEMENTS	2.1	298	298	CAPITAL FUND
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	0.2	170	259	CAPITAL FUND
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	0.8	201	237	CAPITAL FUND
	1792	GIS SUPPORT APPLICATIONS 12/13	0.2	120	187	CAPITAL FUND
	1259	GEN SYS MODS 12/13	0.2	117	160	CAPITAL FUND
	1742	HYDRAULIC MODELING 12/13	0.2	88	124	CAPITAL FUND
	1079	GIS VALVE AND HYDRANT APPLICATION	0.3	60	83	CAPITAL FUND
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.2	40	55	CAPITAL FUND
	1054	AUTOMATION SYSTEM IMPROVEMENTS	0.2	28	28	CAPITAL FUND
				$128,953	**$151,726**	
221	1599	MWRP EXPANSION PHASE II	21.6	1,427,717	1,512,130	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	20.9	1,073,257	1,145,947	BONDS YET TO BE SOLD**
	1706	MWRP EXPANSION PHASE II	14.3	595,595	630,988	BONDS YET TO BE SOLD**
	1485	OCSD EQUITY 11/12	21.6	579,053	579,053	BONDS YET TO BE SOLD**
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	13.2	175,824	198,224	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	10.5	140,312	140,312	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	10.5	138,054	138,054	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	10.5	120,750	120,750	BONDS YET TO BE SOLD**
	3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	29.3	67,859	74,715	BONDS YET TO BE SOLD**
	3799	COATING MWRP	17.8	62,300	63,902	BONDS YET TO BE SOLD**
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	13.2	61,327	62,621	BONDS YET TO BE SOLD**
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	13.2	35,204	38,610	BONDS YET TO BE SOLD**
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	21.6	30,888	33,890	BONDS YET TO BE SOLD**
	1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	21.0	30,282	32,718	BONDS YET TO BE SOLD**
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	7.9	19,750	24,016	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	5.1	21,089	22,705	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	15.4	13,152	20,282	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	15.4	7,284	19,204	BONDS YET TO BE SOLD**
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	14.3	15,744	18,962	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	21.6	7,301	17,906	BONDS YET TO BE SOLD**
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	14.3	10,739	17,174	BONDS YET TO BE SOLD**
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	13.2	6,244	16,460	BONDS YET TO BE SOLD**
	3778	HEALTH DEPT FEES FOR 12/13	14.7	11,319	14,186	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
221	3732	RW CONVERSION FOR OFF-SITE 12/13	7.3	10,643	13,928	BONDS YET TO BE SOLD**
	1118	MWRP FLOOD PROTECTION	4.7	12,582	13,517	BONDS YET TO BE SOLD**
	1754	UCI / NIST	14.3	7,994	12,741	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	15.4	9,579	12,181	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	4.4	12,100	12,100	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	4.4	5,130	11,150	BONDS YET TO BE SOLD**
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	13.2	10,336	10,336	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	4.4	9,777	9,935	BONDS YET TO BE SOLD**
	1565	ENG PLANNING STUDY RESERVE 12/13	4.3	5,014	9,658	BONDS YET TO BE SOLD**
	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	13.2	4,356	9,108	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	5.1	7,069	8,446	BONDS YET TO BE SOLD**
	3783	SKYLIGHT PROTECTION	4.7	6,514	7,783	BONDS YET TO BE SOLD**
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	7.3	6,796	7,453	BONDS YET TO BE SOLD**
	3750	SOCWA CROSSING PROTECTION	6.2	6,200	6,200	BONDS YET TO BE SOLD**
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	4.3	3,659	5,564	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	4.4	4,840	4,840	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	5.1	3,060	4,391	BONDS YET TO BE SOLD**
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	14.3	3,589	4,233	BONDS YET TO BE SOLD**
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	7.3	3,760	4,154	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	4.4	2,640	4,105	BONDS YET TO BE SOLD**
	1792	GIS SUPPORT APPLICATIONS 12/13	4.3	2,580	4,012	BONDS YET TO BE SOLD**
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	14.7	2,646	3,954	BONDS YET TO BE SOLD**
	1259	GEN SYS MODS 12/13	4.3	2,507	3,436	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	4.4	1,936	2,728	BONDS YET TO BE SOLD**
	1742	HYDRAULIC MODELING 12/13	4.3	1,892	2,666	BONDS YET TO BE SOLD**
	1079	GIS VALVE AND HYDRANT APPLICATION	4.7	940	1,297	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	4.4	880	1,214	BONDS YET TO BE SOLD**
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	4.3	860	1,187	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	4.4	625	625	BONDS YET TO BE SOLD**
	1054	AUTOMATION SYSTEM IMPROVEMENTS	4.3	611	611	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	21.6	22	22	BONDS YET TO BE SOLD**
				$4,802,181	**$5,136,384**	
230	1599	MWRP EXPANSION PHASE II	14.2	938,592	994,085	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	13.7	703,522	751,171	BONDS YET TO BE SOLD**
	1706	MWRP EXPANSION PHASE II	10.4	433,160	458,900	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
230	1485	OCSD EQUITY 11/12	14.2	380,674	380,674	BONDS YET TO BE SOLD**
	1662	PA39 SEWER PIPELINES (PHASE 1)	100.0	165,900	186,300	BONDS YET TO BE SOLD**
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	9.6	127,872	144,163	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	7.1	94,877	94,877	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	7.1	93,351	93,351	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	7.1	81,650	81,650	BONDS YET TO BE SOLD**
	1056	PA39 PHASE 1 RW PIPELINES	100.0	51,200	58,300	BONDS YET TO BE SOLD**
	3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	21.3	49,331	54,315	BONDS YET TO BE SOLD**
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	9.6	44,602	45,542	BONDS YET TO BE SOLD**
	3799	COATING MWRP	11.7	40,950	42,003	BONDS YET TO BE SOLD**
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	9.6	25,603	28,080	BONDS YET TO BE SOLD**
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	14.2	20,306	22,280	BONDS YET TO BE SOLD**
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	6.8	17,000	20,672	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	3.3	13,646	14,692	BONDS YET TO BE SOLD**
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	10.4	11,450	13,790	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	10.1	8,625	13,302	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	10.1	4,777	12,595	BONDS YET TO BE SOLD**
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	10.4	7,810	12,490	BONDS YET TO BE SOLD**
	1015	RECYCLED WATER PIPELINE FOR SC GRADE SEPARATION	8.0	11,536	12,464	BONDS YET TO BE SOLD**
	3732	RW CONVERSION FOR OFF-SITE 12/13	6.5	9,477	12,402	BONDS YET TO BE SOLD**
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	9.6	4,541	11,971	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	14.2	4,800	11,772	BONDS YET TO BE SOLD**
	1118	MWRP FLOOD PROTECTION	3.4	9,102	9,778	BONDS YET TO BE SOLD**
	1754	UCI / NIST	10.4	5,814	9,266	BONDS YET TO BE SOLD**
	3778	HEALTH DEPT FEES FOR 12/13	8.7	6,699	8,396	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	10.1	6,282	7,989	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	2.9	7,975	7,975	BONDS YET TO BE SOLD**
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	9.6	7,517	7,517	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	2.9	3,381	7,349	BONDS YET TO BE SOLD**
	1565	ENG PLANNING STUDY RESERVE 12/13	3.2	3,731	7,187	BONDS YET TO BE SOLD**
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	6.5	6,052	6,637	BONDS YET TO BE SOLD**
	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	9.6	3,168	6,624	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	2.9	6,444	6,548	BONDS YET TO BE SOLD**
	1063	PA18 ZN B-C BPS	100.0	5,700	6,300	BONDS YET TO BE SOLD**
	3783	SKYLIGHT PROTECTION	3.4	4,712	5,630	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	3.3	4,574	5,465	BONDS YET TO BE SOLD**
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	3.2	2,723	4,141	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
230	3750	SOCWA CROSSING PROTECTION	4.0	4,000	4,000	BONDS YET TO BE SOLD**
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	6.5	3,348	3,699	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	2.9	3,190	3,190	BONDS YET TO BE SOLD**
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	10.4	2,610	3,078	BONDS YET TO BE SOLD**
	1792	GIS SUPPORT APPLICATIONS 12/13	3.2	1,920	2,986	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	3.3	1,980	2,841	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	2.9	1,740	2,706	BONDS YET TO BE SOLD**
	1259	GEN SYS MODS 12/13	3.2	1,866	2,557	BONDS YET TO BE SOLD**
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	8.7	1,566	2,340	BONDS YET TO BE SOLD**
	1742	HYDRAULIC MODELING 12/13	3.2	1,408	1,984	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	2.9	1,276	1,798	BONDS YET TO BE SOLD**
	1079	GIS VALVE AND HYDRANT APPLICATION	3.4	680	938	BONDS YET TO BE SOLD**
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	3.2	640	883	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	2.9	580	800	BONDS YET TO BE SOLD**
	1054	AUTOMATION SYSTEM IMPROVEMENTS	3.2	454	454	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	2.9	412	412	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	14.2	14	14	BONDS YET TO BE SOLD**
				$3,456,810	**$3,713,323**	
235	1732	LF ZONE C 16 INCH RW RELOCATION SPORTS PARK	100.0	577,600	630,600	REPLACEMENT FUND**
	1509	RW 12"& 6" RANCHO PKWY HERMANA TO PORTOLA RA TO LF	100.0	263,900	283,600	CAPITAL FUND
	1436	LAKE FOREST WW OFFSITE IMPROVEMENTS	100.0	78,900	208,600	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	3.2	164,326	175,456	BONDS YET TO BE SOLD**
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	7.9	105,228	118,634	PREVIOUSLY SOLD BONDS
	1517	LAKE FOREST RW OPPORTUNITY AREAS	100.0	40,900	108,500	BONDS YET TO BE SOLD**
	1096	LAKE FOREST CONTROL AND TELEMETRY SYSTEMS UPGRADES	100.0	57,800	75,800	CAPITAL FUND
	1445	LAKE FOREST WW OPPORTUNITY AREAS	100.0	15,100	39,900	BONDS YET TO BE SOLD**
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	7.9	36,703	37,478	PREVIOUSLY SOLD BONDS
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	7.9	21,069	23,108	PREVIOUSLY SOLD BONDS
	1629	DISTRICT WIDE SEWER REHABILITATION	13.3	11,358	17,516	PREVIOUSLY SOLD BONDS
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	13.3	6,291	16,585	PREVIOUSLY SOLD BONDS
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	13.3	8,273	10,520	PREVIOUSLY SOLD BONDS
	1221	SEWER GEN SYS MODS 12/13	3.8	10,450	10,450	PREVIOUSLY SOLD BONDS
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	7.9	3,737	9,851	PREVIOUSLY SOLD BONDS
	1340	ENG PLANNING STUDY RESERVE 12/13	3.8	4,431	9,629	PREVIOUSLY SOLD BONDS
	1149	MWRP GEN SYS MODS 12/13	3.8	8,444	8,580	PREVIOUSLY SOLD BONDS

Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
253	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	0.3	180	258	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	0.3	132	186	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.3	60	83	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	0.3	43	43	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	1.2	1	1	BONDS YET TO BE SOLD**
				$185,212	**$197,036**	
261	1599	MWRP EXPANSION PHASE II	8.8	581,662	616,053	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	8.5	436,492	466,055	BONDS YET TO BE SOLD**
	1706	MWRP EXPANSION PHASE II	9.9	412,335	436,838	BONDS YET TO BE SOLD**
	1485	OCSD EQUITY 11/12	8.8	235,910	235,910	BONDS YET TO BE SOLD**
	3729	SYPHON RESERVOIR INTERIM IMPROVEMENTS	9.1	121,212	136,655	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	4.4	58,797	58,797	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	4.4	57,851	57,851	BONDS YET TO BE SOLD**
	3529	PA 39 LAKE FOREST DR. 24" BAKE TO ROMANO	20.2	46,783	51,510	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	4.4	50,600	50,600	BONDS YET TO BE SOLD**
	1024	PA9 JEFFREY RD PIPELINES 16" ZNB, 6" ZNC, 30" ZNA	9.1	42,279	43,170	BONDS YET TO BE SOLD**
	1218	SYPHON RESERVOIR - INTEGRATION INTO RW SYS	9.1	24,270	26,618	BONDS YET TO BE SOLD**
	3799	COATING MWRP	7.2	25,200	25,848	BONDS YET TO BE SOLD**
	3731	RW CONVERSION GRANTS FOR ON-SITE 12/13	5.1	12,750	15,504	BONDS YET TO BE SOLD**
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	8.8	12,584	13,807	BONDS YET TO BE SOLD**
	3779	SALT MANAGEMENT PLAN DEVELOPMENT	9.9	10,900	13,127	BONDS YET TO BE SOLD**
	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	9.9	7,435	11,890	BONDS YET TO BE SOLD**
	1698	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	9.1	4,304	11,348	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	2.1	8,684	9,349	BONDS YET TO BE SOLD**
	3778	HEALTH DEPT FEES FOR 12/13	9.6	7,392	9,264	BONDS YET TO BE SOLD**
	1118	MWRP FLOOD PROTECTION	3.2	8,566	9,203	BONDS YET TO BE SOLD**
	3732	RW CONVERSION FOR OFF-SITE 12/13	4.8	6,998	9,158	BONDS YET TO BE SOLD**
	1754	UCI / NIST	9.9	5,534	8,821	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	6.3	5,380	8,297	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	6.3	2,980	7,856	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	8.8	2,974	7,295	BONDS YET TO BE SOLD**
	1262	UNIVERSITY DR PIPELINES CATHODIC PROTECTION	9.1	7,125	7,125	BONDS YET TO BE SOLD**
	1565	ENG PLANNING STUDY RESERVE 12/13	3.0	3,498	6,738	BONDS YET TO BE SOLD**
	1379	WATER SUPPLY ASSESSMENT/VERIF 12/13	9.1	3,003	6,279	BONDS YET TO BE SOLD**
	3783	SKYLIGHT PROTECTION	3.2	4,435	5,299	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
261	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	6.3	3,919	4,983	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	1.8	4,950	4,950	BONDS YET TO BE SOLD**
	3730	WQ PLANNING RESERVES 12/13 - RECYCLED	4.8	4,469	4,901	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	1.8	2,099	4,561	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	1.8	4,000	4,064	BONDS YET TO BE SOLD**
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	3.0	2,553	3,882	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	2.1	2,911	3,478	BONDS YET TO BE SOLD**
	3784	ENERGY EFFICIENCY PUMP REPLACEMENT	9.9	2,485	2,930	BONDS YET TO BE SOLD**
	1792	GIS SUPPORT APPLICATIONS 12/13	3.0	1,800	2,799	BONDS YET TO BE SOLD**
	3726	WQ PLANNING RESERVES 12/13 - WASTEWATER	4.8	2,472	2,731	BONDS YET TO BE SOLD**
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	9.6	1,728	2,582	BONDS YET TO BE SOLD**
	3750	SOCWA CROSSING PROTECTION	2.5	2,500	2,500	BONDS YET TO BE SOLD**
	1259	GEN SYS MODS 12/13	3.0	1,749	2,397	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	1.8	1,980	1,980	BONDS YET TO BE SOLD**
	1742	HYDRAULIC MODELING 12/13	3.0	1,320	1,860	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	2.1	1,260	1,808	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	1.8	1,080	1,679	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	1.8	792	1,116	BONDS YET TO BE SOLD**
	1079	GIS VALVE AND HYDRANT APPLICATION	3.2	640	883	BONDS YET TO BE SOLD**
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	3.0	600	828	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	1.8	360	497	BONDS YET TO BE SOLD**
	1054	AUTOMATION SYSTEM IMPROVEMENTS	3.0	426	426	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	1.8	256	256	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	8.8	9	9	BONDS YET TO BE SOLD**
				$2,254,291	**$2,424,365**	
282	1599	MWRP EXPANSION PHASE II	2.4	158,635	168,014	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	2.3	118,110	126,109	BONDS YET TO BE SOLD**
	1485	OCSD EQUITY 11/12	2.4	64,339	64,339	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	1.1	14,699	14,699	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	1.1	14,463	14,463	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	1.1	12,650	12,650	BONDS YET TO BE SOLD**
	3799	COATING MWRP	2.0	7,000	7,180	BONDS YET TO BE SOLD**
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	2.4	3,432	3,766	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	0.6	2,481	2,671	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	1.7	1,452	2,239	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
282	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	1.7	804	2,120	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	2.4	811	1,990	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	0.5	1,375	1,375	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	1.7	1,057	1,345	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	0.5	583	1,267	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	0.5	1,111	1,129	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	0.6	832	994	BONDS YET TO BE SOLD**
	3750	SOCWA CROSSING PROTECTION	0.7	700	700	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	0.5	550	550	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	0.6	360	517	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	0.5	300	467	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	0.5	220	310	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.5	100	138	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	0.5	71	71	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	2.4	2	2	BONDS YET TO BE SOLD**
				$406,137	**$429,105**	
284	1599	MWRP EXPANSION PHASE II	2.6	171,855	182,016	BONDS YET TO BE SOLD**
	1617	MWRP BIOSOLIDS HANDLING & ENERGY RECOVERY FACILITY	2.5	128,380	137,075	BONDS YET TO BE SOLD**
	1485	OCSD EQUITY 11/12	2.6	69,701	69,701	BONDS YET TO BE SOLD**
	1541	OCSD CORF 12/13	1.7	22,717	22,717	BONDS YET TO BE SOLD**
	1535	OCSD CORF 11/12	1.7	22,352	22,352	BONDS YET TO BE SOLD**
	1393	OCSD SOLIDS HANDLING 12/13	1.7	19,550	19,550	BONDS YET TO BE SOLD**
	3799	COATING MWRP	2.1	7,350	7,539	BONDS YET TO BE SOLD**
	1152	IRWD PIPELINES RELOCATION FOR SC GRADE SEPARATION	2.6	3,718	4,079	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	0.6	2,481	2,671	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	1.8	1,537	2,371	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	1.8	851	2,245	BONDS YET TO BE SOLD**
	1477	LAWRP BIOSOLIDS HANDLING FACILITY	2.6	879	2,155	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	1.8	1,120	1,424	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	0.5	1,375	1,375	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	0.5	583	1,267	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	0.5	1,111	1,129	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	0.6	832	994	BONDS YET TO BE SOLD**
	3750	SOCWA CROSSING PROTECTION	0.7	700	700	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	0.5	550	550	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

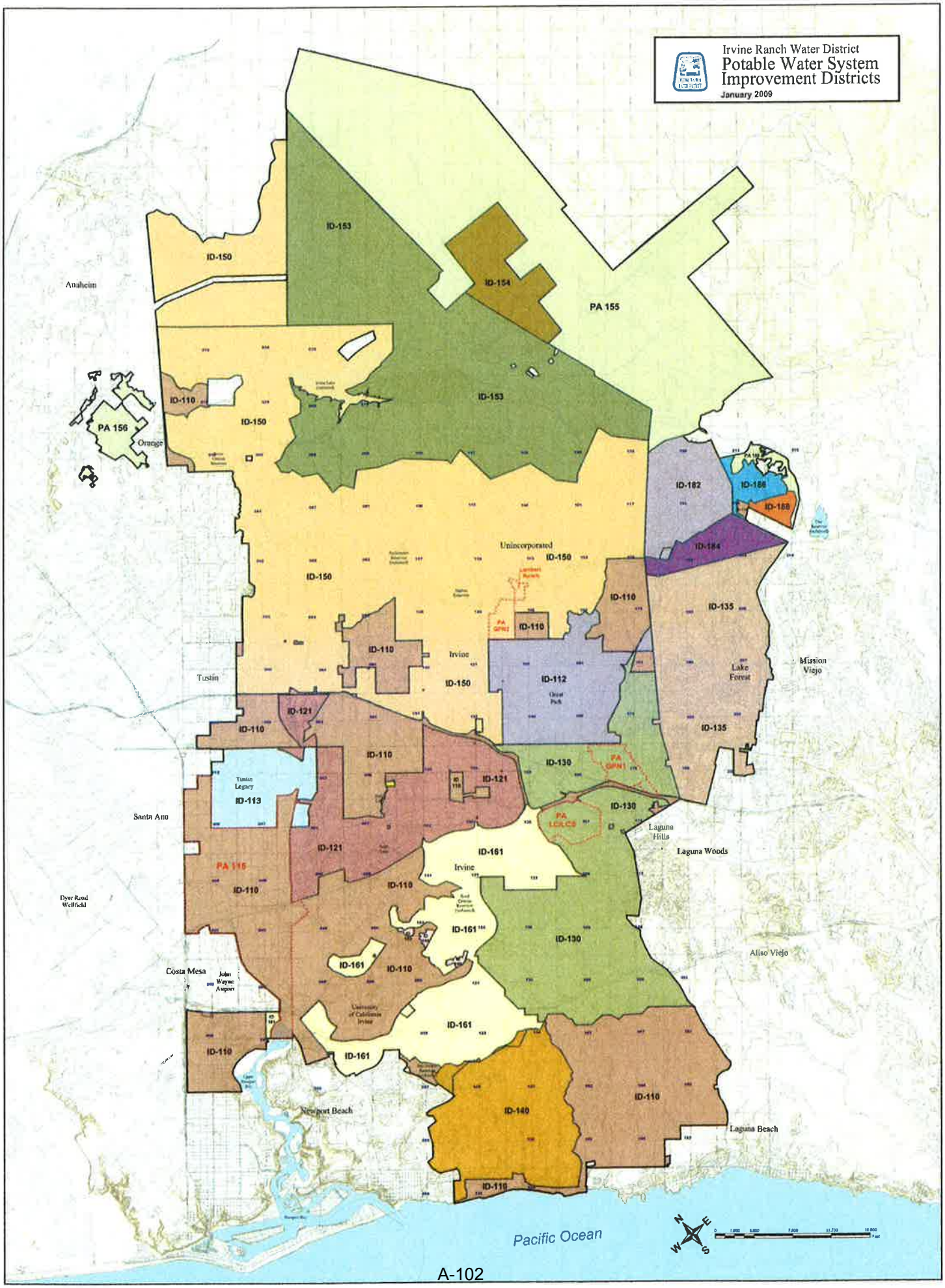
ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
284	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	0.6	360	517	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	0.5	300	467	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	0.5	220	310	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.5	100	138	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	0.5	71	71	BONDS YET TO BE SOLD**
	1495	OCSD EQUITY 12/13	2.6	3	3	BONDS YET TO BE SOLD**
				$458,696	**$483,416**	
286	3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	78.0	223,080	237,120	BONDS YET TO BE SOLD**
	1600	PORTOLA HILLS LS ABANDONMENT	50.0	125,650	176,050	BONDS YET TO BE SOLD**
	3799	COATING MWRP	0.6	2,100	2,154	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	0.2	827	890	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	0.5	427	659	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	0.5	237	624	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	0.5	311	396	BONDS YET TO BE SOLD**
	3777	SKYLIGHT PROTECTION	0.2	277	331	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	0.1	275	275	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	0.1	117	253	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	0.1	222	226	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	0.2	120	172	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	0.1	110	110	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	0.1	60	93	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	0.1	44	62	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.1	20	28	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	0.1	14	14	BONDS YET TO BE SOLD**
	1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	0.9	3	6	BONDS YET TO BE SOLD**
				$353,894	**$419,463**	
288	1600	PORTOLA HILLS LS ABANDONMENT	50.0	125,650	176,050	BONDS YET TO BE SOLD**
	3725	TRABUCO LS EMERGENCY STORAGE BASIN (SMWD)	22.0	62,920	66,880	BONDS YET TO BE SOLD**
	3799	COATING MWRP	0.6	2,100	2,154	BONDS YET TO BE SOLD**
	1150	MWRP FLOOD PROTECTION	0.2	827	890	BONDS YET TO BE SOLD**
	1629	DISTRICT WIDE SEWER REHABILITATION	0.5	427	659	BONDS YET TO BE SOLD**
	1434	RECORD DRAWINGS AND ATLAS MAP UPDATE 12/13	0.5	237	624	BONDS YET TO BE SOLD**
	1136	LONG TERM SEWER SYSTEM FLOW MONITORING	0.5	311	396	BONDS YET TO BE SOLD**

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
288	3777	SKYLIGHT PROTECTION	0.2	277	331	BONDS YET TO BE SOLD**
	1221	SEWER GEN SYS MODS 12/13	0.1	275	275	BONDS YET TO BE SOLD**
	1340	ENG PLANNING STUDY RESERVE 12/13	0.1	117	253	BONDS YET TO BE SOLD**
	1149	MWRP GEN SYS MODS 12/13	0.1	222	226	BONDS YET TO BE SOLD**
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	0.2	120	172	BONDS YET TO BE SOLD**
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	0.1	110	110	BONDS YET TO BE SOLD**
	1685	GIS SUPPORT APPLICATIONS 12/13	0.1	60	93	BONDS YET TO BE SOLD**
	1727	HYDRAULIC MODELING 12/13	0.1	44	62	BONDS YET TO BE SOLD**
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	0.1	20	28	BONDS YET TO BE SOLD**
	1016	AUTOMATION SYSTEM IMPROVEMENTS	0.1	14	14	BONDS YET TO BE SOLD**
	1590	LAKE FOREST SEWER MUIRLANDS, EL TORO TO LAWRP	0.4	1	3	BONDS YET TO BE SOLD**
				$193,732	**$249,220**	
290	3778	HEALTH DEPT FEES FOR 12/13	4.2	3,234	4,053	BONDS YET TO BE SOLD**
	1106	HYDRAULIC MODEL UPDATE / CALIBRATION - NONPOTABLE	4.2	756	1,130	BONDS YET TO BE SOLD**
				$3,990	**$5,183**	
299	1150	MWRP FLOOD PROTECTION	71.4	295,239	317,873	CAPITAL FUND ENHANCEMENT*
	1221	SEWER GEN SYS MODS 12/13	71.5	196,625	196,625	CAPITAL FUND ENHANCEMENT*
	1118	MWRP FLOOD PROTECTION	67.4	180,430	193,842	CAPITAL FUND ENHANCEMENT*
	1340	ENG PLANNING STUDY RESERVE 12/13	71.5	83,369	181,181	CAPITAL FUND ENHANCEMENT*
	1149	MWRP GEN SYS MODS 12/13	71.5	158,873	161,447	CAPITAL FUND ENHANCEMENT*
	1565	ENG PLANNING STUDY RESERVE 12/13	67.3	78,472	151,156	CAPITAL FUND ENHANCEMENT*
	3777	SKYLIGHT PROTECTION	71.4	98,960	118,238	CAPITAL FUND ENHANCEMENT*
	3783	SKYLIGHT PROTECTION	67.4	93,416	111,614	CAPITAL FUND ENHANCEMENT*
	1776	LAWRP RECYCLED WATER EFF. PS VFD CONVERSION	67.3	57,272	87,086	CAPITAL FUND ENHANCEMENT*
	1265	LAWRP GENERAL SYSTEM MODIFICATIONS 12/13	71.5	78,650	78,650	CAPITAL FUND ENHANCEMENT*
	3750	SOCWA CROSSING PROTECTION	71.6	71,600	71,600	CAPITAL FUND ENHANCEMENT*
	1685	GIS SUPPORT APPLICATIONS 12/13	71.5	42,900	66,710	CAPITAL FUND ENHANCEMENT*
	1792	GIS SUPPORT APPLICATIONS 12/13	67.3	40,380	62,791	CAPITAL FUND ENHANCEMENT*
	1134	GIS COLLECTIONS MAINTENANCE APPLICATION	71.4	42,840	61,475	CAPITAL FUND ENHANCEMENT*
	1259	GEN SYS MODS 12/13	67.3	39,236	53,773	CAPITAL FUND ENHANCEMENT*
	1727	HYDRAULIC MODELING 12/13	71.5	31,460	44,330	CAPITAL FUND ENHANCEMENT*
	1742	HYDRAULIC MODELING 12/13	67.3	29,612	41,726	CAPITAL FUND ENHANCEMENT*
	1044	DEVELOPMENT SERVICES PLANCHECK UPGRADE	71.5	14,300	19,734	CAPITAL FUND ENHANCEMENT*

IRVINE RANCH WATER DISTRICT
2012/13 Capital Budget
Allocation of FY Project Expenditures by Improvement District and Source of Funds

ID No.	Project	Title	% Allocated	FY Direct	FY Direct + GA	Source of Funds
299	1079	GIS VALVE AND HYDRANT APPLICATION	67.4	13,480	18,602	CAPITAL FUND ENHANCEMENT*
	1072	DEVELOPMENT SERVICES PLANCHECK UPGRADE	67.3	13,460	18,575	CAPITAL FUND ENHANCEMENT*
	1016	AUTOMATION SYSTEM IMPROVEMENTS	71.5	10,153	10,153	CAPITAL FUND ENHANCEMENT*
	1054	AUTOMATION SYSTEM IMPROVEMENTS	67.3	9,557	9,557	CAPITAL FUND ENHANCEMENT*
	3712	BEE CANYON BPS	0.0	0	0	CAPITAL FUND ENHANCEMENT*
				$1,680,284	**$2,076,738**	
		Grand Total:		**$64,396,025**	**$72,061,221**	


Irvine Ranch Water District
Potable Water System
Improvement Districts
January 2009
ID-153
ID-150
ID-154
PA 155
Anaheim
ID-110
ID-150
PA 156
Orange
ID-153
ID-182
ID-188
ID-189
ID-184
Unincorporated
ID-150
ID-150
ID-110
ID-135
PA GPN1
ID-110
ID-110
Irvine
Tustin
ID-150
ID-112
Lake Forest
Mission Viejo
ID-121
ID-110
ID-135
ID-110
ID-130
PA GPN1
Tustin Legacy
ID-113
ID-121
ID-130
Santa Ana
PA LC/LCS
Laguna Hills
Laguna Woods
ID-121
ID-161
PA 115
Irvine
ID-110
ID-110
Dyer Road Wellfield
ID-161
ID-130
Aliso Viejo
Costa Mesa
John Wayne Airport
ID-161
ID-110
University of California Irvine
ID-161
ID-110
ID-161
ID-140
ID-110
Newport Beach
Laguna Beach
ID-110
Pacific Ocean
N
W
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S

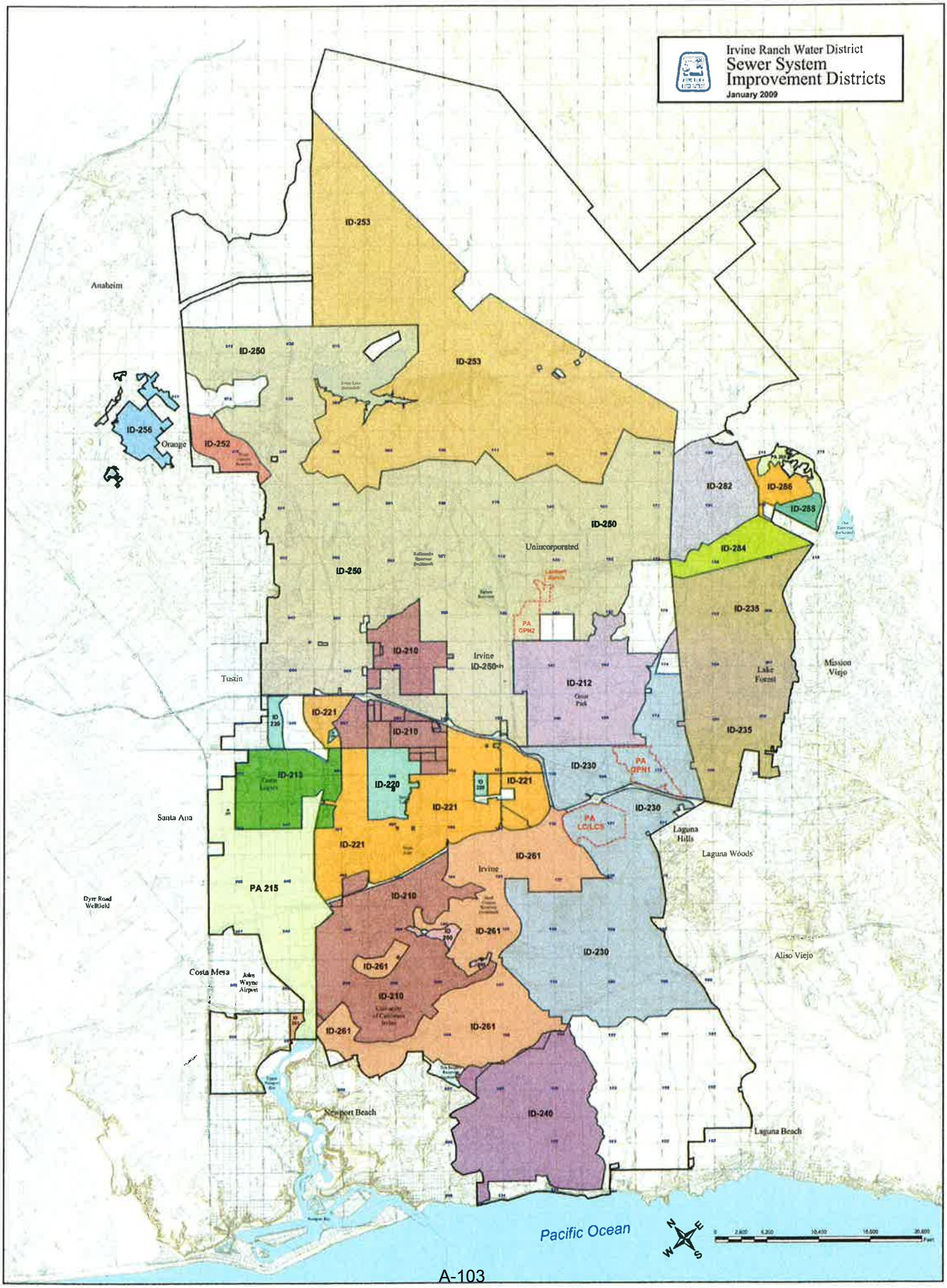
Irvine Ranch Water District
Sewer System
Improvement Districts
January 2009
ID-253
Anaheim
ID-250
ID-253
ID-256
Orange
ID-252
ID-282
ID-286
ID-288
ID-250
Unincorporated
ID-284
ID-250
ID-235
PA
GPN2
ID-210
Irvine
ID-250
ID-212
Tustin
Lake
Forest
Mission
Viejo
ID-221
ID-210
ID-235
ID-230
PA
GPN1
ID-213
ID-220
ID-221
ID-221
ID-230
PA
LC/LCS
Santa Ana
Laguna
Hills
ID-221
Laguna Woods
ID-261
Irvine
PA 215
ID-210
Dyer Road
Wellfield
ID-261
ID-230
Aliso Viejo
Costa Mesa
John
Wayne
Airport
ID-261
ID-210
ID-261
ID-261
ID-240
Newport Beach
Laguna Beach
Pacific Ocean
N
E
S
W

EXHIBIT "B"

RESOLUTION NO. 2012 -

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA, APPROVING DISTRICT'S CAPITAL BUDGET FOR FISCAL YEAR 2012-13

WHEREAS, the Board of Directors of the Irvine Ranch Water District (IRWD) has considered the capital project needs of IRWD for Fiscal Year 2012-13; and

WHEREAS, a Capital Budget as set forth in the attached Exhibit "A" has been prepared and reviewed by this Board of Directors; and

WHEREAS, during the review of the Capital Budget by the Board of Directors, the Board "flagged" certain projects for further review by the Board; and

WHEREAS, Article XIIIB of the Constitution of the State of California provides that the appropriations of local agencies will be limited each year to those of the previous year, adjusted for changes in population, cost of living and transfers in sources of funding; and

WHEREAS, Section 8 of Article XIIIB excludes from its limitations user charges and fees and regulatory fees, to the extent such fees and charges do not produce revenue exceeding the costs reasonably borne in providing the regulation, product or service, and Section 9 of Article XIIIB excludes from the appropriations subject to limitation an appropriation for a qualified capital outlay project, defined by statute as an appropriation for a fixed asset (including land and construction) with a useful life of 10 or more years and a value which equals or exceeds one hundred thousand dollars ($100,000); and

WHEREAS, the expenditures identified in the Capital Budget are to be funded entirely from excluded user fees and charges and other monies that are not proceeds of taxes, such as proceeds of bonds or other indebtedness, and/or are expenditures for qualified capital outlay projects.

NOW, THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

Section 1. The revenues which have been collected from connection fees and have been deposited in the capital funds of the Improvement Districts, to the extent not previously or hereafter committed or appropriated to pay reimbursement, bonding and other financing or fund-management related costs for capital facilities, are hereby appropriated to pay costs of the projects shown in the Capital Budget. The Expenditure Authorization to be approved for each project shall set forth the Improvement Districts' allocated shares of the costs of each project to be derived from such revenues and from proceeds of bonds and any other funding sources or contributions.

Section 2. That relative to appropriations subject to limitation under Article XIIIB of the Constitution of the State of California, it is hereby determined that IRWD's Capital Budget for Fiscal Year 2012-13 is to be funded totally by revenues other than the proceeds of taxes, and/or that the expenditures identified in such Capital Budget are for qualified capital outlay projects, and that the documentation used in making such determination has been on file in the offices of IRWD for not less than 15 days prior to the date hereof, pursuant to Section 7910 of the Government Code of the State of California.

Section 3. That IRWD's Capital Budget for Fiscal Year 2012-13 is in compliance with the provisions of Article XIIIB of the Constitution of the State of California.

Section 4. That the budget for IRWD Capital Projects expected to occur during Fiscal Year 2011-12, shown in the attached Exhibit "A" as total cost and by this reference incorporated herein, be and the same is hereby approved.

Section 5. That the projects set forth in the attached Exhibit "A" identified with "Yes" in the Flag column are "flagged" for further review by the Board of Directors prior to implementation of the next phase of the respective projects.

Section 5. That implementation of the previously approved phase of each "flagged" project be continued within the limits of approved expenditure authorizations.

ADOPTED, SIGNED and APPROVED this 11th day of June, 2012.

_____

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

By_____

June 11, 2012
Prepared and
Submitted by: L. Bonkowski
Approved by: P. Cook

CONSENT CALENDAR

MINUTES OF REGULAR BOARD MEETING

SUMMARY:

Provided are the minutes of the May 29, 2012 Regular Board Meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE MAY 29, 2012 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – May 29, 2012 Regular Board Meeting

EXHIBIT "A"

MINUTES OF REGULAR MEETING –MAY 29, 2012

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President Matheis on May 29, 2012 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Finance Cherney, Executive Director of Operations Pedersen, Executive Director of Engineering and Planning Burton, Executive Director of Water Policy Heiertz, Secretary Bonkowski, Legal Counsel Arneson, Director of Water Resources Weghorst, Assistant Director of Finance/Treasurer Jacobson, Assistant Director of Water Policy Sanchez, Mr. Jim Reed, Mr. Bruce Newell, Ms. Shannon Reed, Mr. Ian Swift, Mr. Mike Bray 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 1, 5, 7, C-8, C-9, 10, 12, and 17 will operate in accordance with the District's annual pumping plan. Wells, 2, 3, 4, 6, 11, 13, 14, 15, 16 and 18 will be off. This was confirmed by Mr. Cook, 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.

PRESENTATION

SCIENCE FAIR WINNERS

Ms. Cheryl Kelly presented awards to local students for their water-related projects entered in the Irvine Unified School District Science Fair. The awards winners are: Gopal Vashishtha, 9th Grade, University High School, -"The Effect of Manufactured Nanoscale Zinc Oxide on Filtration Rate and Particle Size Distribution in Membrane Biological Reactor Systems in the Wastewater Treatment Process."; Elizabeth Chang, 6th Grade, Plaza Vista School – "Evaporating Waters"; Zach Howard 6th Grade, Oak Creek School – "Where are the Highest Bacteria Levels, the Back Bay, Newport Harbor, or Newport Beach?"; and Louis Primeau, 6th Grade, Turtle Rock School – "Effect of Elevated CO2 on the Growth of Freshwater Algae".

WORKSHOP

FISCAL YEAR 2012-13 DRAFT CAPITAL BUDGET

General Manager Cook reported that the projected expenditures for the FY 2012-13 Capital Budget are $64 million. This item is presented for information and discussion purposes prior to the Board Workshop on June 11, 2012.

Using a PowerPoint presentation, Mr. Akiyoshi reported that in FY 2011-12, projected expenditures were estimated at $116.2 million with actual expenditures projected at approximately $106.6 million (92% of projected). The major construction projects included significant expenditures including the Michelson Water Recycling Plant (MWRP) Phase 2 Expansion, the Wells 21 and 22 Project, and the OPA/Regional Transmission Main. Construction of these projects is scheduled for completion in the first half of the upcoming fiscal year with construction expenditures to be significantly lower in FY 2012-13.

Mr. Akiyoshi said in FY 2012-13, capital expenditures are estimated to be $64 million of which design and bid phase efforts on three of the larger projects are the major contributors to the projected annual expenditures including the MWRP Biosolids Dewatering Facility, the Baker Water Treatment Plant, and the Orange Park Acres (OPA) Groundwater project. The reduction in

expenditures from FY 2011-12 to FY 2012-13 is primarily associated with a shift from completing construction (e.g. MWRP Phase II and Wells 21 and 22) to design phase or bid phase efforts on other major projects (e.g. MWRP Biosolids Dewatering Facility and Baker Water Treatment Plant). Staff anticipates that the capital expenditures in FY 2013-14 will increase due to the increase in construction activities on both the MWRP Biosolids Dewatering Facility and the Baker Plant.

CONSENT CALENDAR

Director Reinhart asked that item No. 8 be moved to the Action Calendar for discussion of the sewer spills. There being no objection, this item was placed on the Action Calendar. On MOTION by Reinhart, seconded and unanimously carried, CONSENT CALENDAR ITEMS 4 THROUGH 7 and 9 THROUGH 14 WERE APPROVED AS FOLLOWS:

5. MINUTES OF REGULAR AND ADJOURNED BOARD MEETINGS

Recommendation: That the minutes of the May 14, 2012 Regular Board Meeting and the May 21, 2012 Adjourned Board Meeting be approved as presented.

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

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

7. APRIL 2012 FINANCIAL REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report and the Monthly Interest Rate Swap Summary for April 2012; approve the April 2012 Summary of Payroll ACH payments in the total amount of $1,361,911.78, and approve the April 2012 Accounts Payable Disbursement Summary of Warrants Nos. 328836 through 329642, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of $23,830,355.64.

9. UPCOMING PROJECTS STATUS REPORT

Recommendation: That the Board receive and file.

10. PORTOLA HILLS SEWAGE LIFT STATION ABANDONMENT AND GRAVITY SEWER CONSULTANT SELECTION

Recommendation: That the Board approve an Expenditure Authorization in the amount of $188,100 for Project 20224 (1600); and authorize the General Manager to execute a Professional Services Agreement with CivilSource, Inc. in the amount of $86,403 for the design of Portola Hills Sewage Lift Station Abandonment and Gravity Sewer, Project 20224 (1600).

11. MASTER REIMBURSEMENT AGREEMENT BETWEEN IRWD AND THE CITY OF IRVINE FOR THE ADJUSTMENT/RELOCATION OF MISCELLANEOUS FACILITIES RELATED TO CITY STREET PROJECTS

Recommendation: That the Board authorize the General Manager to execute a Master Reimbursement Agreement between Irvine Ranch Water District and the City of Irvine for the installation of miscellaneous facilities.

12. AMENDMENT NO. 1 TO THE CITY OF LAKE FOREST SPORTS PARK REIMBURSEMENT AGREEMENT

Recommendation: That the Board authorize the General Manager to execute Amendment No. 1 to the Reimbursement Agreement between Irvine Ranch Water District and the City of Lake Forest for the relocation of a recycled water pipeline as part of the City of Lake Forest's sports park grading and drainage, projects 11560 (1181) and 30352 (1732).

13. TRANSITION OF ACWA HEALTH BENEFITS AUTHORITY INTO THE ACWA/JOINT POWERS INSURANCE AUTHORITY

Recommendation: That the Board adopt the following resolution by title approving membership in the ACWA Joint Powers Insurance Authority, consenting to join the health benefits program of the ACWA Joint Powers Insurance Authority, ratifying the action of the ACWA Health Benefits Authority board of directors to terminate the Health Benefits Authority Joint Powers Agreement, and authorizing and directing the Irvine Ranch Water District to execute all necessary documents.

14. MAIN GILLETTE SEWER REHABILITATION EXPENDITURE AUTHORIZATION AND BID REJECTION

Recommendation: That the Board approve an Expenditure Authorization in the amount of $79,700 for the Main Gillette Sewer Rehabilitation, 21436 (1129); and reject the bids received for the Main Gillette Sewer Rehabilitation, project 21436 (1129).

ACTION CALENDAR

DISTRICT STRATEGIC MEASURES DASHBOARDS

In response to Director Reinhart's inquiry of the sewer spills, he received clarification that no wastewater was recovered at the April 2012 Newport Coast Marriott site. There being no further discussion, On MOTION by Reinhart, seconded and unanimously carried, THE BOARD RECEIVED AND FILED THE STRATEGIC MEASURES DASHBOARDS AND INFORMATION ITEMS.

APPROVAL OF SUPPLEMENTS TO OFFICIAL STATEMENTS RELATED TO LETTERS OF CREDIT REPLACEMENT

General Manager Cook reported that in April 2012, the Board approved replacing the Bank of America (BofA) letters of credit on the District's 1989, 1991 and 1993 bond issues with new letters of credit from Bank of New York Mellon (BNYM). Mr. Cook said that draft reimbursement agreements between the District and BNYM and remarketing statements have been prepared and placed on file with the Secretary. Legal counsel has prepared a Resolution for adoption by the Board approving the forms of the remarketing statements and reimbursement agreements.

Executive Director of Finance Cherney reported that in February, Moody's placed BofA and 16 other global banks and securities firms on credit watch for possible downgrade. Ms. Cherney said that if a downgrade of BofA's short-term rating from P-1 to P-2 occurs, staff anticipates the interest rates on three of the District's issues backed by BofA letters of credit will increase, and many money funds (which are the primary purchasers of the Districts' variable rate debt issues) will either reduce or no longer hold the BofA-backed issues.

Ms. Cherney said the Board approved replacing the BofA letters of credit on the 1989, 1991 and 1993 bond issues with new letters of credit from BNYM at an annual fee of 0.35% for two years, which is a 0.33% decrease from the current LOC fees of 0.68% for the issues. She said replacing the letters of credit on the issues will result in an estimated annual savings of $148,900. The one-time expense related to the letter of credit replacement will be approximately $125,000, which includes legal counsel, rating agency fees, and other miscellaneous expenses. She said that staff, the substitution transaction participants and their legal counsels have prepared the draft forms of the remarketing statements reflecting the letter of credit substitution, the District's most recent financial information, updated disclosure information and other pertinent updates.

Legal Counsel Arneson noted that the form of the Resolution in the agenda package should be amended to delete the bracketed language that referred to supplemental indentures. Director Swan reported this item was reviewed by the Finance and Personnel Committee on April 3, 2012 and by the Board on April 9, 2012. On MOTION by Swan, seconded and unanimously carried, THE FOLLOWING RESOLUTION WAS ADOPTED BY TITLE:

RESOLUTION NO. 2012-21
RESOLUTION OF THE BOARD OF DIRECTORS
OF THE IRVINE RANCH WATER DISTRICT APPROVING
REMARKETING STATEMENTS AND CERTAIN OTHER
ACTIONS IN CONNECTION WITH REPLACEMENT OF
LETTERS OF CREDIT (CONSOLIDATED SERIES 1989,
CONSOLIDATED SERIES 1991, CONSOLIDATED SERIES 1993)

RECONCILIATION OF CHARGES FOR EMERGENCY REPAIR AND PROTECTION OF 39-INCH IRVINE LAKE PIPELINE – BUDGET INCREASE AND EXPENDITURE AUTHORIZATION

General Manager Cook reported this item is to reconcile the final charges for the emergency repair and protection of the 39-inch Irvine Lake Pipeline (ILP) that washed out in Santiago Creek at Irvine Park during the severe December 2010 storm events. The reconciliation of the charges will support the preparation of a final accounting for the project that is necessary to receive Federal Emergency Management Agency (FEMA) reimbursement of eligible costs for the work.

Executive Director of Operations Pedersen reported that the intense rainstorms that swept through Orange County from December 20 through 22, 2010 caused Irvine Lake to spill and erode the banks of Santiago Creek, downstream of the dam. Approximately 200 feet of the 39-inch ILP washed out in Santiago Creek downstream of the Fremont Diversion, including one entire segment of the pipeline that was carried a short distance downstream. Additionally, the Santiago Creek Dam access road washed out immediately upstream of the Eastern Transportation Corridor overcrossing.

Mr. Pedersen said that on December 28, 2010, Irvine Ranch Water District (IRWD) and Serrano Water District (SWD) staff discussed the damages and mutually agreed that IRWD would take the lead to administer the necessary emergency repairs and seek FEMA reimbursement for the eligible work. The net cost of the work after FEMA reimbursements would be allocated to IRWD and SWD pursuant to the terms of 1928 Agreement and its amendments.

Mr. Pedersen said that following the diversion of water in Santiago Creek to allow for the repair work, it was discovered that a larger than originally estimated segment of the ILP had been exposed during the storms and was vulnerable to future storm damage. A cost proposal was requested from Paulus Engineering, Inc. for the additional work, which consisted of importing backfill and installing one ton rip-rap for an additional 325 feet of the ILP. In conjunction with the major work performed by Paulus Engineering, a number of smaller contracts were awarded under the General Manager's authority to complete the project. These contracts included work to re-grade and pave approximately 11,000 square feet of the Santiago Creek Dam access road, place one ton rip-rap along the access road immediately upstream of the Eastern Transportation Corridor overcrossing, perform a biological assessment of the work areas, complete construction staking and re-vegetate the work areas to restore them to their original condition. The total amount for this work was $149,256, which was charged to a temporary billable project number and Operating Budget. A budget increase and Expenditure Authorization in the amount of $149,256 is required to transfer these charges to Project 11571.

He said that FEMA initially obligated $341,018 in funds to reimburse IRWD for the costs associated with Project 11571. This amount excluded the cost of the repairs associated with the Santiago Creek Dam access road because FEMA cited that IRWD had not provided sufficient documentation demonstrating its legal responsibility to perform those repairs. IRWD submitted a formal appeal to FEMA with additional documentation; FEMA subsequently approved the appeal and increased the obligated amount to $399,541. To date, IRWD has received reimbursements totaling $385,000 for Project 11571. Upon completion of a final accounting for the project, IRWD

will request reimbursement for the remaining eligible costs, including those that are proposed for transfer to Project 11571.

Director Reinhart reported that this item was reviewed at the Engineering and Operations Committee on May 15, 2012. On MOTION by Reinhart, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE TO THE FISCAL YEAR 2011-12 CAPITAL BUDGET FOR PROJECT 11571 (1231) FOR $149,256, FROM $350,000 TO $499,256; AND APPROVED AN EXPENDITURE AUTHORIZATION FOR PROJECT 11571 (1231) IN THE AMOUNT OF $149,256 TO RECONCILE THE FINAL CHARGES FOR THE EMERGENCY REPAIR AND PROTECTION OF THE 39-INCH IRVINE LAKE PIPELINE.

BAKER WATER TREATMENT PLANT DESIGN VARIANCE

General Manager Cook reported that at the February 27, 2012 Board Meeting, staff proposed to proceed with the implementation of on-site residuals handling facilities in a two-phased approach. The first phase, identified the recommended residuals handling process and associated facilities, defined the design criteria, sited the facilities, identified the impacts of those facilities on the current design, and updated the overall capital and operations and maintenance costs for the project. The second phase, presented today, will provide for the development of the final design of the residuals handling facilities and incorporation into the overall project.

Executive Director of Engineering and Planning Burton reported that at the onset of the Baker WTP project, residuals were planned to be transported to the Los Alisos Water Recycling Plant (LAWRP) for processing. Due to emerging issues associated with the Michelson Water Recycling Plant (MWRP) biosolids project and planned changes for the delivery of LAWRP solids to the MWRP plant, staff identified concerns with delivering the Baker residuals to LAWRP. Mr. Burton said that Black & Veatch (B&V), the District's consultant, identified several significant impacts and risks associated with processing Baker residuals through the proposed solids handling facilities at MWRP. To avoid the multiple risks and negative impacts of the Baker residuals on the proposed biosolids facilities, staff recommended developing on-site residuals handling facilities at the Baker WTP.

Mr. Burton said that the recommended residuals handling process includes retaining the currently designed membrane waste washwater facilities and adding new residuals thickening and mechanical dewatering facilities at the Baker WTP. The proposed new facilities include a sludge pumping station, primary and secondary thickeners, thickened sludge pumping station, decant return pumping station, polymer storage and feed facility, mechanical dewatering with centrifuges, and a truck loading facility. Additionally, a new building is proposed to enclose the centrifuges, thickened sludge pump station, and polymer facilities.

He said that RBF developed construction and operations and maintenance (O&M) cost estimates for the recommended residuals handling facilities. The construction cost is estimated at $5.2 million with annual O&M costs estimated at $256,000. Due to the preliminary level of the analysis, the construction cost estimate includes a 30 percent contingency. Using these cost estimates, along with the recently updated cost estimates for the overall project, the unit cost of treated water from the Baker WTP is projected to increase by $7/AF with the implementation of

on-site residuals handling facilities. As a result, the overall unit cost of treated water for the project will increase from $891/AF to $898/AF, which equates to an increase of less than 1%.

Mr. Burton said the second phase of this process includes the development of the final design of the residuals handling facilities and the incorporation of the facilities into the overall project. The work will include the design of the newly proposed facilities as well as the redesign of some currently designed facilities. He said that RBF submitted Variance No. 7 in the amount of $710,000 to complete the second phase of the work. The fee includes $485,000 for design of the new residuals handling facilities; $125,000 for revisions to currently completed drawings and specifications necessary to incorporate the residuals handling facilities; $36,000 for project management and administration; and $44,000 for an updated noise analysis, OCFA and CEQA coordination, field survey, updated engineer's estimates, and miscellaneous direct costs. The fee also includes a reimbursable budget of $20,000 for multiple permit fees associated with the project. RBF initially submitted a fee of $964,000 for this work, but after extensive negotiations with staff, RBF reduced its fee by more than 25 percent to $710,000.

Mr. Burton said that throughout this entire process, staff has closely coordinated with the Baker Project Committee Stakeholders. At a meeting held on January 26, 2012 to present the two-phased approach for including on-site residuals handling facilities, the stakeholders concurred and approved the residuals handling alternatives evaluation effort

Director Reinhart reported that this item was reviewed at the Engineering and Operations Committee on May 15, 2012. On MOTION by Reinhart, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 7 IN THE AMOUNT OF $710,000 WITH RBF CONSULTING FOR THE BAKER WATER TREATMENT PLANT, PROJECT 11218 (1417).

PROPOSED SALARY GRADE SCHEDULE CHANGES FOR FY 2012-13

General Manager Cook reported that each year during the process of developing the Operating Budget, staff reviews the current budgeted positions, salaries, and benefits to determine the necessary staffing levels and to maintain a competitive compensation package within our industry. The District's benefits package is currently under review and any proposed changes would be presented at future meetings. Staff efforts for the operating budget were focused on current and future staffing needs. The justifications for staffing and organizational changes and the associated costs and cost savings have been incorporated in the adopted Operating Budget.

Mr. Cook said that staff recommends several changes to existing budgeted positions, including the upgrade of five positions to higher levels, the downgrade of two positions to lower levels, transfer of one position, and elimination of three positions. He said that staff also recommends the addition of eight new positions and title changes for six positions; that five job titles be removed from the Salary Grade Schedule, that five job titles be added for new or re-titled positions, that one job title be moved, and that two job titles be changed to correspond with the changes adopted in the operating budget. Staff also recommends three additional title changes in the Engineer/Planner job series to better align titles with current job duties.

Mr. Cook said that the estimated net annual cost to implement the recommended changes is an increase in the salary budget of $998,800, or 3.8%. This increase was included in the FY 2012-13 Operating Budget adopted by the Board of Directors on April 23, 2012.

On MOTION by LaMar, seconded and unanimously carried, THE BOARD APPROVED THE PROPOSED CHANGES IN THE DISTRICT'S BUDGETED POSITIONS IN THE ADOPTED OPERATING BUDGET; AND APPROVED OF THE SALARY GRADE SCHEDULE CHANGES EFFECTIVE WITH THE APPROVED FY 2012-13 OPERATING BUDGET ON JULY 1, 2012; AND ADOPTED THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2012-22

RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT RESCINDING RESOLUTION NO. 2011-52 AND ESTABLISHING REVISED SCHEDULE OF POSITIONS AND SALARY RATE RANGES

GENERAL MANAGER'S COMMENTS

General Manager Cook reported that AB 2398 (Hueso) relative to recycled water passed through the Assembly and will now be moving to the Senate.

DIRECTORS' COMMENTS

Director LaMar reported that NROC is going through a strategic planning process and recently received a report from its facilitator. He said that he was pleased that the District is providing office space for NROC and noted that they are growing and will be requiring additional space from the District.

Director Swan reported on his attendance at DAR, an OCWA lunch meeting, a Newport Bay Watershed Executive meeting tour of the creek with the principle concern being the Autumnwood area, an ACWA Board meeting, and a Southern California Water Committee Dialogue meeting. He relayed that Hoag Hospital would like to increase utilization of its facility, and asked if staff could look into building a relationship with HOAG in Irvine.

Director Withers reported that he along with Mr. Mike Hoolihan attended a successful community tour two weeks ago. He said that this Thursday he will be attending ISDOC's quarterly meeting with LAFCO reporting on the recent Grand Jury Report, and that on Friday, he will be attending the monthly WACO meeting.

Director Matheis presented to the Board a plaque received from the Irvine Police Department as a Bronze Sponsor recipient of its annual awards event. She said that she attended the Irvine Teacher's Award ceremony where the District was a sponsor, and an Exchange Club of Irvine event last Tuesday. She complimented Shadetree Partnership's Mr. Tom Bonkowski, General Manager, Leslie Bonkowski, Secretary and Director, and the new Facilities Manager, Dave Asman on their efforts with this organization. She noted that its nursery is very healthy and that the 100

volunteers regularly attend its monthly events. Director Matheis also expressed her appreciation that the nursery is growing a total of 16,000 groundcover, plants and trees for the MWRP Phase II project. She further noted that KOCE's topic on Sunday evening was the recent Orange County Water Summit.

ADJOURNMENT

President Matheis adjourned the meeting at 6:25 p.m.

APPROVED AND SIGNED THIS 11TH DAY OF June, 2012.

_____
President, IRVINE RANCH WATER DISTRICT

_____
Secretary, IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

_____
Legal Counsel - Bowie, Arneson, Wiles and Giannone

June 11, 2012
Prepared by: Marta Ramos
Submitted by: Gretchen Maswadeh
Approved by: Paul Cook

CONSENT CALENDAR

SELF-INSURED WORKERS' COMPENSATION COVERAGE

SUMMARY:

Alliant Driver Specialty Group marketed the District's Workers' Compensation coverage and received responses from eight excess carriers and 13 primary carriers for the plan year beginning July 1, 2012 and ending June 30, 2013. Staff is recommending that the District:

- Renew Self-insured Workers' Compensation coverage with the California State Association of Counties (CSAC) Excess Insurance Authority;
- Renew Third Party Administrator coverage with York Insurance Services; and
- Maintain the District's self-insured rate (SIR) at the $125,000 liability level.

BACKGROUND:

Self-insurance Program:

IRWD has been a member of the CSAC Excess Workers' Compensation Program since 2003. The program has been running smoothly under the Third Party Administrator, York Insurance Services Group, Inc. York has provided good customer service and the District's claims have been monitored in a much more proactive manner.

During FY 2011-12, the District's self-insurance program experienced a total of 24 reported injuries (not including first-aids), resulting in paid claims of $152,879. The program has not had any major medical claims this fiscal year, but medical claims continue to increase on a per claim basis. The following is a summary of the District's Workers' Compensation claims history:

WORKERS' COMPENSATION CLAIMS / PREMIUM HISTORY			
POLICY TERM	**TOTAL NO. OF CLAIMS**	**TOTAL INCURRED CLAIMS**	**AUDITED PREMIUM**
7/1/11-12*	24	$152,879	$271,561
7/1/10-11	19	$185,086	$218,149
7/1/09-10	26	$172,762	$157,397
7/1/08-09	32	$194,186	$196,891
7/1/07-08	23	$145,688	$176,891
7/1/06-07	20	$73,202	$213,406
7/1/05-06	18	$47,813	$220,000
7/1/04-05	9	$22,424	$237,177
7/1/03-04**	7	$2,320	$231,134
7/1/02-03	12	$207,117	$285,668
TOTALS	190	$1,309,497	$2,469,989
10-Year Average	19	$130,950	$246,998

* Estimated
** First year of self funded program.

Under the CSAC program, the self-insured retention (SIR) would remain at $125,000 per occurrence, which means that the District is responsible for the first $125,000 of each claim. Total Workers' Compensation premiums and fees for the FY 2012-13 are estimated at $328,000. The total cost of the IRWD Workers' Compensation program including the $27,946 Third Party Administration (TPA) fee is $357,314. The TPA fee remained the same from fiscal year 2011-2012. In February, staff received notice from CSAC Excess Insurance Authority that the District would receive a premium credit of $28,314 for the IRWD Excess Workers' Compensation Program for the FY 2012-13 premium. This credit is the result of an annual analysis which compares the District's actual payroll to projected payroll in order to determine the final premiums. Staff requested that the credit be applied to the FY 2012-13 expenses bringing the total program costs to $328,361 for the FY 2012-13, as set forth in the table below:

Pooled Premium	$269,066
Excess Premium	18,744
EIA Administration Fee	19,353
Broker Fee	19,391
Public Entity Fee	1,439
Total Premium FY 2012-13	$327,993
Less FY 2011-12 Premium Credit	(27,946)
Total FY 2012-13 Premium	$300,047
Third Party Administrator Fee (York)	28,314
Total Estimated Premium/Fees for FY 2012-13	$328,361

Marketing Study Results:

Driver Alliant Insurance Services conducted a market study for the District's Workers' Compensation coverage for the FY 2012-13. A number of carriers were unable to provide a quote on the District's coverage because they do not provide coverage for public agencies and/or water districts. Given the understanding of the current market trends and recent review of loss history combined with Excess Workers' Compensation premium outlay, Driver Alliant recommendations that IRWD continue with the purchase of Excess coverage.

The following summary of responses indicates that there are no viable alternatives to the District's program at this time. Being self-insured has been the best choice in maintaining IRWD's premiums. The California Workers' Compensation Institute issued a report showing an increase to Workers' Compensation costs due to the escalating medical losses per claim. Even though the Workers' Compensation Insurance Rating Bureau (WCIRB) annual report shows that claims have moved downward, the severity of claims has risen. Courts have ignored the American Medical Association guidelines on claims and the few landmarks cases have set a rise in Workers' Compensation premiums. In evaluating the market study done by Alliant Insurance Services, had IRWD not switched to the Self-insured Workers' Compensation program, the District would be forced to select from the largest Workers' Compensation carrier in California, with estimated premiums at $827,663 (others range from $753,700 to $1,234,000). All other primary carriers declined to quote because they do not write for public agencies and/or water/sewer agencies.

Primary Market	Response
Berkshire Hathaway	$998,763 Preliminary Premium Indication
Travelers	No longer writing Workers' Compensation
ECIC (formerly Fremont)	Declined – Prohibited class
Everest National	Declined – Prohibited class
ICW	Declined – Prohibited class
Chartis	No longer writing Workers' Compensation
Zurich Insurance Company	$753,700 Preliminary Premium
Fireman's Fund	Declined – Prohibited class
CA State Compensation Fund	$827,663 Preliminary Premium indication
Chubb	Declined – Prohibited class
Zenith	$1,060,000 Preliminary Premium indication
Seabright Insurance Co	$1,234,000 Preliminary Premium indication
Hartford	$811,216 Preliminary Premium indication

The following table summarizes the responses received for the Excess Workers' Compensation market. No indications were given from the Excess market due to the minimum SIR that is requirement for participation. The Excess SIRs are starting at $500,000 compared to IRWD's current and proposed SIR of $125,000.

Excess Market	Response
Ace American Insurance	$250,000 Minimum SIR
Liberty Mutual Insurance	$500,000, Minimum SIR
Midwest	$1,000,000 Minimum SIR
CSAC	**$125,000 SIR, $329,000 Indication**
Safety National	$1,000 Minimum SIR
Discover Reinsurance	$300,000 Minimum SIR
Munica	Declined-not interested
US Specialty/Republic	$1,000,000 Minimum SIR

Based on the marketing results, staff recommends continuing the Self-insured Workers' Compensation program with CSAC Excess Insurance Authority with an indication of $328,000, maintain an SIR of $125,000 and continue with the Third Party Administrator, York Insurance Services, for a continued annual fee of $28,314.

FISCAL IMPACTS:

The total projected cost to self-insure the District's Workers' Compensation coverage, including the cost of the Third Party Administrator coverage, is estimated at $356,314. The District's budget for this coverage for FY 2012-13 is $378,000 or $21,686 under budget.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on June 5, 2012.

RECOMMENDATION:

THAT THE BOARD DIRECT STAFF TO CONTINUE TO SELF-INSURE WORKERS' COMPENSATION COVERAGE USING THE DISTRICT'S CURRENT PROVIDERS AS OUTLINED, BIND COVERAGE WITH CSAC EXCESS INSURANCE AUTHORITY AT THE $125,000 SELF-INSURED RETENTION LEVEL AND AUTHORIZE THE CONTINUATION OF THE THIRD PARTY ADMINISTRATOR COVERAGE WITH YORK INSURANCE SERVICES.

LIST OF EXHIBITS:

None.

June 11, 2012
Prepared by: K. McLaughlin KGM
Submitted by: G. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

2012 STATE LEGISLATIVE UPDATE

SUMMARY:

This report provides an update on the 2012 legislative session and IRWD state legislative priorities. A copy of the 2012 State Legislative Matrix is attached as Exhibit "A".

Staff recommends that the Board consider the following positions:

- AB 2063 (Alejo): Ex parte communications - WATCH
- SB 1251 (Evans): Aquatic invasive species working group - SUPPORT
- SB 1535 (Padilla): Greenhouse gas emissions allowances - SUPPORT

BACKGROUND:

IRWD 2012 Legislative Priority Update:

AB 2398 (Hueso) – The Water Recycling Act of 2012:

AB 2398 was passed off of the Appropriations Committee Suspense Calendar on Friday, May 25, 2012 and passed in the full Assembly by a vote of 62-11 on May 29, 2012. The bill was double referred to the Senate Natural Resources and Senate Environmental Quality Committees and scheduled to be heard in the Natural Resources Committee on June 12, 2012.

As the Natural Resources hearing date approached, it became clear that AB 2398 was facing an expected negative committee consultant report, most notably expected to argue that the bill was still a work in progress, as well as list of concerns from the environmental community. In response, Assembly Member Hueso and Committee Chair Pavley reached a deal to hold AB 2398 and initiate a stakeholder process to develop a legislative proposal for introduction in 2013. With the looming the policy committee deadline of July 6, 2012, it became clear to the Author and WateReuse that it would not be possible to adequately address the concerns raised by the Committee and the environmental community in time to get through policy hearings in both committees.

Chair Pavley has committed the resources of the Committee and her staff to the stakeholder process which will include the WateReuse community, environmental community, the State Board and Department of Public Health and the Assembly committee staff and will begin in the fall. Additionally, Pavley will make a statement at Tuesday's hearing expressing her support for the AB 2398 concept and stakeholder process with the goal of setting a positive tone with the committee, staff, and stakeholders. A meaningful stakeholder process supported by Senator Pavley as the Chair of the Senate Natural Resources Committee and Assembly Member Hueso as the expected Chair of the Assembly Water, Parks, and Wildlife Committee will provide the

opportunity to develop the most effective legislation possible to advance water recycling in California.

WateReuse is initiating an internal process with the co-sponsors its membership to review and discuss the goals, priorities, general concepts, and specific language over the summer. The first of these discussions will occur at the June 15, 2012 WateReuse Legislative/Regulatory Committee meeting. Further committee and board meeting as well as expected WateReuse membership workshops will occur over the summer. The goal of this process will be to resolve the remaining internal issues so WateReuse has a strong starting point for the stakeholder discussions this fall. Staff will provide the Board updates on the process as they become available.

SB 1090 – Senate Local Government Omnibus Bill and AB 2069 (Solorio):

The IRWD "Bona Fide Encumbrancer" clean-up language continues to move forward in the legislature as a part of SB 1090, the Senate Local Government Omnibus Bill. SB 1090 passed out of the Senate and has been referred to the Assembly Local Government Committee and scheduled for a hearing on June 27, 2012.

At the request of Assembly Member Solorio, IRWD assisted in moving AB 2069 through the Assembly and into the Senate to preserve a legislative vehicle for another topic if needed by the author. AB 2069 was amended on May 24, 2012 to remove the IRWD language and the bill now addresses workers' compensation benefits for peace officers. Assemblyman Solorio expressed his appreciation to IRWD for helping him move AB 2069 through the Assembly to the Senate.

Other 2012 Legislation:

AB 2063 (Alejo): Ex Parte Communications

AB 2063 (Alejo) would amend current law related to ex parte communications with State and Regional Board members to provide conditions under which a communication is not ex parte and permit such communication upon full disclosure. Specifically, the bill would provide that a communication is not ex parte if it is between a State or Regional Board member acting in his or her official capacity and another State or Regional Board member or interested party or is limited entirely to procedure or practice. The bill also provides that an otherwise prohibited ex parte communication is permissible if the State or Regional Board member fully discloses the communication and the communication is in regard to waste discharge requirements, water quality certifications, conditional waivers of waste discharge requirements, or municipal separate storm sewer permits.

AB 2063 is similar to SB 965 (Wright) which applies to matters before the State or Regional Board pertaining to Waste Discharge Requirements or the issuance of NPDES permits pursuant to state authorization under the Clean Water Act. The goal of the bill is to allow the public to present its views on adjudicative business before the State and Regional Boards. Staff recommends that the Board take a *watch* position on AB 2063 (Alejo).

SB 1251 (Evans): Aquatic invasive species working group

SB 1251 (Evans) would require the Ocean Protection Council and the Wildlife Conservation Board to jointly establish the Aquatic Invasive Species Working Group to be responsible for developing a well-funded, comprehensive statewide approach to the management and control of aquatic invasive species by January 1, 2014. SB 1251 is aimed at finding a comprehensive, proactive approach to addressing the challenges and threats California's water supplies and infrastructure face from aquatic invasive species, including Quagga and other dressined mussels and invasive aquatic weeds.

IRWD has supported several bills introduced and enacted into law over the past few years that provide new authorities to state and local governments to prevent and eradicate infestations of mussels and other invasive aquatic species. Additionally, IRWD has a support position on AB 2443 (Williams), which would authorize recreational boater fees for dreissenid mussel monitoring, inspection, and eradication programs. Staff recommends that the Board consider a *support* position on SB 1251 (Evans).

SB 1535 (Padilla): Greenhouse gas emissions allowances

AB 1535 (Padilla), sponsored by the Metropolitan Water District of Southern California (MWD) was gutted and amended on April 25, 2012 to prohibit the California Air Resources Board (CARB) from imposing regulatory obligations on MWD unless CARB provides allowances, credits, or other forms of price mitigation received by publicly-owned electric utilities to offset anticipated costs for retail customers and to mitigate short-term rate impacts. Under CARB's AB 32 greenhouse gas cap-and-trade program, CARB has categorized MWD as an electrical marketer due to the fact that it purchases supplemental, unspecified, out-of-state power for operation of the Colorado River aqueduct system, even though MWD does not resell this power and does not provide any electricity to its retail customers. This designation would require MWD to participate in the CARB auction process and carbon trading market to purchase greenhouse gas allowances, resulting in extra costs of up to $50 million per year. MWD is the only water utility in California that would be regulated as an electrical marketer under the CARB plan and, unlike other regulated parties, MWD was not given any allowances to mitigate the price impacts on its ratepayers.

MWD is hopeful the legislation will move ongoing negotiations between MWD and CARB forward to a mutually agreeable resolution, in which case Senator Padilla would drop the bill. However, to date negotiations have not reached such a resolution. SB 1535 includes an urgency measure which triggers a 2/3 vote threshold and would allow the provisions of the bill to take effect immediately.

If MWD continues to be designated as an electricity marketer without any allowances, the cost of imported water will increase. Staff recommends that the Board consider a *support* position on SB 1535 (Padilla).

California Budget Update – Regional Water Quality Control Boards

Governor Brown has proposed budget trailer bill language to reorganize the Regional Water Quality Control Boards to address a number of issues including retaining quality board members to serve on the boards. The Governor's proposal would:

- Consolidate the regional boards by eliminating the Colorado Regional Water Quality Control Board and shifting its functions to both the Lahontan and San Diego Regions.
- Reduce the number of members on each regional board from nine to seven.
- Eliminate existing categorical requirements on board appointee associations to instead allow the Governor flexibility to appoint board members "on the basis of demonstrated interest and proven ability in the field of water quality."
- Conform the Water Code's conflict of interest rules to the rules that apply to other state officials under the Political Reform Act.
- Authorize the Governor to select the chair of each regional board.
- Increase per diem compensation from $100 to $500 per day and increase the annual compensation cap from $13,500 to $60,000.

On May 24, 2012 Senate Budget Committee #2 voted to approve the Governor's proposed trailer bill language except for the provisions related to consolidating the Colorado Regional Board and giving the Governor the authority to appoint the regional board chairs. Committee staff raised concerns about the proposed consolidation, questioning why the Colorado Regional Board was selected rather than "consolidation of urban Southern California Boards (such as Santa Ana and San Diego)." Committee staff went on to recommend reconsideration of the board consolidation proposal to ensure it achieves the goal of increasing government efficiency and reducing programmatic expenses at the regional board level. The Assembly Budget Committee #2 was scheduled to review the same language the week of May 28, 2012.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on June 7, 2012.

RECOMMENDATION:

THAT THE BOARD TAKE A SUPPORT POSITION ON SB 1251 (EVANS) AND SB 1535 (PADILLA) AND A WATCH POSITION ON AB 2063 (ALEJO).

LIST OF EXHIBITS:

Exhibit "A" – IRWD 2012 State Legislative Matrix

EXHIBIT "A"
IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 403 Campos (D)	Public Drinking Water Standards: Hexavalent Chromium	Watch	Requires the DPH 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.	03/01/2012 - In ASSEMBLY. Ordered returned to SENATE. *****To SENATE.	
AB 1345 Lara (D)	Local Government: Audits		Requires the annual audit reports of a state, local government, or nonprofit organization made pursuant to the federal Single Audit Act to be submitted to the Controller within a specified time period. Authorizes the Controller to appoint a qualified certified public accountant to complete an audit report if a local agency fails to submit the report, and notification thereof. Requires any local agency audit be completed by a certified public accountant. Prohibits employing certain public accounting firms.	04/24/2012 - In SENATE. Read second time and amended. Re-referred to Committee on GOVERNANCE AND FINANCE.	2_Year_Bill
AB 1508 Carter (D)	Junk Dealers and Recyclers: Nonferrous Materials	Support	Amends existing law regulating junk dealers and recyclers recordkeeping of purchases and sales made and the payment for nonferrous materials, and exempts from the payment by cash or check requirement the redemption of nonferrous materials in connection with the redemption of beverage containers. Modifies that exemption to apply when the majority of the transaction is for the redemption of beverage containers. Excludes the redemption of materials made of copper or copper alloys from the exemption.	05/14/2012 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.	5/14/12 Board: IRWD support
AB 1514 Lowenthal B (D)	Excavations: Subsurface Installations: Violations		Amends existing law that generally requires any person planning to conduct an excavation to contact a regional notification center prior to excavation to delineate the areas to be excavated. Increases the civil penalties for negligent or knowing and willful violations. Authorizes the Attorney General or the district attorney to bring an action to enforce those civil penalties. Authorizes the local or state agency to take action to assess the penalties.	05/16/2012 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.	Could be detrimental to IRWD. Working with CMUA.
AB 1669 Perea (D)	Groundwater: Nitrate at Risk Area Fund		Establishes the Nitrate at Risk Area Fund. Provides that, upon appropriation by the Legislature, moneys in the fund would be available for the purposes of developing and implementing	05/16/2012 - In ASSEMBLY Committee on	Spot bill for water bond changes.

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			sustainable and affordable solutions for disadvantaged communities in areas reliant on nitrate-contaminated groundwater as their source of drinking water, as determined by the department and the board, consistent with specified data.	APPROPRIATIONS: To Suspense File.	
AB 1686 Jeffries (R)	Waterways: Lake Mathews		Requires the Department of Boating and Waterways to allow public access to Lake Mathews, in Riverside County, for the purposes of boating, fishing, and hiking, including access by nonmotorized bicycles. Prohibits body contact with the lake, and limits the type of boats and fuel permitted on the lake. Allows the Metropolitan Water District of Southern California to develop, fund, and operate any necessary infrastructure, place limits on the number of boats and persons accessing and establish a fee.	02/23/2012 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE and LOCAL GOVERNMENT.	Dropped by author.
AB 1692 Wieckowski (D)	Bankruptcy: Redevelopment: Successor Agencies	Oppose	Revises and recasts the bankruptcy procedures that apply to the neutral evaluation process. Authorizes the evaluator to toll the limitation period from the evaluation process based on specified conditions, and to request and control the process of an independent investigation. Provides that the evaluation process shall end upon a specified circumstance.	05/14/2012 - In ASSEMBLY. Read second time. To third reading.	5/14/12: Board - IRWD oppose
AB 1750 Solorio (D)	Rainwater Capture Act of 2012	Watch	Enacts the Rainwater Capture Act of 2012. Authorizes residential, commercial and governmental landowners to install, maintain, and operate rain barrel systems and rainwater capture systems for specified purposes, provided that the systems comply with specified requirements. Authorizes a landscape contractor working within the classification of his or her license to enter into a prime contract for the construction of a rainwater capture system if the system is used exclusively for landscape irrigation.	05/17/2012 - To SENATE Committees on NATURAL RESOURCES AND WATER and RULES.	3/12/12 Board: IRWD watch
AB 1813 Buchanan (D)	Sacramento-San Joaquin Delta Reform Act of 2009	Oppose	Requires a specified system of Sacramento-San Joaquin Delta Delta watershed diversion data collection and public reporting to use data used by the Department of Water Resources to determine the Net Delta Outflow Index. Requires the system to use modeling or satellite imagery in lieu of public reporting to the maximum extend practicable. Requires the new flow criteria to ensure there is no degradation in water quality in Delta channels and to replicate certain conditions with regard to fish populations.	03/29/2012 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.	5/14/12: Board - IRWD Oppose Dropped by author

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 1884 Buchanan (D)	Sacramento-San Joaquin Delta Reform Act: Covered Action	Oppose	Excludes from the definition of covered action specified plans, programs, projects, or activities within the secondary zone that have received environmental certification under the California Environmental Quality Act or otherwise have invested rights as of the effective date of the Sacramento-San Joaquin Delta plan, or both. Excludes all of the categorical act exemptions. Excludes from the definition of employee housing, low-income housing, infill residential projects, or other infill development.	03/29/2012 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.	5/14/12: Board - IRWD Oppose Dropped by author
AB 1971 Buchanan (D)	Theft: Junk, Metals, and Secondhand Materials		Increases the maximum fine to a specified amount that a dealer in or collector of junk, metals, or secondhand materials for receiving stolen property. Enacts a clarifying statement relating to vandalism committed against public transit property and facilities, public parks and facilities, and public utilities and water property and facilities.	05/14/2012 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.	
AB 2000 Huber (D)	Sacramento-San Joaquin Delta	Oppose	Relates to the Sacramento-San Joaquin Delta. Relates to the Delta Stewardship Council and Delta Protection Commission membership. Relates to incorporating a Bay Delta Conservation Plan into the Sacrament-San Joaquin Delta conservation plan. Appropriates available funds from specified bond measures approved by the voters of the state to the DWR for levee improvements.	04/24/2012 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Failed passage.	4/9/12 Board - IRWD oppose
AB 2003 Torres (D)	Junk Dealers and Recyclers: Nonferrous Materials		Relates to existing law requiring junk dealers and recyclers to keep written records of all sales and purchases made in the course of their business. Allows payment for nonferrous materials by check only.	05/17/2012 - To SEN Com on BUS, PROF AND ECON DEV	
AB 2011 Gatto (D)	CalConserve Water Conservation Retrofit Program		Requires a percentage of Safe, Clean, and Reliable Drinking Water Supply Act of 2012 bond funds to be allocated to establish a CalConserve Water Conservation Retrofit Program to provide grants to local water agencies for the implementation of local and regional water conservation revolving loan programs that assist customers within the service area of the water agency to carry out water use efficiency retrofit projects, consistent with the act.	05/09/2012 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.	

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 2021 Wagner (R)	Works of Improvement: Disputed Amounts		Relates to existing law providing, with respect to contracts, an increase in the amount that may be withheld from progress payments or final payments for works of improvement. Increases the amount that may be withheld from progress payments, or final payments, depending on the circumstances, to a sum of various amounts and percentages, as specified.	05/10/2012 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.	Commitment from author to remove public agencies.
AB 2063 Alejo (D)	Ex Parte Communications		Prohibits a state water quality control board member, a regional water quality control board member, or any interested person, from engaging in a communication that would be considered ex parte under the Administrative Procedure Act. Provides the conditions under which a communication is not ex parte. Provides such communication is permissible upon the full disclosure of the communication, and the communication is related to certain subjects permissible under existing law.	05/21/2012 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.	
AB 2069 Solorio (D)	Sanitation, Sewerage, and Water Charges: Collection	Sponsor;Support	Relates to an existing law authorizing various local public entities to prescribe fees for services and facilities furnished in connection with their water, sanitation, storm drainage, or sewerage system and providing that such charges may be collected on the tax roll in the same manner as property taxes, the amount of the charges constituting a lien against the lot or parcel, unless the real property has been transferred or conveyed. Makes changes concerning a transfer, conveyance, or attachment.	05/03/2012 - To SENATE Committee on GOVERNANCE AND FINANCE.	4/9/12 Board - IRWD support Will be amended to no longer apply to IRWD
AB 2075 Fong (D)	Energy Powerplant Certification		Repeals the authorization of a person proposing to construct a facility excluded from the State Energy Resources Conservation and Development Commission's to waive the exclusion by submitting a notice to the commission of the intent to file an application for a certification of an electric generating facility.	05/14/2012 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.	
AB 2105 Grove (R)	Junk Dealers: Scrap Metal		Expresses the intent of the Legislature to enact legislation regarding scrap metals and recycling.	02/23/2012 - INTRODUCED.	
AB 2230 Gatto (D)	Recycled Water: Car Washes	Support	Requires an in-by car wash, or a conveyor car wash to either install, use, and maintain a water recycling system, or enter into a contract to use recycled water provided by a retail water supplier to wash and rinse vehicles.	04/19/2012 - To SENATE Committee on NATURAL RESOURCES AND WATER.	5/14/12: Board - IRWD support

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
AB 2298 Ma (D)	Junk Dealers and Recyclers		Authorizes persons appointed by the head of a county agricultural commission to carry out the periodic inspection of the premises of junk dealers and recyclers.	05/17/2012 - To SEN Committee on PUBLIC SAFETY.	
AB 2398 Hueso (D)	Water Recycling	Sponsor;Support	Enacts the Water Recycling Act of 2012. Establishes a statewide goal to recycle specified amounts of water by specified calendar years. Requires the adoption of a drinking water criteria for groundwater recharge project utilizing recycled water and the development and adoption of drinking water criteria for advanced treated purified water for raw water augmentation projects. Establishes a related research fund. Relates to permits and permit fees for raw water augmentation projects. Relates to inspections.	05/21/2012 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.	3/26/12 Board - IRWD support.
AB 2421 Berryhill B (R)	Bay Delta Conservation Plan: Project: Costs and Benefit	Oppose	Requires an independent third party to conduct an analysis of the costs and benefits for any project being submitted by the Bay Delta Conservation Plan to the Delta Plan and to submit this to the Legislature. Prohibits funding for these provisions from exceeding a specified amount.	05/09/2012 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.	4/9/12 Board - IRWD oppose
AB 2422 Berryhill B (R)	Sacramento-San Joaquin Delta: Intake Concepts: Study	Oppose	Requires the Department of Water Resources Development to undertake an expedited evaluation and feasibility study of the Western Delta Intakes Concept. Requires the department of prepare and submit a report. Appropriates funds from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 to pay for the study.	05/09/2012 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.	5/14/12: Board - IRWD Oppose
AB 2423 Berryhill B (R)	Comprehensive Sacramento-San Joaquin Delta Planning		Makes a technical, nonsubstantive change to the Sacramento-San Joaquin Delta Reform Act establishing the Delta Stewardship Council as an independent agency of the state.	02/24/2012 - INTRODUCED.	
AB 2443 Williams (D)	Vessels: Registration Fee: Quagga and Zebra Mussels	Support	Provides for a quagga/zebra mussel infestation prevention program. Imposes an additional fee on a vessel required to pay a registration fee. Requires funds from the fee to be used to implement and administer a dreissenid mussel monitoring, inspection, and eradication program. Requires the adoption of an emergency regs to prescribe procedures for the collection and use of the fee.	05/09/2012 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.	5/14/12: Board - IRWD support
AB 2595 Hall (D)	Desalination	Support	Requires the Ocean Protection Council to report to the Legislature on opportunities for improving the statewide permitting process for seawater desalination facilities. Requires the council to convene the	05/16/2012 - In ASSEMBLY Committee on	sponsor: CalDesal 4/9/12 Board:

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			Seawater Desalination Permit Improvement Task Force. Appropriates specified bond funds to pay the costs of convening the Task Force and preparation of the report.	APPROPRIATIONS: To Suspense File.	IRWD support
SB 27 Simitian (D)	Public Employees' Retirement		Amends the State Teachers' Retirement Law. Relates to the Defined 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 payrate changes.	08/25/2011 - In ASSEMBLY Committee on APPROPRIATIONS: Not heard.	
SB 31 Correa (D)	Post Government Employment: Restrictions		Applies the post government employment restrictions of the Political Reform Act of 1974 to other public officials serving as members of local governing boards or commissions with decision making authority.	04/12/2012 - To ASM Com on ELECTIONS AND REDISTRICTING	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.	Author not likely to move SB 46 this year
SB 52 Steinberg (D)	Environmental Quality: Jobs and Economic Improvement		Amends the Environmental Quality Act. Requires that a project result in a specified minimum financial investment that is spent on planning, design, and construction of the project. Requires a lead agency to place the highest priority on feasible measure that will reduce greenhouse gas emissions on the site and in the neighboring communities of the project site. Relates to judicial review of an environmental impact report. Relates to the Judicial Council's reporting requirements.	01/31/2012 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.	2_Year_Bill
SB 186 Kehoe (D)	The Controller		Relates to the duties and responsibilities of the State Controller that include the reporting of financial records by local agencies, the reports of financial transactions of joint powers agencies that issue	03/22/2012 - In ASSEMBLY. Read second time and	

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			conduit revenue bonds, the audit or investigation of suspected false or problem reporting by local agencies and the use of a financial review committee. Authorizes raising the forfeiture amount if a local official fails or refuses to file a financial report after receipt of a written notice.	amended. Re-referred to Committee on LOCAL GOVERNMENT.	
SB 200 Wolk (D)	Delta Levee Maintenance		Declares the legislative intent to reimburse eligible local agencies up to a specified percentage of maintenance or improvement or project or no project levees in the Sacramento-San Joaquin Delta until an specified date and to increase the reimbursement rate on and after that date. Extends the authorization of the Reclamation Board to provide funds to an eligible local agency in the form of an advance in an amount that does not exceed a specified percentage of the estimated state share.	04/12/2012 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.	3/26/12 Board: remove IRWD oppose position based on 1/12/12 amends 2_Year_Bill
SB 250 Rubio (D)	Sacramento-San Joaquin Delta: Delta Plan: Facility	Support	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.	05/10/2012 - Re-referred to ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.	3/26/12 Board: IRWD support 2_Year_Bill
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.	
SB 911 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	05/23/2011 - To ASSEMBLY Committee on LOCAL GOVERNMENT.	

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			request about any expenditure of bond proceeds exceeding a specified amount, to make specified information available with respect to any expenditure or expenditures.		
SB 964 Wright (D)	State Water Resources Control Board		Provides that the exemption for the adoption of regulations for the issuance, denial or revocation of specified waste discharge requirements and permits shall not apply to any general permits or waivers issued under state law or the federal National Pollutant Discharge Elimination System, thereby requiring the State Water Resources Control Board and the regional water quality control boards to comply with provisions that require the adoption of regulations under those circumstances.	04/23/2012 - In SENATE Committee on ENVIRONMENTAL QUALITY: Reconsideration granted.	
SB 965 Wright (D)	Water Resources Control Boards: Ex Parte Communications		Provides that ex parte communications provisions of the Administrative Procedure Act do not apply to specified proceedings of the State Water Resources Control Board or a regional board. Defines ex parte communications. Permits oral and written communications if specified procedures are followed. Requires an individual meeting for all parties under specified circumstances. Authorizes the board to prohibit ex parte communications for a specified period. Requires reporting of all ex parte communications.	05/22/2012 - In SENATE. Read second time. To third reading.	
SB 1002 Yee (D)	Public Records: Electronic Format		Amends the Public Records Act. Authorizes an agency, when requested by a person, to provide an electronic record in a format in which the text in the electronic record is searchable by commonly used software. Requires the requestor to bear the cost of converting the electronic record into a searchable format. Prohibits an agency from charging a requester for the cost of specified services.	05/14/2012 - In SENATE Committee on APPROPRIATIONS: To Suspense File.	
SB 1003 Yee (D)	Local Government: Open Meetings		Amends the Ralph M. Brown Act regarding open meetings. Authorizes the district attorney or any interested person to file an action to determine the applicability of the act to past actions of the legislative body. Prohibits an interested party from filing an action for alleged violation under the act unless certain conditions are met to include written notification of the legislative body involved. Provides that time frame for the legislative body to respond to the notification.	05/10/2012 - In SENATE. Read second time. To third reading.	

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
SB 1045 Emmerson (R)	Metal Theft: Damages	Support	Prohibits any junk dealer or recycler from possessing a public fire hydrant, fire department connection, public manhole cover or lid or any part thereof, or public backflow device or connection thereto, without a written certification from the public agency or utility that owns or previously owned the material. Makes the dealer or recycler civilly liable for actual damages and for exemplary damages, unless the court determines that extenuating circumstances do not justify awarding exemplary damages.	05/14/2012 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.	5/14/12 Board: IRWD support
SB 1090 Governance and Finance Cmt	Local Government: Omnibus Bill	Support	Relates to county boundary descriptions, city sidewalk installation charges, a solar-use easement under a Williamson Act contract, bribery and corruption as abuse of public office, the validity of a local benefit assessment, showing a professional registration of license number under the Subdivision Map Act, charges for water, sanitation and sewer services, and the establishment, operation and dissolution of districts under the property and business district law.	05/17/2012 - To ASSEMBLY Committee on LOCAL GOVERNMENT.	4/9/12 Board - IRWD support Includes IRWD "bona fide encumbrancer " language
SB 1146 Pavley (D)	Wells: Reports: Public Availability		Relates to well reports. Requires the Department of Water Resources to make the well reports available to the public. Requires the department to provide specified disclaimers. Allows the department to charge a fee, for the provision of the report, for each release of the report to recover department's costs. Requires the release to comply with the Information Practices Act of 1977. Requires a person who request a report to provide his or her name, address, and reason for making the request.	05/14/2012 - In SENATE Committee on APPROPRIATIONS: To Suspense File.	
SB 1251 Evans (D)	Ocean Protection Council: Aquatic Invasive Species		Requires the Ocean Protection Council and the Wildlife Conservation Board to establish an Aquatic Invasive Species Working Group for the development and implementation of an aquatic species control program within different regions of the state. Relates to the council membership.	05/14/2012 - In SENATE Committee on APPROPRIATIONS: To Suspense File.	
SB 1276 Wyland (R)	Indemnity: Design Professionals		Amends existing law that requires, in all contracts, amendments to contracts, provisions, clauses, covenants, and agreements contained in, collateral to, or affecting public contracts for design professional services, the design professional to defend the public agency under an indemnity agreement. Limits the design professional's duty to defend a public against a negligence claim to reimbursement of	03/29/2012 - Re-referred to SENATE Committee on JUDICIARY.	Attempt to undo AB 506 compromise from 2011. Dropped by Author.

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			defense costs incurred by the agency that were caused by the professional's actual negligence.		
SB 1340 LaMalfa (R)	Appropriation of Water: Sewerage Commission Oroville	Oppose	Authorizes the Sewerage Commission Oroville to file an application for a permit to appropriate a specified amount of water that is based on the volume of treated wastewater that it discharges into the Feather River. Authorizes the State Water Resources Control Board to grant a permit to appropriate that treated wastewater upon terms and conditions determined by the board. Relates to permit approvals by the commission. Relates to reports regarding Sacramento-San Joaquin Delta water quality standards.	05/14/2012 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.	Expansion of AB 134 (Dickenson), sponsored by Sac Regional in 2011. 4/9/12 Board - IRWD oppose
SB 1364 Huff (R)	Water Corporations		Authorizes the inspection of the accounts, books, papers, and documents of any business that is a subsidiary or affiliate of, or a corporation that holds a controlling interest in, a water corporation of a certain number of connections. Requires such water corporation to include in its notice to its customers of the submission of a request for a rate hike with the Public Utilities Commission the estimated impacts of various customers of the entity. Requires notification of the outcome of the request.	05/14/2012 - In SENATE Committee on APPROPRIATIONS: To Suspense File.	
SB 1387 Emmerson (R)	Metal Theft	Support	Prohibits any junk dealer or recycler from possessing a fire hydrant, fire department connection, including, but not limited to, bronze or brass fittings or parts, a manhole cover or lid, or any part of that cover or lid, or a backflow device and connections to that device without a written certification on the letterhead of the agency or utility that owns or previously owned the material and that the entity has sold. Provides the application of an existing criminal fine to a violation of this prohibition.	05/14/2012 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.	5/14/12 Board: IRWD support
SB 1395 Rubio (D)	State Auditor		Renames the Bureau of State Audits as the California State Auditor's Office and the State Auditor as the California State Auditor. Prohibits any supplies, forms, insignias, signs, or logos from being destroyed or changed as a result of the name change, and requires their continued use until exhausted or unserviceable. Makes nonsubstantive, conforming changes.	05/16/2012 - In SENATE. Read second time. To third reading.	
SB 1495 Wolk (D)	Sacramento-San Joaquin Delta Reform Act of 2009		Excludes from the definition of covered action, under the Sacramento-San Joaquin Delta Reform Act of 2009, specified leases	05/10/2012 - To ASSEMBLY	4/4/12 WRP - recommended

IRWD 2012 LEGISLATIVE MATRIX
Updated May 23, 2012

Bill No. Author	Title	IRWD Position	Summary/Effects	Status	Notes
			approved by specified special districts, and routine dredging activities necessary for maintenance of certain facilities operated by special districts. Requires a state or local public agencies that proposes to undertake a covered action to prepare a written certification as to whether the covered action is consistent with the Delta Plan.	Committee on WATER, PARKS AND WILDLIFE.	IRWD oppose
SB 1498 Emmerson (R)	Local Agency Formation Commission: Powers		Authorizes the Local AGency Formation Commission to authorize a city or district to provide new or existing services outside its jurisdictional boundaries and outside its sphere of influence to support existing or planned uses involving public or private properties, subject to approval at a noticed public hearing.	03/22/2012 - To SENATE Committee on GOVERNANCE AND FINANCE.	Sponsor: League of Cities.
SB 1516 Leno (D)	Public Contracts: Bids: Or Equal Materials or Service		Prohibits public bid specifications from requiring a bidder to provide submission of data substantiating a request for a substitution of an equal item prior to the bid or proposal submission.	05/22/2012 - In SENATE. To third reading.	
SB 1535 Padilla (D)	Global Warming Solution Act: Water Industry Study		Amends the State Global Warming Solutions Act of 2006 that requires the State Air Resources Board to adopt rules and regulations to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emission reductions. Prohibits any authority being conferred on the board to impose any regulatory obligation of publicly owned water utilities for purpose of greenhouse gas emissions related to electricity imported for the utility to provide water to its service area unless given price mitigation.	05/14/2012 - In SENATE Committee on ENVIRONMENTAL QUALITY: Heard, remains in Committee.	

June 11, 2012
Prepared by: K. McLaughlin
Submitted by: G. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

2012 SELECTION OF STATE LOBBYIST/CONSULTANT

SUMMARY:

Irvine Ranch Water District's current one-year contract with O'Haren Government Relations for state lobbying and consulting services expires on June 30, 2012. Staff recommends approval of a one-year contract, from July 1, 2012 to June 30, 2013, with O'Haren Government Relations for state lobbying and consulting services.

BACKGROUND:

IRWD continues to be a leader in a variety of subjects in the State Capitol. The topics expected to be of continued priority in 2012 and 2013 are addressed in further detail in the attached contract proposal, included as Exhibit "A", from Ms. Maureen O'Haren and are summarized as follows:

- AB 2398 (Hueso): Co-sponsor the Water Recycling Act of 2012 to streamline California laws and regulations related to recycled water; remove recycled water from the definition of waste and Porter Cologne; and provide a pathway for advanced purified recycled water projects.
- SB 1090 (Senate Governance and Finance Committee): Advocate for IRWD-sponsored language in the Senate Local Government Omnibus Bill related to cleaning up the Water and Health and Safety Codes related to "bona fide encumbrancers" to allow for AB 741 (Huffman) implementation.
- Special District Governance and Reform: Protect IRWD interests in any legislation establishing new requirements, restrictions, or other reform measures impacting special district governance, operations, contracting, transparency and pensions, and proactively work to limit the introduction of such legislation.
- Delta / Water Package Implementation and Protection: Promote IRWD's interests in implementation legislation and advocate against legislation that would undermine the package.
- Water Bond: Work with the statewide water industry to secure a pathway for a Water Resources Bond that maximizes the opportunity for success and ensures that IRWD has opportunities for funding.
- Public Goods Charge on Water: Advocate against a statewide public goods charge on water.
- Water Conservation, Water Recycling, Water Rights, and Related Legislative Issues: Preserve and advance IRWD interests in these policy areas.
- State Budget: Minimize the negative impact on the District's property tax allocation, reserves and investment interests.

- Wetlands Oversight: Protect the Natural Treatment System.
- Water Transfer Legislation: Protect the District's interests in legislation related to water transfers.

O'Haren Government Relations provides the District with a high level of service, knowledge, credibility and access in Sacramento. Additionally, O'Haren assists the District in ongoing efforts to build and maintain relationships with key policy makers in the Legislature, Governor's office and State Agencies.

To serve IRWD's needs, staff recommends that the Board authorize a Professional Services Agreement for a one-year period, beginning July 1, 2012 through June 30, 2013, with O'Haren Government Relations for a $6,500 monthly retainer plus reimbursable expenses not to exceed $7,800. The current contract with O'Haren Government Relations expires on June 30, 2012.

FISCAL IMPACTS:

The contract will be charged against the FY 2012-13 Operating Budget, under Department 710 expenses. The total requested contract authorization is $85,800.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on June 7, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE A ONE-YEAR PROFESSIONAL SERVICES AGREEMENT, FROM JULY 1, 2012 THROUGH JUNE 30, 2013, WITH O'HAREN GOVERNMENT RELATIONS IN THE AMOUNT OF $6,500 PER MONTH RETAINER PLUS REIMBURSABLE DIRECT EXPENSES FOR A TOTAL NOT TO EXCEED $85,800.

LIST OF EXHIBITS:

Exhibit "A" - O'Haren Government Relations Contract Proposal

May 22, 2012

Kirsten G. McLaughlin
Government Relations Manager
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

RE: PROPOSAL FOR REPRESENTATION
June 2012 through June 2013

Dear Kirsten:

Thank you for your interest in renewing our contract to represent the Irvine Ranch Water District in Sacramento. I am honored to continue to represent you as O'Haren Government Relations. I've enjoyed working with you and representing you in Sacramento for a number of years, and have been thrilled to be a part of your success in the Legislature. I hope to continue helping to advance the District's innovative agenda.

Our top two priorities for the 2012 legislative session are: sponsoring legislation, to help with the implementation of AB 741 (Huffman) as either AB 2069 (Solorio), or more likely, SB 1090 (Senate Governance and Finance Committee), our back-up to AB 2069; and co-sponsoring AB 2398 (Hueso) related to water recycling. We're also aiding in the effort to pass AB 2595 (Hall) on desalination and opposing a number of efforts to undermine the 2009 Delta/water package.

We're continuing to monitor measures related to local government, particularly special district governance, a statewide water resources bond, water conservation, and other water and wastewater issues as well. Public contracting issues continue to be a problematic source of legislative initiatives. Though little progress is expected on pension reform this year, we're also tracking measures in this area. We've also added energy, particularly solar energy policy, to the mix to keep abreast of changes in this area.

IRWD continues to be perceived as a leader in statewide policy on conservation and recycled water. The reputation that IRWD has established over the years will continue to earn the District more attention in Sacramento as we pursue new ideas. Members of the Legislature and key executives have great interest in touring IRWD facilities, and we should continue to extend those invitations to our district.

The remainder of this letter reiterates our background and the scope of services we provide.

Background

From 1997 to the end of 2004, Phil Isenberg and Maureen O'Haren provided government relations services to a host of clients through Miller, Owen & Trost. Our clientele included

trade associations, local governments, corporations and non-profit organizations in a variety of fields. On January 1, 2005, we opened the doors to our own firm, Isenberg/O'Haren.

In March of 2010, Phil Isenberg was appointed to the Delta Stewardship Council and named as full-time chair by his council colleagues. The firm name was changed to O'Haren Government Relations, and the firm continues to provide the District with the same dedicated service and belief in the District's mission.

General Scope of Services

We provide full-service lobbying and government relations services for our clients. The following is a general list of the services we provide.

- Strategic planning and consultation.
- Introduction to specific legislators and administration officials.
- Lobbying legislation and budget issues of concern or interest to the client.
- Bill tracking and monitoring.
- Regular communications and updates regarding priority issues.
- Staffing of sponsored legislation.
- Drafting of legislative language, including amendments.
- Testimony in committee hearings.
- Preparation of testimony for client representatives.
- Briefing of client representatives for meetings and hearings.
- Preparation of letters and other written materials for legislators and administration officials.
- Background research on issues.
- Creation of coalitions and staffing of coalitions.
- Coordination with coalition partners in lobbying, committee hearings and grassroots activities.
- Advocacy on regulatory matters, including meetings with officials and formal written or oral comment on proposed regulations.
- Advocacy on regulatory decisions specific to the client.
- Maintenance of relationships with legislators, administration officials and key staff.
- Representation of client at coalition meetings.
- Development of charitable activity strategies that support or complement government affairs goals.
- Development of local outreach and grass roots efforts to enhance relationships with local legislators.

Irvine Ranch Water District Proposal

Below we have developed a general outline of the areas of advocacy for the 2012 legislative session. All of these activities would be undertaken pursuant to IRWD direction.

ISSUE: **Water Conservation, Water Recycling, Water Rights and Other Water Resource Legislative Issues**

GOAL: **Protect and advance District interests in policy issues.**

TASKS:

- Provide full lobbying services (as described above), consistent with strategic direction, on priority legislation identified by IRWD through IRWD monitoring of bills introduced and identified by industry groups, such as ACWA, CMUA, the WateReuse Association, CASA and CSDA.
- Assist in development of position, strategy and amendments on priority legislation and assist in drafting of position letters and amendments.
- Attend negotiating sessions with author's staff and strategy meetings of associations. Influence association position so that it is consistent with and supportive of IRWD position.
- Testify as needed on legislation and report on results.
- Provide regular reports on priority legislation and reassess strategy and position as issues develop.
- Identify and notify the District of any specific legislation or developments that may have significant impact on IRWD.
- Monitor negotiations on relevant legislation.

ISSUE: **State Budget**
GOAL: **Minimize the negative impacts on the District's property tax allocation, reserves and investment interests.**

TASKS:

- Gather and report budget intelligence.
- Maintain communications with key legislators on major budget efforts.
- Maintain communications with ACWA and CMUA staff monitoring budget developments.
- Develop coalitions with common interests and coordinate with coalition partners.
- Schedule and attend lobbying meetings with legislators, key staff and administration officials in advance of hearings, as needed.
- Provide regular budget updates to the District as needed.
- Provide regular budget analyses and reviews of new budget proposals of concern.
- Advocate with key entities, including trade associations, coalitions and administrative agencies.
- Monitor budget committee hearings and activities when appropriate.
- Provide public testimony in budget hearings when appropriate and consistent with strategy.
- Draft budget language as needed.
- Develop and coordinate with potential legislative sponsors of District proposals or language.

ISSUE: **Special District Governance Oversight, Local Government Law, Pension Reform**

GOAL: **Protect IRWD interests in any legislation establishing new requirements or other reform measures affecting special district governance, financing and operations.**

TASKS:

- Review and assist in the development of policy goals.
- Analyze the legislation.
- Determine IRWD priorities and position. As part of this activity, it is essential to identify areas in which IRWD is different from other water districts. Unique characteristics of governance structure, financing or ethics policies may allow IRWD to achieve special recognition, or exclusion, from larger efforts in this area.
- Develop a legislative strategy, if needed, based on IRWD position and priorities.
- Meet with identified legislators, key staff and other key decision makers if necessary.
- Work with IRWD staff on language and position, and influence member associations such as ACWA, CMUA, CSDA and others to ensure they support or promote our amendments.
- Determine whether testimony at committee hearings is appropriate.
- Prepare regular updates for IRWD Board of Directors.
- Lobby Administration officials on IRWD position if necessary.
- Watch for any and act on any problematic legislation.

ISSUE: **Bond Funding and Financing**

GOAL: **Ensure IRWD Opportunities in these areas and protect IRWD flexibility**

TASKS:

- Monitor all bond measures that may provide funds for water projects.
- Maintain communications with key staff.
- Monitor budget negotiations for funding opportunities.
- Maintain communications with key legislators involved in budget and bond funding and implementation.
- Review implementation language regarding consistency with IRWD projects.
- Ensure implementation of water bond measure reflects IRWD interests.

ISSUE: **Wetlands Oversight**

GOAL: **Protect IRWD's Natural Treatment System**

TASKS:

- Monitor intelligence on emerging policy relating to wetlands and the SWANCC gap.
- Attend relevant workgroup and board meetings dealing with wetlands regulation or legislation.
- Advocate for narrow oversight limited to the SWANCC gap only.
- Advocate the advantages of IRWD's Natural Treatment System.

Fee Proposal

We propose a monthly retainer of $6,500. In addition, we request reimbursement for additional costs such as courier service, long-distance telephone calls, conference calls, facsimiles, printing, costs associated with business meetings and other similar costs, in addition to travel costs (including airfare, ground transportation, meals, hotel, etc). We would, consistent with the existing agreement, obtain prior approval for any travel. We also propose a limitation of $7,800 in costs over the one-year contract period.

We hope that this letter provides you with an adequate scope of services. Thank you again for your continued relationship. We enjoy working with you.

Regards,

MAUREEN O'HAREN

cc: Greg Heiertz, Executive Director of Water Resources and Policy

APPROVED BY: _____ **DATE:** _____

Paul Cook, General Manager
Irvine Ranch Water District

June 11, 2012
Prepared by: K. Welch/R. Thatcher
Submitted by: P. Weghorst/G. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

GRANT OF EASEMENT TO KERN WATER BANK AUTHORITY

SUMMARY:

In September 2011, the District completed construction of recharge basins on the Stockdale West Ranch in Kern County. While finalizing plans for fencing around the property, staff received a request from the Kern Water Bank Authority (KWBA), which is the landowner to the south of the ranch, for a fence realignment that would provide the KWBA better access to its property through the use of an access road located on the west side of the Stockdale West Ranch. Staff has reviewed the KWBA's request and recommends that the Board adopt a resolution authorizing the Grant of Easement for vehicular ingress and egress purposes to the KWBA for approximately 3,500 square feet of the Stockdale West Ranch.

BACKGROUND:

Wood Bros., Inc. completed construction of the District's recharge basins for the pilot project on the Stockdale West Ranch in September 2011. The original construction plans included installing fencing around the entire property. The KWBA is the landowner to the south of the Stockdale West Ranch, and has agreed to allow IRWD to connect to the Kern Water Bank fence line at the southwest corner of the Stockdale West property. This connection would further secure the KWBA's property and would eliminate IRWD's need to construct nearly 6,000 LF of fencing on the south side of the Stockdale West Ranch. This would result in a $14,285 savings to the District.

Recently, the KWBA also requested a slight realignment of the fencing at the northwestern corner of the Stockdale West Ranch which would allow the KWBA better access to their property. Staff has determined that this slight realignment will not affect IRWD's use of the water banking facilities on the property. IRWD's fencing contractor, Lamont Fence Company, prepared a cost estimate for the revision which resulted in $700 in additional costs. KWBA has agreed to pay the additional costs directly to the Lamont Fence Company.

Staff and legal counsel have prepared a grant of easement for a perpetual, non-exclusive easement for vehicular ingress and egress purposes to the KWBA over 3,500 SF of the Stockdale West Ranch property. The District retains the right to terminate the grant of easement with six months notice to the KWBA. The proposed grant of easement document, including a location map of the fencing alignment, is attached as Exhibit "A".

The KWBA has reviewed and approved the easement document and will sign an acceptance certificate to be included with the recording of the easement document. Staff is requesting authorization for the General Manager to execute the grant of easement for vehicular ingress and egress purposes to the KWBA for approximately 3,500 SF of the Stockdale West Ranch property. The resolution authorizing the execution of the Grant of Easement is attached as Exhibit "B".

FISCAL IMPACTS:

There are no fiscal impacts associated with granting this easement to the KWBA.

ENVIRONMENTAL COMPLIANCE:

A Notice of Exemption was filed for the Stockdale West Ranch Pilot Project consistent with a Class 6 Categorical Exemption as provided for in the California Environmental Quality Act guidelines. Mitigation measures similar to those from the Strand Ranch Integrated Banking Project Final Environmental Impact Report were incorporated as environmental commitments within the project description.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2012-___

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
AUTHORIZING THE GRANT OF EASEMENT FOR
INGRESS AND EGRESS PURPOSES TO
KERN WATER BANK AUTHORITY.

LIST OF EXHIBITS:

Exhibit "A" – Grant of Easement
Exhibit "B" – Resolution Authorizing Grant of Easement

EXHIBIT "A"

Recording Requested by and
Return to:

KERN WATER BANK AUTHORITY
1620 Mill Rock Way #500
Bakersfield, CA 93311
Attn.:

With conformed copy to:

IRVINE RANCH WATER DISTRICT
15600 Sand Canyon Avenue
Irvine, CA 92618
Attn.: Ray Thatcher, District R/W Agent

ASSESSOR'S PARCEL NO(S).:
160-020-12

FREE RECORDING REQUESTED:
Essential to Acquisition By
Kern Water Bank Authority
Government Code §6103

(SPACE ABOVE THIS LINE FOR RECORDER'S USE)

Consideration less than $100.00

(Undersigned Declarants)

GRANT OF EASEMENT
TO
KERN WATER BANK AUTHORITY
BY
IRVINE RANCH WATER DISTRICT

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

IRVINE RANCH WATER DISTRICT, a California Water District organized under and existing pursuant to Section 34000 et seq. of the California Water Code ("DISTRICT" herein), hereby grants and conveys to KERN WATER BANK AUTHORITY, a joint powers authority pursuant to California Government Code 6500 et seq. ("GRANTEE" herein), a perpetual, non-exclusive easement and right-of-way for vehicular ingress and egress. This easement shall include, but not by way of limitation, the right to construct, reconstruct, remove and replace, renew, inspect, maintain, repair, improve, and otherwise use the hereinafter described property for these purposes to and from GRANTEE's adjacent property, in, over, under, upon, along, through and across the real property located in the County of Kern, State of California, as described in Exhibit "A" and depicted in Exhibit "B", which exhibits are attached hereto and made a part hereof (the "Easement Area"), as necessary in connection with the use, operation and maintenance of an access road.

Subject to: Covenants, conditions, restrictions, easements, rights, rights-of-way and encumbrances of record.

A. Rights of DISTRICT to Use Easement Area:

It is understood and agreed that the easements and rights-of-way acquired herein are also acquired subject to the rights of the DISTRICT to use the Easement Area for any purpose whatsoever to the extent that such

Project Stockdale Ranch West Access Road
Title Company _____
Title Report No. _____
Project Engineer _____

use does not interfere with the GRANTEE's use of its easement for vehicular ingress and egress purposes. The DISTRICT retains the rights which are not inconsistent with the easement, including, but not limited to the DISTRICT placing its own lock on any gate installed within, along, or across the Easement Area.

Nothing contained herein will result in a forfeiture or reversion of DISTRICT's title to the Easement Area in any respect. DISTRICT reserves all rights to the Easement Area not expressly granted herein, including, but not limited to, the right to grant, license, or otherwise allow others the non-exclusive rights in the use of the Easement Area.

B. Maintenance of Easement Area:

It is understood and agreed that the Easement Area is being granted in its "AS-IS" condition, subject to all defects and hazards that exists thereon, and that DISTRICT has no responsibility for maintenance of the Easement Area or to warn GRANTEE of any hazards or defects respecting the Easement Area. GRANTEE shall promptly repair any damage exceeding normal wear and tear caused by GRANTEE to roads and/or other improvements over the Easement Area. Any construction, repair, maintenance, clean-up, or any other work on or within the Easement Area by GRANTEE shall be at its sole cost and expense, without contribution from DISTRICT.

C. Indemnity:

GRANTEE agrees to indemnify DISTRICT against and to hold the DISTRICT harmless from any liability, loss, claims or damage with respect to any property, injury or death of any person whomsoever, proximately caused in whole or in part by any negligence of GRANTEE, its employees, independent contractors or agents, or by any act or omission for which GRANTEE, its employees, independent contractors, or agents are liable without fault in the exercise of the rights herein granted; save and except to the extent that such liability, loss, damage, injury or death is proximately caused by any negligent act or omission of the DISTRICT or the employees, agents or independent contractors of DISTRICT (other than a failure to perform an act for which GRANTEE, its employees, independent contractors or agents are responsible under this Grant of Easement or applicable law or a failure to correct or to require GRANTEE to correct a condition created by GRANTEE, its employees, independent contractors or agents) or by any act or omission for which DISTRICT or the employees, independent contractors or agents of DISTRICT are liable without fault.

D. Auto/General Liability Insurance:

Prior to any entry under this Grant of Easement, DISTRICT must be furnished with a policy or certificate of comprehensive general liability and automobile insurance (including non-owned auto) carried by GRANTEE, covering all operations of GRANTEE and GRANTEE's Representatives under this Grant of Easement, endorsed to include DISTRICT, its employees, officers, directors, agents and representatives, as additional insureds and including a thirty (30) day notice to DISTRICT in the event of cancellation or any material change in coverage. In addition, this insurance policy shall reflect that the policy is primary insurance as respects any claim, loss or liability arising directly or indirectly from GRANTEE's operations, and any other insurance maintained by DISTRICT shall be considered noncontributing. This liability insurance must be in a form satisfactory to DISTRICT and written with limits of liability not less than the greater of (i) $2,000,000 (or such greater amount as may reasonably be required by DISTRICT) combined single limit bodily injury and property damage liability per occurrence, or (ii) the current limit of liability carried by GRANTEE. If GRANTEE carries greater liability insurance than the minimum amount required in (i) above, the certificate or policy delivered to DISTRICT must evidence this greater amount. DISTRICT will not be responsible for any costs of premiums or other charges for such insurance. In addition, GRANTEE shall provide DISTRICT with Worker's Compensation and Employer's Liability Insurance coverage with a Waiver of Subrogation Agreement by the insurance carrier as respects DISTRICT. Failure by DISTRICT to obtain from GRANTEE evidence of any insurance required hereunder shall not constitute a waiver of the requirement for such insurance. Nothing in this subparagraph shall limit GRANTEE's obligations under the other provisions of this Grant of Easement.

Project Stockdale Ranch West Access Road
Title Company _____
Title Report No. _____
Project Engineer _____

E. Successors and Assigns:

This Grant of Easement shall be binding upon and inure to the benefit of the successors and assigns of DISTRICT and GRANTEE. GRANTEE shall not have the right to assign the easement rights granted herein or permit the use thereof by the public or any party, other than GRANTEE's employees and agents, without the prior written approval of DISTRICT.

F. Acceptance and Recordation:

GRANTEE agrees, by acceptance and recordation of this Grant of Easement from DISTRICT, that the terms and conditions herein set forth shall be binding upon and inure to the benefit of GRANTEE.

G. Termination:

This Grant of Easement shall terminate upon the earlier to occur of the following: (a) there is a change in use of the Easement Area by GRANTEE for a use other than the use specifically granted herein and/or the terms of the easement are violated; (b) the improvements within the Easement Area are either relocated or removed; (c) GRANTEE abandons the easement hereby granted; or (d) DISTRICT terminates this Grant of Easement by giving GRANTEE written notice of not less than six (6) months that DISTRICT has determined that the Easement Area is necessary for its own operations.

(signatures on next page)

IN WITNESS WHEREOF this Grant of Easement has been executed this _____ day of _____, 20___.

"DISTRICT"

IRVINE RANCH WATER DISTRICT,
a California Water District

By _____

Paul A. Cook, General Manager

Project Stockdale Ranch West Access Road
Title Company _____
Title Report No. _____
Project Engineer _____

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

On _____, 20___, before me, _____,
a Notary Public in and for said State, personally appeared _____
_____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Notary Public in and for said State

(SEAL)

Project Stockdale Ranch West Access Road
Title Company _____
Title Report No. _____
Project Engineer _____

EXHIBIT "A"

INGRESS AND EGRESS EASEMENT TO
KERN WATER BANK AUTHORITY
(APN 160-020-12)

LEGAL DESCRIPTION

That certain parcel of land situated in the unincorporated territory of the County of Kern, State of California being that portion of Northwest Quarter of Section 3, Township 30 South, Range 25 East, Mount Diablo Meridian according to the official plat of the survey of said land on file in the office of the Bureau of Land Management lying within Parcel 1 as described in the grant deed recorded December 22, 2010 as Document No. 000210179052 of Official Records in the Office of the County Recorder of said County described as follows:

COMMENCING at the northwest corner of said Section 3; thence along the westerly line of said section and said Parcel 1 South 00°39'34" West 30.00 feet to the southerly right of way line of Stockdale Highway as it currently exists and the **TRUE POINT OF BEGINNING**; thence continuing along said last described westerly line South 00°39'34" West 500.00 feet; thence leaving said line South 89°20'26" East 2.00 feet; thence North 01°48'19" East 500.01 feet to said southerly right of way line of Stockdale Highway; thence along said right of way line North 88°54'56" West 12.00 feet to the **TRUE POINT OF BEGINNING.**

CONTAINING: 3500 square feet, more or less.

SUBECT TO: Covenants, conditions, reservations, restrictions, rights-of-way, and easements of record, if any.

EXHIBIT "B" attached hereto and by this reference made a part hereof.

Prepared by me or under my direction:

Dated: May 7, 2012

Gregory P. Heiertz, R.C.E. 33084
License expires June 30, 2012

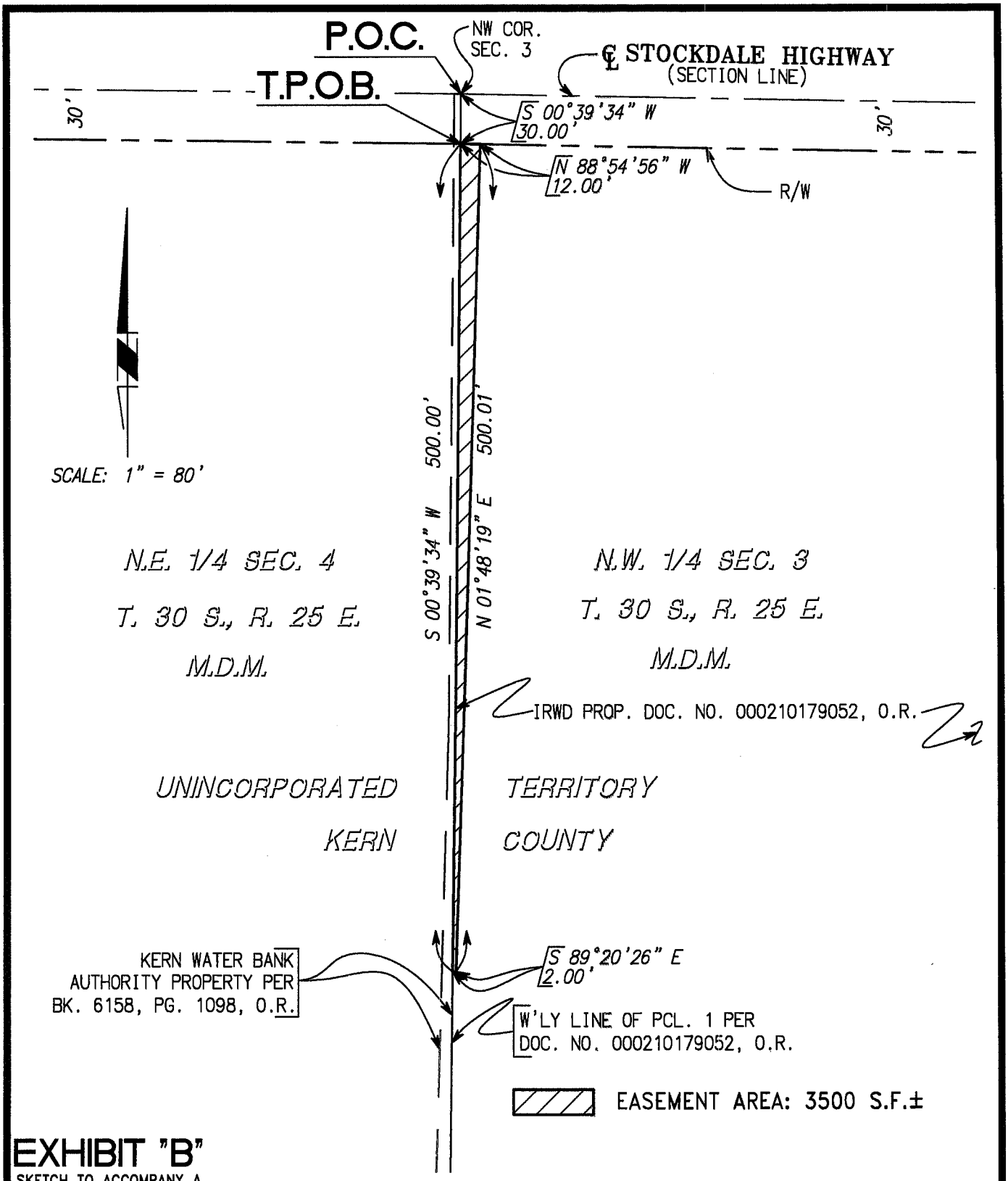

EXHIBIT "B"

SKETCH TO ACCOMPANY A LEGAL DESCRIPTION FOR

INGRESS AND EGRESS EASEMENT TO KERN WATER BANK AUTHORITY

(APN 160-020-12)

SHEET 1 OF 1 SHEET

IRVINE RANCH WATER DISTRICT
15600 SAND CANYON AVENUE, IRVINE, CA 92619

IRVINE RANCH WATER DISTRICT

MAY 7, 2012

EXBPLAT.DWG

EXHIBIT "B"

RESOLUTION NO. 2012 - _____

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
AUTHORIZING THE GRANT OF EASEMENT
FOR INGRESS AND EGRESS PURPOSES
TO KERN WATER BANK AUTHORITY

WHEREAS, Irvine Ranch Water District (IRWD) has completed construction of its pilot project of recharge basins on Stockdale Ranch West in September 2011; and

WHEREAS, while finalizing fencing plans around the perimeter of the basins IRWD staff received a request from the Kern Water Bank Authority (KWBA) to re-align the fence on the northwest side to provide better access to KWBA's property; and

WHEREAS, staff has reviewed the request and determined that this request does not restrict the use of the Stockdale Ranch West recharge basins; and

WHEREAS, staff has prepared a Grant of Easement deed for a non-exclusive easement for ingress and egress purposes to KWBA and is requesting authorization of the General Manger to execute; and

WHEREAS, the proposed Grant of Easement deed has been presented to this Board of Directors, copy of which is attached hereto as Exhibit "A".

NOW, THEREFORE, BE IT RESOLVED, the Grant of Easement deed attached hereto as Exhibit "B" to Kern Water Bank Authority, a Joint Powers Authority, herein described and hereby is approved and execution by the District's General Manager is authorized.

ADOPTED, SIGNED and APPROVED this 11th day of June, 2012.

_____
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
IRWD Legal Counsel

By _____

EXHIBIT "B"

RESOLUTION NO. 2012 –

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
AUTHORIZING THE GRANT OF EASEMENT
FOR INGRESS AND EGRESS PURPOSES
TO KERN WATER BANK AUTHORITY

WHEREAS, Irvine Ranch Water District (IRWD) has completed construction of its pilot project of recharge basins on Stockdale West Ranch in September 2011; and

WHEREAS, while finalizing fencing plans around the perimeter of the basins IRWD staff received a request from the Kern Water Bank Authority (KWBA) to re-align the fence on the northwest side to provide better access to KWBA's property; and

WHEREAS, staff has reviewed the request and determined that this request does not restrict the use of the Stockdale West Ranch recharge basins; and

WHEREAS, staff has prepared a Grant of Easement for a perpetual, non-exclusive easement for ingress and egress purposes to KWBA for approximately 3,500 square feet of the Stockdale West Ranch property; and

WHEREAS, staff is requesting Board authorization for the General Manager to execute the Grant of Easement; and

WHEREAS, the proposed Grant of Easement has been presented to this Board of Directors, copy of which is attached hereto as Exhibit "A".

NOW, THEREFORE, BE IT RESOLVED, the Grant of Easement attached hereto as Exhibit "A" to Kern Water Bank Authority, a Joint Powers Authority, herein described and hereby is approved and execution by the District's General Manager is authorized.

ADOPTED, SIGNED and APPROVED this 11th day of June, 2012.

_____

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

_____

Secretary/Assistant Secretary
IRVINE RANCH WATER DISTRICT
and of the Board of Directors thereof

APPROVED AS TO FORM:
BOWIE, ARNESON, WILES & GIANNONE
IRWD Legal Counsel

By _____

June 11, 2012
Prepared by: K. Welch/M. Hoolihan
Submitted by: K. Burton/G. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

WATER SUPPLY ASSESSMENT FOR HERITAGE FIELD PROJECT 2012 – GENERAL PLAN AMENDMENT AND ZONE CHANGE

SUMMARY:

In April 2012, staff approved a request by the City of Irvine to complete a new Water Supply Assessment (WSA) for the Heritage Fields proposed project located within the former Marine Corps Air Station (MCAS) El Toro Base. A new WSA was requested due to changes in the project that substantially increase water demand. Staff has completed the WSA for the Heritage Fields 2012 General Planning Amendment and Zone Change. Staff is recommending Board approval of the WSA.

BACKGROUND:

The City of Irvine's proposed Heritage Fields Project 2012 - General Plan Amendment and Zone Change (GPA/ZC) is the current designation of the former Orange County Great Park proposed development. This project is located within Planning Areas 30 and 51 on the former MCAS El Toro Base. The initial WSA for the Orange County Great Park proposed project was approved on January 27, 2003; and a subsequent WSA for the initial Heritage Fields proposed project was approved on May 23, 2011. The last approved WSA included 4,894 total dwelling units within the proposed project. The current WSA request includes an additional 5,806 units for a total of 10,700 dwelling units. The project also includes 1.3 million square feet (MSF) of multi-use, .764 MSF of research and development and one 2,600-student school.

As a result of the proposed land use changes, a new WSA has been completed and the document is provided as Exhibit "A." The WSA for the proposed project is based on information from the IRWD Water Resources Master Plan (WRMP) and the Sub Area Master Plan for the Great Park. Preliminary estimates show an increase in potable water demands for this project of 2,140 acre-feet per year (AFY) and a decrease of 325 AFY in non-potable demands associated with this revised land use plan. The decrease in non-potable demands is primarily associated with the removal of a golf course in the original plan.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

This study is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15262 which provides exemption for planning studies.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on June 7, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE THE WATER SUPPLY ASSESSMENT FOR HERITAGE FIELDS PROJECT 2012 GENERAL PLAN AMENDMENT AND ZONE CHANGE.

LIST OF EXHIBITS:

Exhibit "A" – Water Supply Assessment for Heritage Fields Project 2012 General Plan Amendment and Zone Change

EXHIBIT "A"

IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY
Water Code §10910 *et seq.*

To: (*Lead Agency*)

City of Irvine
P.O. Box 19575
Irvine, CA 92623-9575

(*Applicant*)
Heritage Fields El Toro, LLC
25 Enterprise, Suite 400
Aliso Viejo, CA 92656

Project Information

Project Title: Heritage Fields Project 2012 – General Plan Amendment and Zone Change (Exhibit A)

☐ *Residential*: No. of dwelling units: _____
☐ *Shopping center or business*: No. of employees_____ Sq. ft. of floor space _____
☐ *Commercial office*: No. of employees_____ Sq. ft. of floor space _____
☐ *Hotel or motel*: No. of rooms _____
☐ *Industrial, manufacturing or processing*: No. of employees_____ No. of acres _____
Sq. ft. of floor space _____
☒ *Mixed use* (check and complete all above that apply) (see Exhibit B)
☐ *Other*: _____

Assessment of Availability of Water Supply

On _____, 2012 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

☐ The projected water demand for the Project ☐ was ☐ was not included in IRWD's most recently adopted urban water management plan.

☐ A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

☐ A sufficient water supply is not available for the Project. *[Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]*

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

_____
Signature *Date* *Title*

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update of that document was adopted June 13, 2011.

In addition to the WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. System losses at a rate of approximately 5% are built into the water use factors. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2010 UWMP and historical regional demand variation as documented in the Metropolitan Water District of Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

Planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2032, which is considered to represent build-out or "ultimate development".

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2032):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.

- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.

- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County ("MWDOC"). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).

- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).

- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system's ability to meet the highest day's demand of the fluctuating demands that will be experienced in a year's time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

Figure 1: Normal Year Supply and Demand – Potable Water
Figure 2: Single Dry-Year Supply and Demand – Potable Water
Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
Figure 4: Maximum-Day Supply and Demand – Potable Water
Figure 5: Normal Year Supply and Demand – Nonpotable Water
Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD's potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD's nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if

overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2010 Regional Urban Water Management Plan (RUWMP) shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods through 2035, including a repeat of the 1990-1992 multiple dry-year hydrology and the 1977 single dry-year hydrology. (See Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2015. (Figures 1, 2 and 3.)

- Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of *under-development* supplies. (Figures 2 and 3.)

- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2032. (Figure 4.)

- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2020. (Figures 5, 6, 7 and 8). IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.

- The potential exists for the treatment and conversion of some reserve nonpotable supplies to potable water.

- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and

information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "***Recent Actions on Delta Pumping,***" below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "***Recent Actions on Delta Pumping,***" below.

- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

Recent Actions on Delta Pumping. The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cut back on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by

implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2010) and MWD's RUWMP (November 2010), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2015 through 2035.[1] For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,682,000 acre-feet and Colorado base average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 370,000 acre-feet which is approximately 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels.

[1] MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. DWR estimated that approximately 520,000 AF had been lost to the SWP for 2010 of which nearly 240,000 AF would have been available to MWD. This amount is equivalent to about 16% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.[2] In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2032 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

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[2] In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2008-2009 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "an accumulated overdraft of 500,000 AF is only acceptable for short durations due to drought conditions...and an optimal basin management target of 100,000 AF of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also providing enough water in storage to offset decreased supplies during a two- to three-year drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply, 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

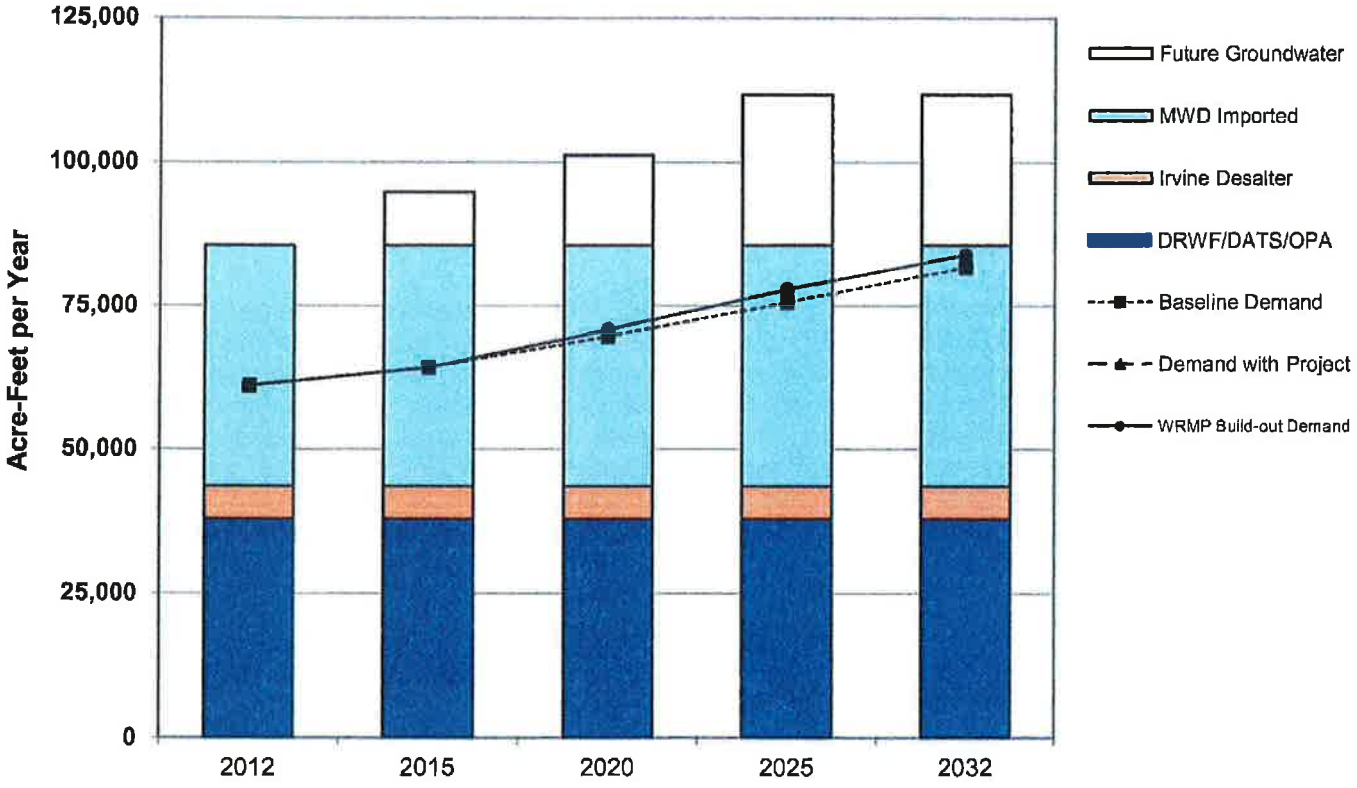
Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has also addressed supply interruption planning in its WRMP and UWMP.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Recent Actions on Delta Pumping" above.

Figure 1
IRWD Normal-Year Supply & Demand - Potable Water

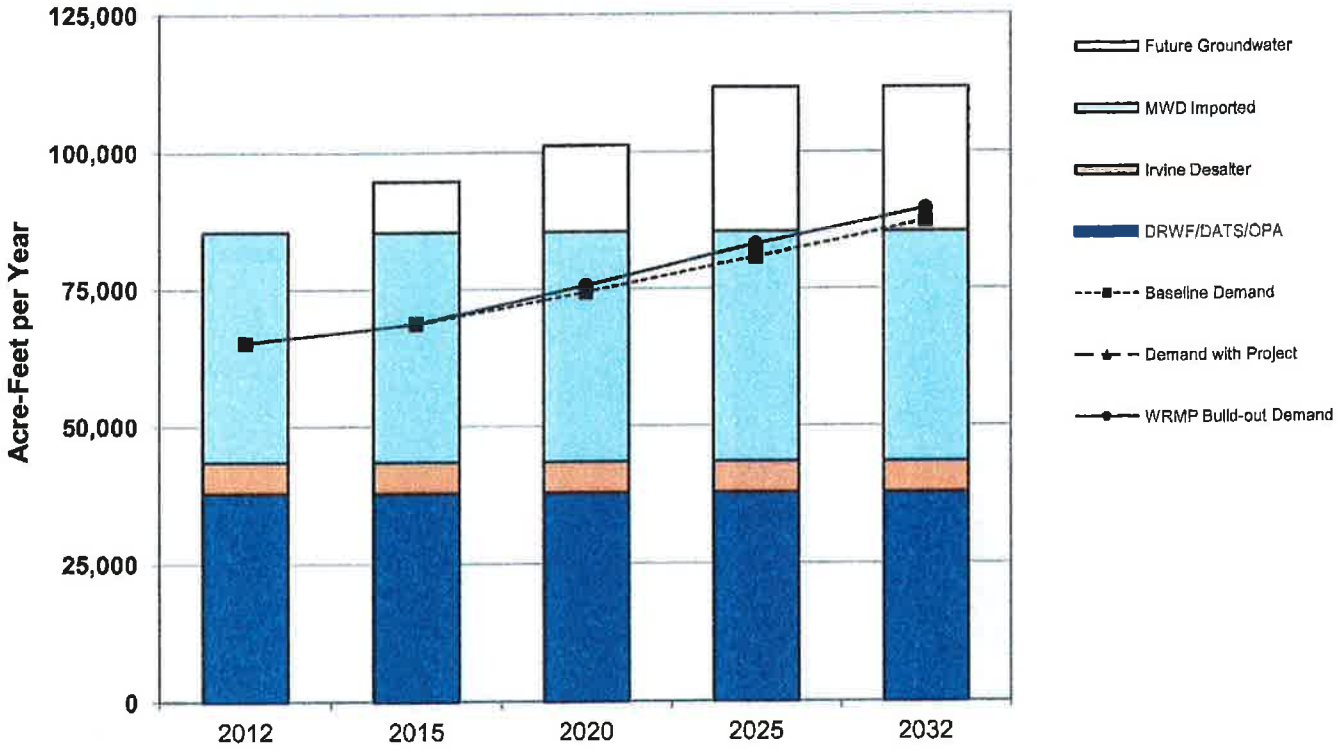


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	60,992	64,220	69,563	75,505	81,667
Demand with Project	60,988	64,182	70,713	77,759	83,807
WRMP Build-out Demand	60,988	64,182	70,713	77,759	83,807
Reserve Supply with Project	24,481	36,888	36,856	40,310	34,262

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water

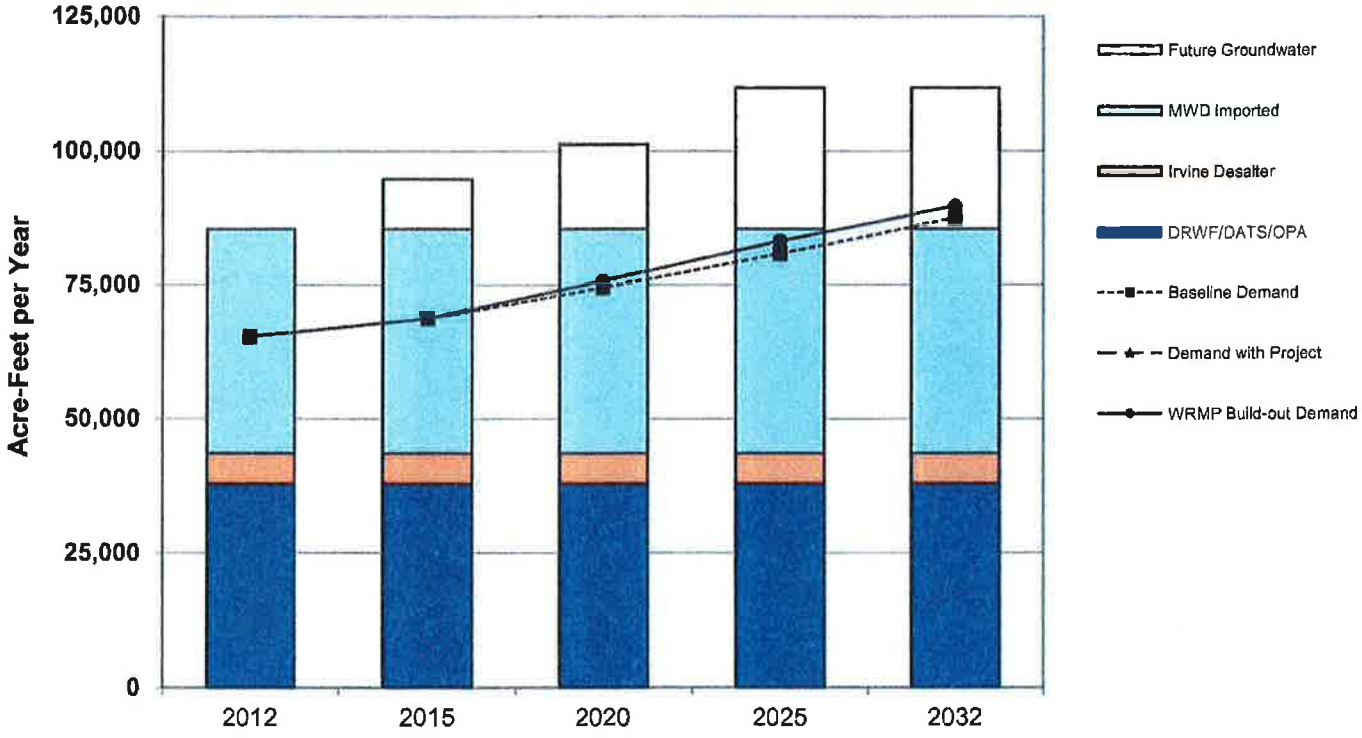


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	65,262	68,716	74,432	80,791	87,384
Demand with Project	65,257	68,674	75,663	83,202	89,674
WRMP Build-out Demand	65,257	68,674	75,663	83,202	89,674
Reserve Supply with Project	20,212	32,395	31,907	34,867	28,395

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water

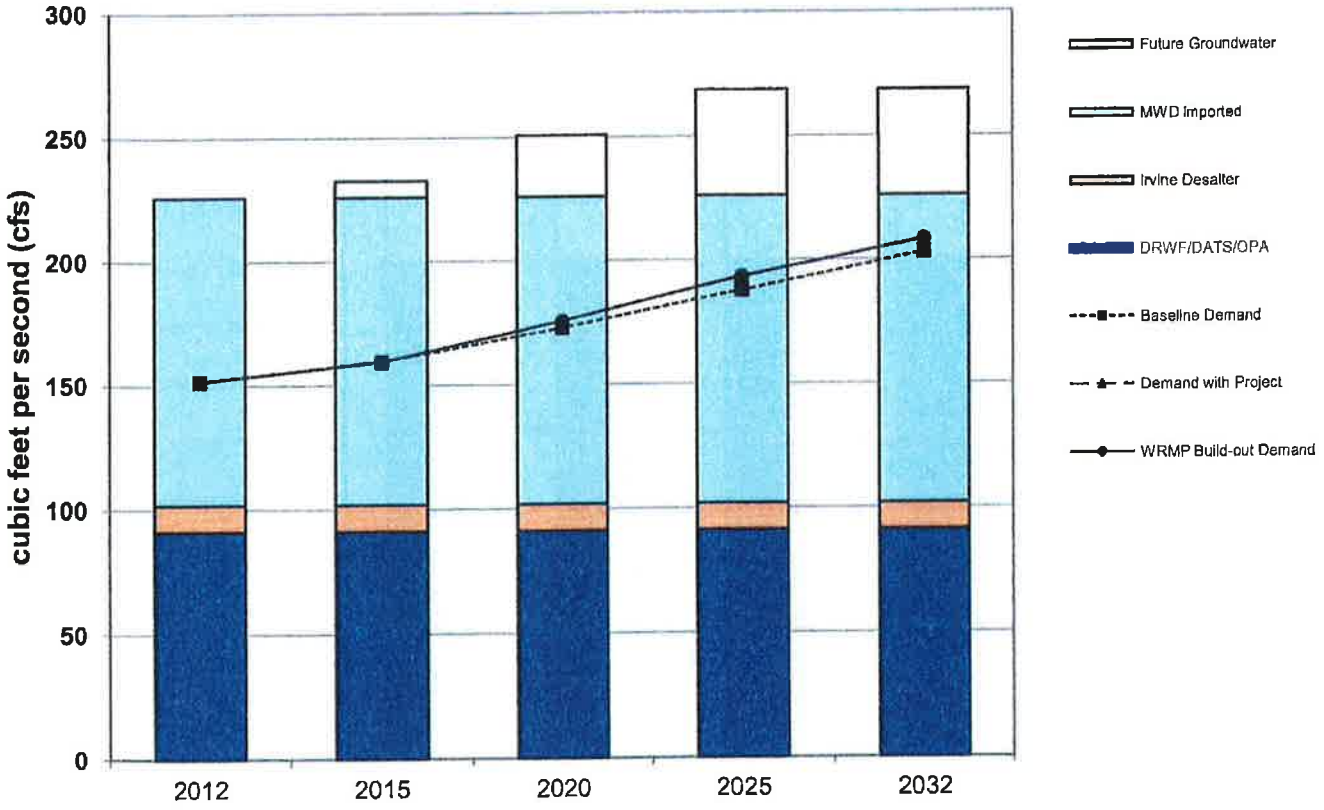


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	65,262	68,716	74,432	80,791	87,384
Demand with Project	65,257	68,674	75,663	83,202	89,674
WRMP Build-out Demand	65,257	68,674	75,663	83,202	89,674
Reserve Supply with Project	20,212	32,395	31,907	34,867	28,395

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

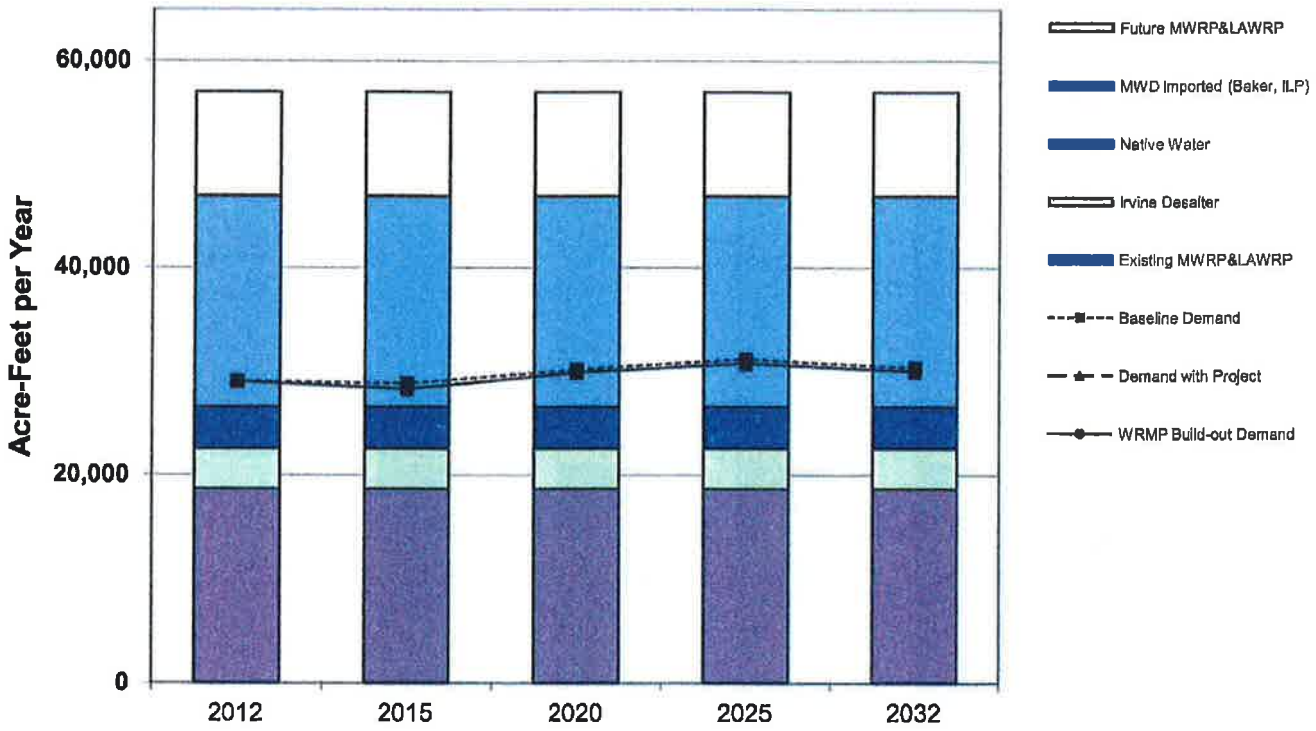
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water



(in cfs)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	91.4	91.4	91.4	91.4	91.4
Irvine Desalter	10.6	10.6	10.6	10.6	10.6
Wells 21 & 22	-	6.0	6.0	6.0	6.0
Supplies Under Development					
Future Groundwater	-	6.7	24.7	42.7	42.7
Maximum Supply Capability	226.1	238.8	256.8	274.8	274.8
Baseline Demand	151.6	159.7	172.9	187.7	203.0
Demand with Project	151.6	159.6	175.8	193.3	208.4
WRMP Build-out Demand	151.6	159.6	175.8	193.3	208.4
Reserve Supply with Project	74.5	79.3	81.0	81.5	66.5

Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water

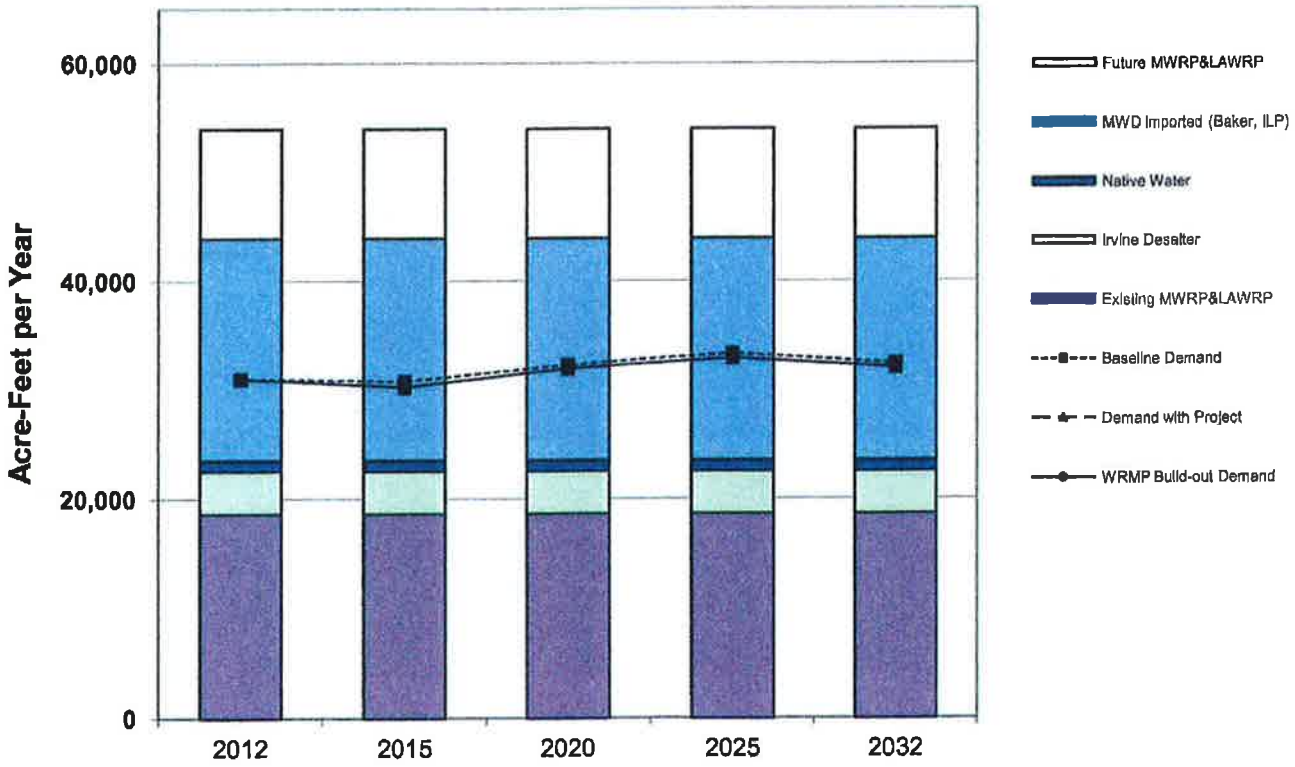


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	4,000	4,000	4,000	4,000	4,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	57,035	57,035	57,035	57,035	57,035
Baseline Demand	28,985	28,779	30,169	31,157	30,296
Demand with Project	28,985	28,281	29,856	30,757	29,972
WRMP Build-out Demand	28,985	28,281	29,856	30,757	29,972
Reserve Supply with Project	28,050	28,050	28,754	27,179	27,063

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water

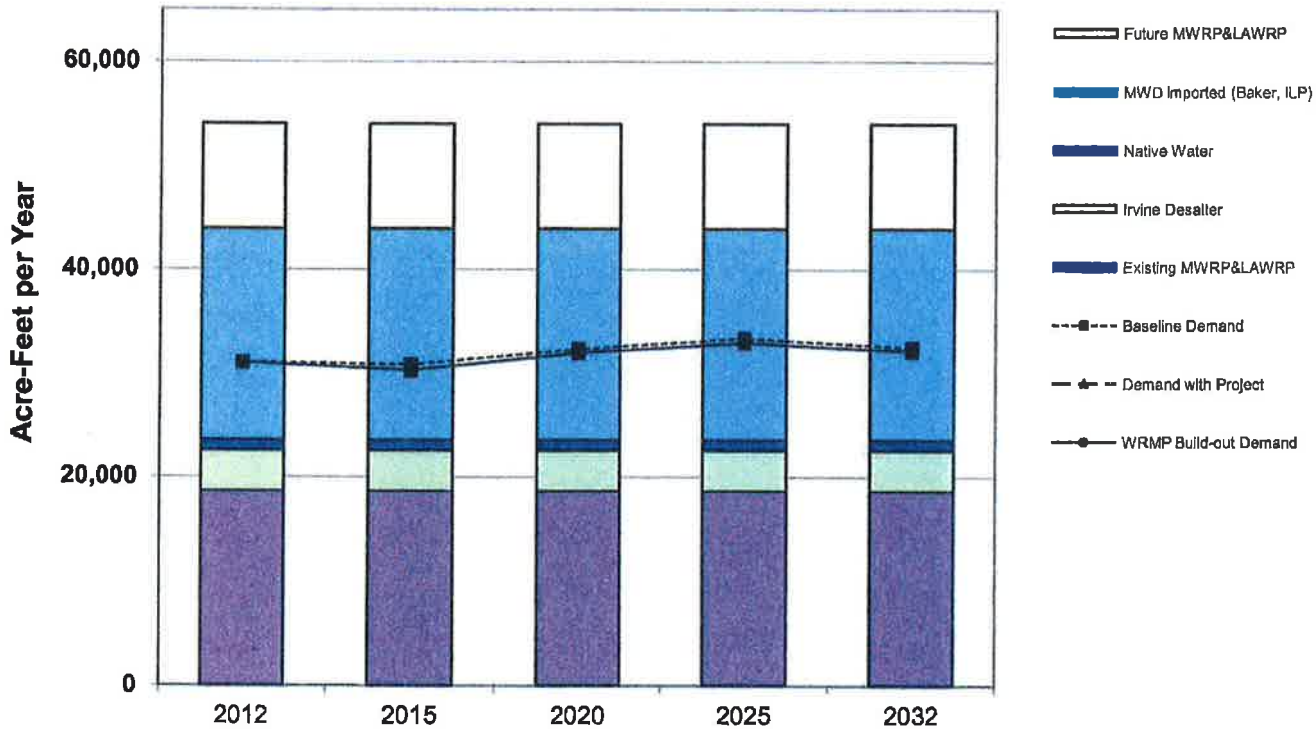


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	31,014	30,794	32,281	33,338	32,417
Demand with Project	31,014	30,261	31,946	32,910	32,070
WRMP Build-out Demand	31,014	30,261	31,946	32,910	32,070
Reserve Supply with Project	23,021	23,774	22,089	21,125	21,965

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water

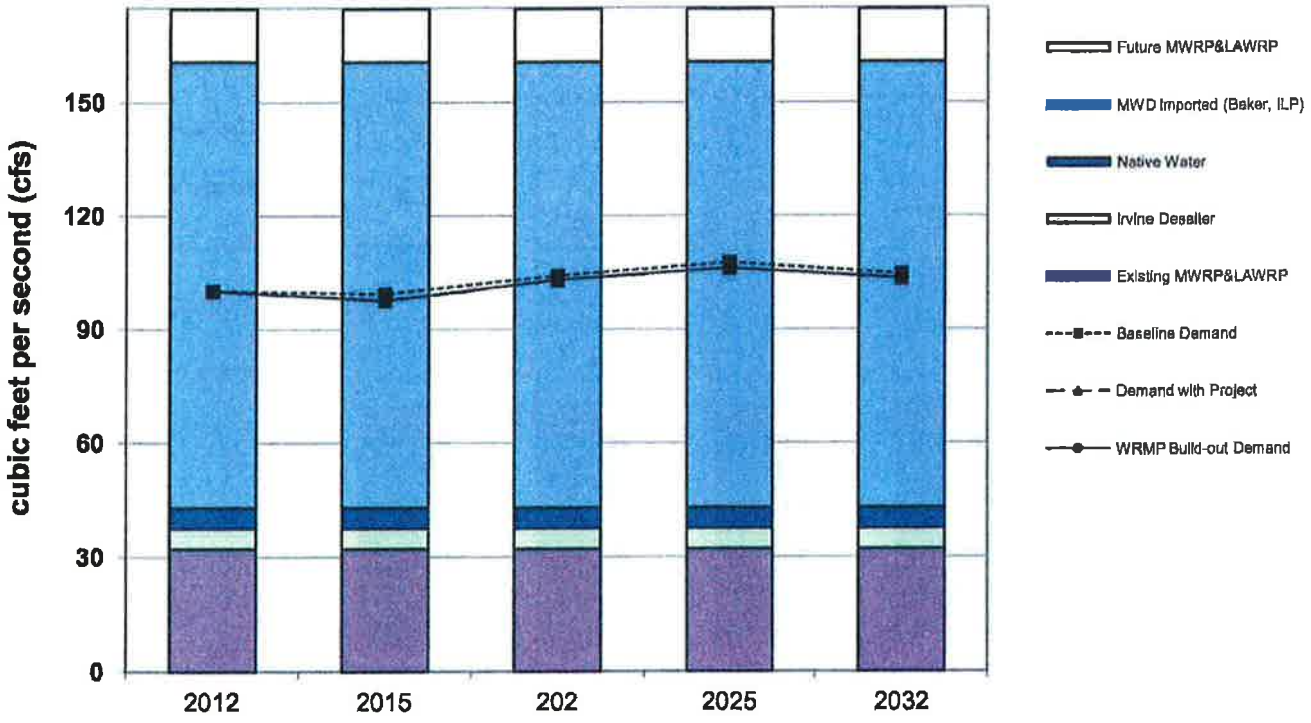


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	31,014	30,794	32,281	33,338	32,417
Demand with Project	31,014	30,261	31,946	32,910	32,070
WRMP Build-out Demand	31,014	30,261	31,946	32,910	32,070
Reserve Supply with Project	23,021	23,774	22,089	21,125	21,965

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

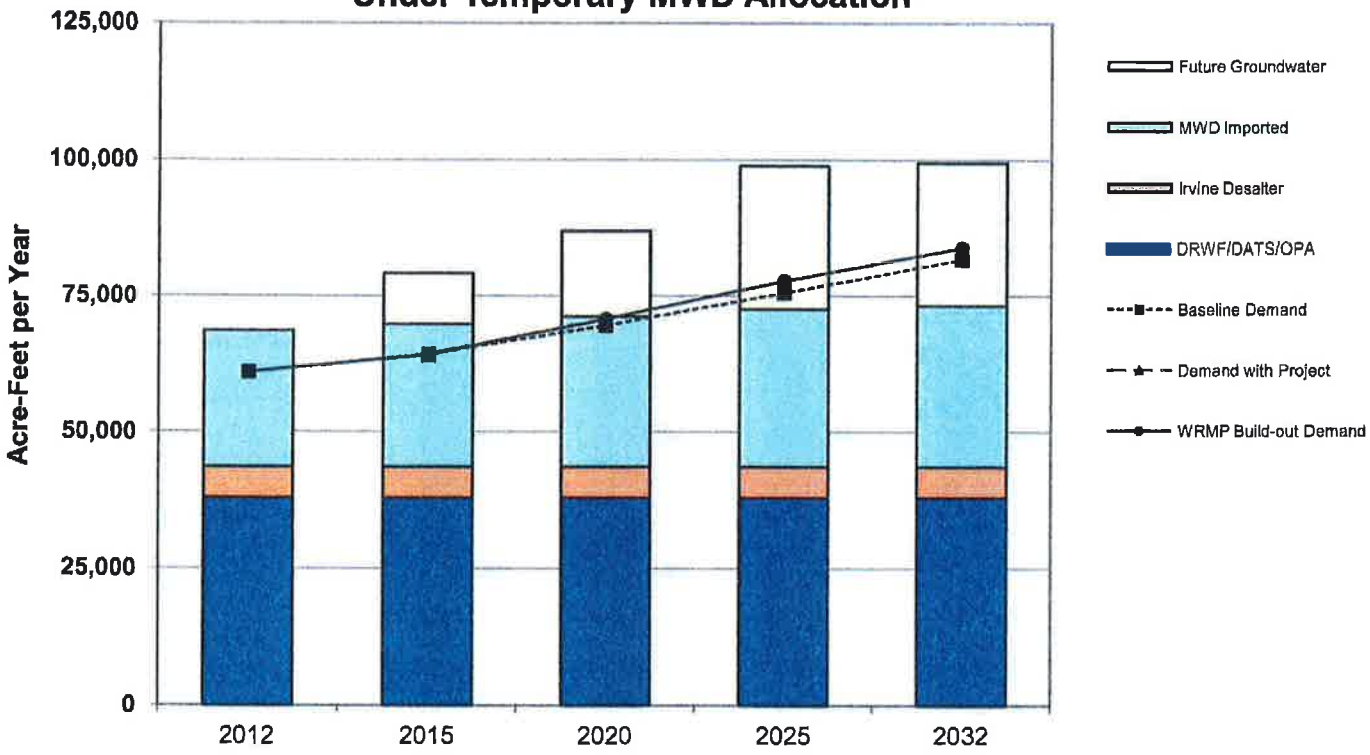
Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water



(in cfs)	2012	2015	202	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	5.5	5.5	5.5	5.5	5.5
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
Supplies Under Development					
Future MWRP&LAWRP	14.0	14.0	14.0	14.0	14.0
Maximum Supply Capability	174.7	174.7	174.7	174.7	174.7
Baseline Demand	100.1	99.4	104.2	107.6	104.6
Demand with Project	100.1	97.7	103.1	106.2	103.5
WRMP Build-out Demand	100.1	97.7	103.1	106.2	103.5
Reserve Supply with Project	74.6	77.1	71.6	68.5	71.2

Note: Downward trend reflects reduction in agricultural use over time.

Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*



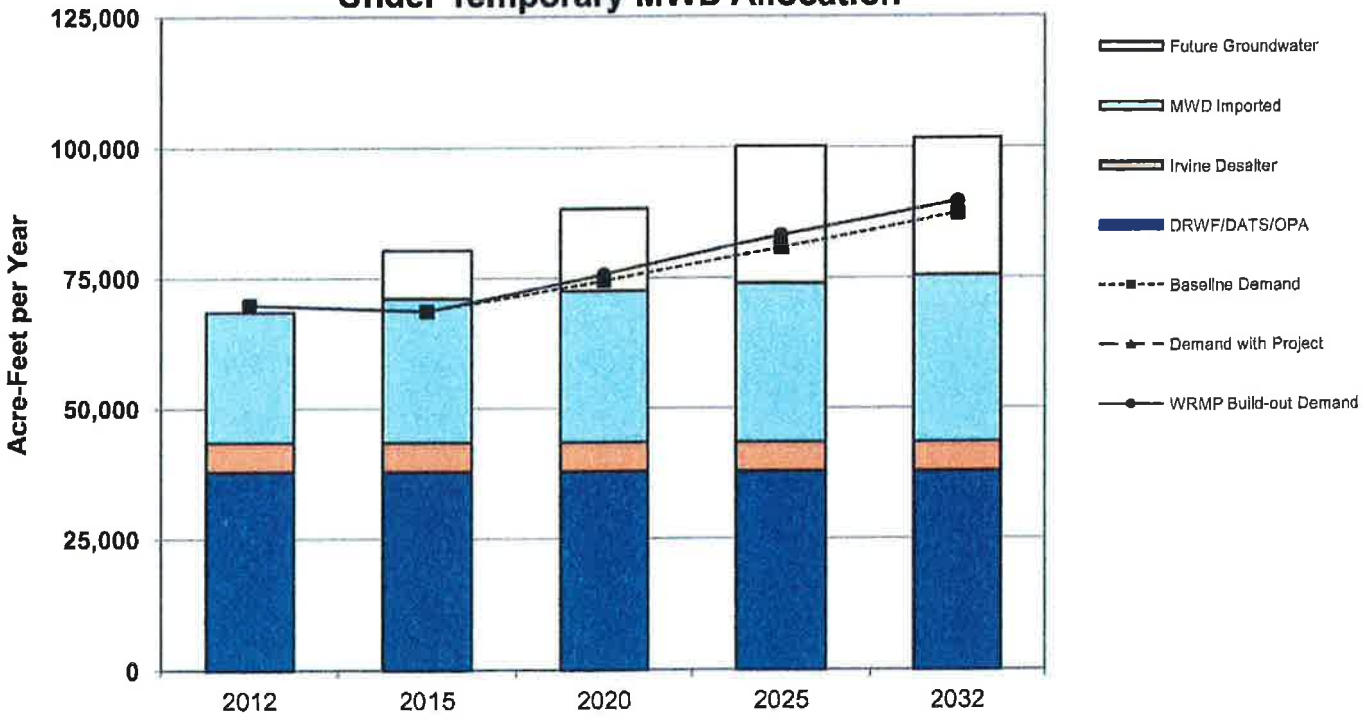
(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	26,275	27,616	29,024	29,608
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	85,415	93,256	105,164	105,748
Baseline Demand	60,992	64,220	69,563	75,505	81,667
Demand with Project	60,988	64,182	70,713	77,759	83,807
WRMP Build-out Demand	60,988	64,182	70,713	77,759	83,807
Reserve Supply with Project	7,552	21,234	22,543	27,405	21,940

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

Figure 2a

IRWD Single Dry-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*

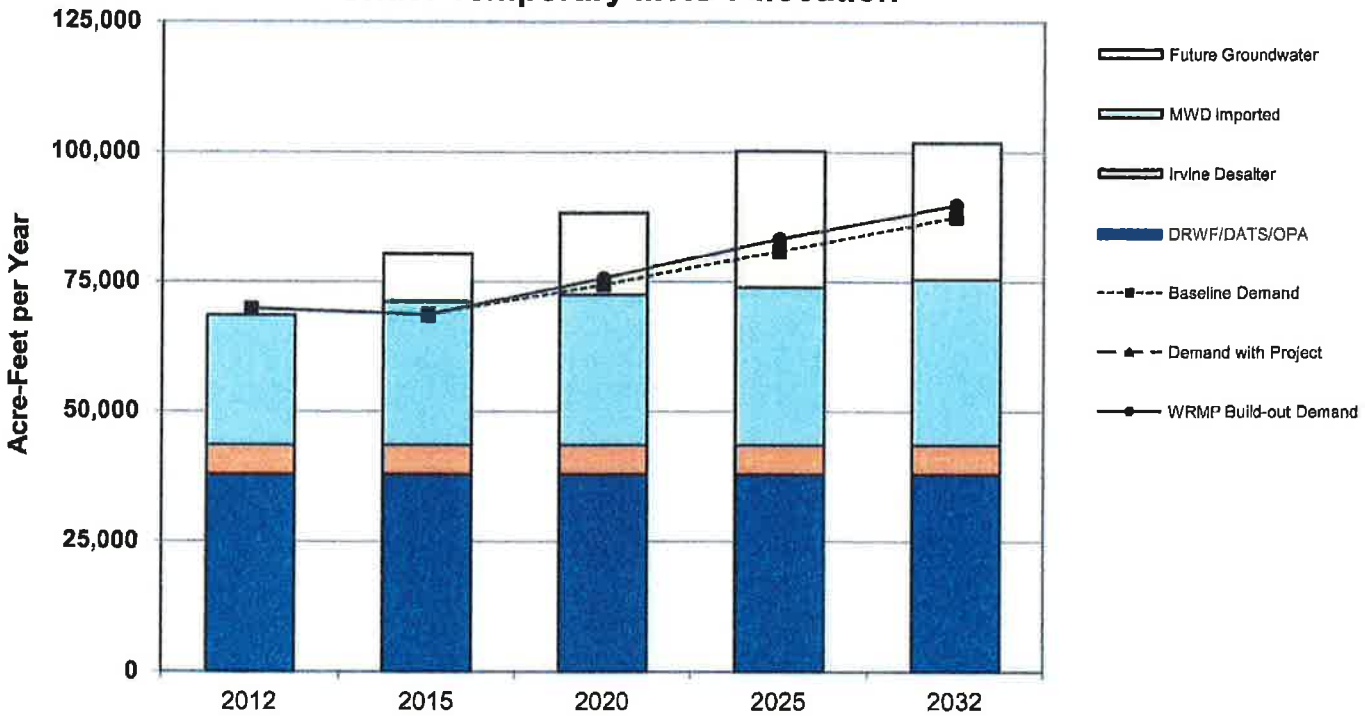


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	69,830	68,716	74,432	80,791	87,384
Demand with Project	69,825	68,674	75,663	83,202	89,674
WRMP Build-out Demand	69,825	68,674	75,663	83,202	89,674
Reserve Supply with Project	(1,285)	18,055	18,946	23,355	18,404

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

Figure 3a
IRWD Multiple Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*



(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	80,429	88,308	100,257	101,778
Baseline Demand	69,830	68,716	74,432	80,791	87,384
Demand with Project	69,825	68,674	75,663	83,202	89,674
WRMP Build-out Demand	69,825	68,674	75,663	83,202	89,674
Reserve Supply with Project	(1,285)	11,755	12,646	17,055	12,104

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

	Max Day (cfs)	Avg. Annual (AFY)		Annual by Category (AFY)
Current Supplies				
Potable - Imported				
East Orange County Feeder No. 2	41.4	16,652	1	
Allen-McColloch Pipeline*	64.7	26,024	1	
Orange County Feeder	18.0	7,240	1	49,916
Potable - Groundwater				
Dyer Road Wellfield	80.0	28,000	2	
OPA Well	1.4	1,000		
Deep Aquifer Treatment System-DATS	10.0	8,900	2	
Wells 21 & 22	6.0	6,300	2	
Irvine Desalter	10.6	5,640	3	49,840
Total Potable Current Supplies	232.1			99,756
Nonpotable - Reclaimed Water				
MWRP (18 mgd)	23.9	17,340	4	
LAWRP (5.5 mgd)	8.3	5,975	4	23,315
Nonpotable - Imported				
Baker Aqueduct	52.7	15,262	5	
Irvine Lake Pipeline	65.0	9,000	6	24,262
Nonpotable - Groundwater				
Irvine Desalter-Nonpotable	5.4	3,898	7	3,898
Nonpotable Native				
Irvine Lake	5.5	4,000	8	4,000
Total Nonpotable Current Supplies	160.8			55,475
Total Combined Current Supplies	392.9			155,231
Supplies Under Development				
Potable Supplies				
Well 106	2.2	1,300		
Well 53	4.5	3,000		
Future OPA Wells	8.0	5,000		
Anaheim wellfield	10.0	6,500		
Wells 51 & 52	9.0	5,500		
Tustin Legacy wells	9.0	5,000	9	
Total Potable Under Development Supplies	42.7	26,300		26,300
Nonpotable Supplies: Future MWRP&LAWRP Reclaimed	20.0	14,450	10	14,450
Total Under Development	105.4			40,750
Total Supplies				
Potable Supplies	274.8			126,056
Nonpotable Supplies	180.7			69,925
Total Supplies (Current and Under Development)	455.6			195,981

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 3, page 22).

2 Contract amount - See Potable Supply-Groundwater(iii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 3, page 22).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70 years historical average of Santiago Creek Inflow into Irvine Lake.

9 Estimated combined capacity of wells.

10 Future estimated MWRP & LAWRP reclaimed water production.

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(2) Quantities received in prior years from existing sources identified in (a)(1):

Source	1980	1985	1990	1995	2000	2005	2010
Potable - imported	29,510	43,320	44,401	28,397	36,777	19,306	19,306
Potable - groundwater	827	38	10,215	20,020	20,919	37,160	37,160
Nonpotable - reclaimed	9,196	12,399	11,589	10,518	14,630	15,296	15,296
Nonpotable - groundwater	-	36	816	1,834	2,890	2,285	2,285
Nonpotable - native	11,909	3,587	2,778	5,980	4,949	7,251	7,251
Total	60,998	71,639	94,699	69,082	96,508	86,602	86,602

*Includes water purchased for delivery to storage in Irvine Lake.

(Source: water purchase and production records.)

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.[3] [4]

•POTABLE SUPPLY - IMPORTED[5]

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),[6] identified as "Participants" therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD

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[3] In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second ("cfs"). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

[4] In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, except where otherwise noted, IRWD has no current plans to do so.

[5] See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

[6] IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a "utility basis," meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD's capacity along the AMP, at MWD's expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 ("AMP Allocation Agreement"). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD's capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD's first four AMP connections, 49.69 cfs at IRWD's next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD's remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant's peak flow exceeds its capacity, the Participant shall "purchase" additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD's obligation under the AMP Sale Agreement to meet all Participants' demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or "FAP" Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 ("EOCF#2") (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 ("IRWD MWDOC Assignment Agreement"); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 ("IRWD Coastal Assignment Agreement"). East Orange County Feeder No. 2 ("EOCF#2"), a feeder linking Orange County

with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

•<u>POTABLE SUPPLY - GROUNDWATER</u>

(i) Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of

municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999. OCWD's analysis has been expanded and updated through 2025 in its Final Draft Long-Term Facilities Plan (January, 2006).

(ii) *Irvine Ranch Water District v. Orange County Water District,* OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield (DWRF) / Deep Aquifer Treatment System (DATS) (currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System (CATS), IRWD has increased the yield of DATS.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, as

amended June 15, 2006, restating May 5, 1988 agreement ("Irvine Subbasin Agreement"). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC's commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD's entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

Orange Park Acres (currently available)

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin.

Wells 21 and 22 (currently available)

IRWD is completing construction of treatment facilities, pipelines and wellhead facilities for Wells 21 and 22. Water supplied through this project will be available by the end of 2012. The wells will be operated within the Orange County Groundwater Basin.

Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine, Anaheim, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, a site for an additional well and treatment facility has been acquired by IRWD. The production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. An agreement with the City of Anaheim would be developed for production within Anaheim. Appropriate environmental review would be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECLAIMED

Water Reclamation Plants (currently available)

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP). MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

Water Reclamation Plant Expansion (under development)

IRWD has prepared a Final Environmental Impact Report for the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project (February, 2006) and the expansion project is under construction. With this expansion, IRWD plans to increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2032. (Initial upgrades that are within existing permit authorizations and CEQA compliance are completed.) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED[7]

Baker Pipeline (currently available)

[7] See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(i) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriative rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the

Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.[8] The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

•NONPOTABLE SUPPLY - GROUNDWATER

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

•IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply; MWD has provided information concerning the availability of the supplies to its entire service area. In its most recently adopted RUWMP, MWD has extended its planning timeframe out through 2035 to ensure that MWD's 2010 RUWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the RUWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The RUWMP summarizes MWD's planning initiatives over the past ten years, which includes the Integrated Resources Plan (IRP), the IRP Update, the Water Surplus and

[8] The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

Drought Management Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's IRP Update (October 2010) showed that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2015 through 2035. The RUWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2035. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

It is anticipated that MWD will revise its regional supply availability analysis periodically to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD RUWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - ***Recent Actions on Delta Pumping,*** MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater wells (PR Nos. 10285, 15423, 15427, 15428, 15051 and 15052) and the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), IRWD adopted its fiscal year 2011/12 capital budget on June 13, 2011 (Resolution No. 2011-20), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately $601.7 million (water) and $763.5 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval.

Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also *MWD's RUWMP,* Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also *MWD's RUWMP,* Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board.

See also *MWD's RUWMP,* Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2010 UWMP, sections 4-D through 4-J.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin ("Basin") is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 ("MPR") and in the more recent Groundwater Management Plan ("GMP") at pages 2-1 through 6-33[9]. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 366,000 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan ("LTFP") which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin.

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over $250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an "overdraft" condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin

[9] OCWD has also prepared a Long Term Facilities Plan which provides updated information which was received and filed by its Board in July 2009.

management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term "mining" overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (Source: 2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District; OCWD MPR, *supra*.)

OCWD's efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD's management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2 and LTFP, section 6)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD[10]
2011	34,304	7,055	0	0
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

[10] The water produced from IRWD's Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF[11]	Future GW[12]	IDP (Potable)	IDP (Nonpotable)
2015	37,900	15,600	5,640	3,898
2020	37,900	22,100	5,640	3,898
2025	37,900	32,600	5,640	3,898
2032	37,900	32,600	5,640	3,898

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD's preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be

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11 See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 1,000 AFY for the OPA well.

12 Under development.

implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.[13] Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD is moving forward with a number of replenishment supply projects, including the Groundwater Replenishment System project ("GWRS"). The OCWD MPR indicates that the GWRS will produce over 100,000 AFY of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

5. ☒ This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Date of prior assessment: May 24, 2011. Check all of the following that apply:

☒ Changes in the Project have substantially increased water demand.

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

2010 Urban Water Management Plan, Irvine Ranch Water District, June, 2011

[13] OCWD has adopted a basin production percentage of 65% for 2011-12. In prior years OCWD has maintained a basin production percentage that is higher than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

Integrated Water Resources Plan Update, Metropolitan Water District of Southern California, July, 2004

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

Board Information Report, Metropolitan Water District of Southern California, October 9, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October, 2007

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

Regional Urban Water Management Plan, Metropolitan Water District of Southern California, November 2010

Exhibit A

Depiction of Project Area

EXHIBIT "A"

The Project also proposes to implement and potentially enhance some of the improvements to the previously approved Orange County Great Park Sports Park including additional athletic fields and athletic facilities, as well as additional seating within a previously approved soccer stadium.

Vicinity Map

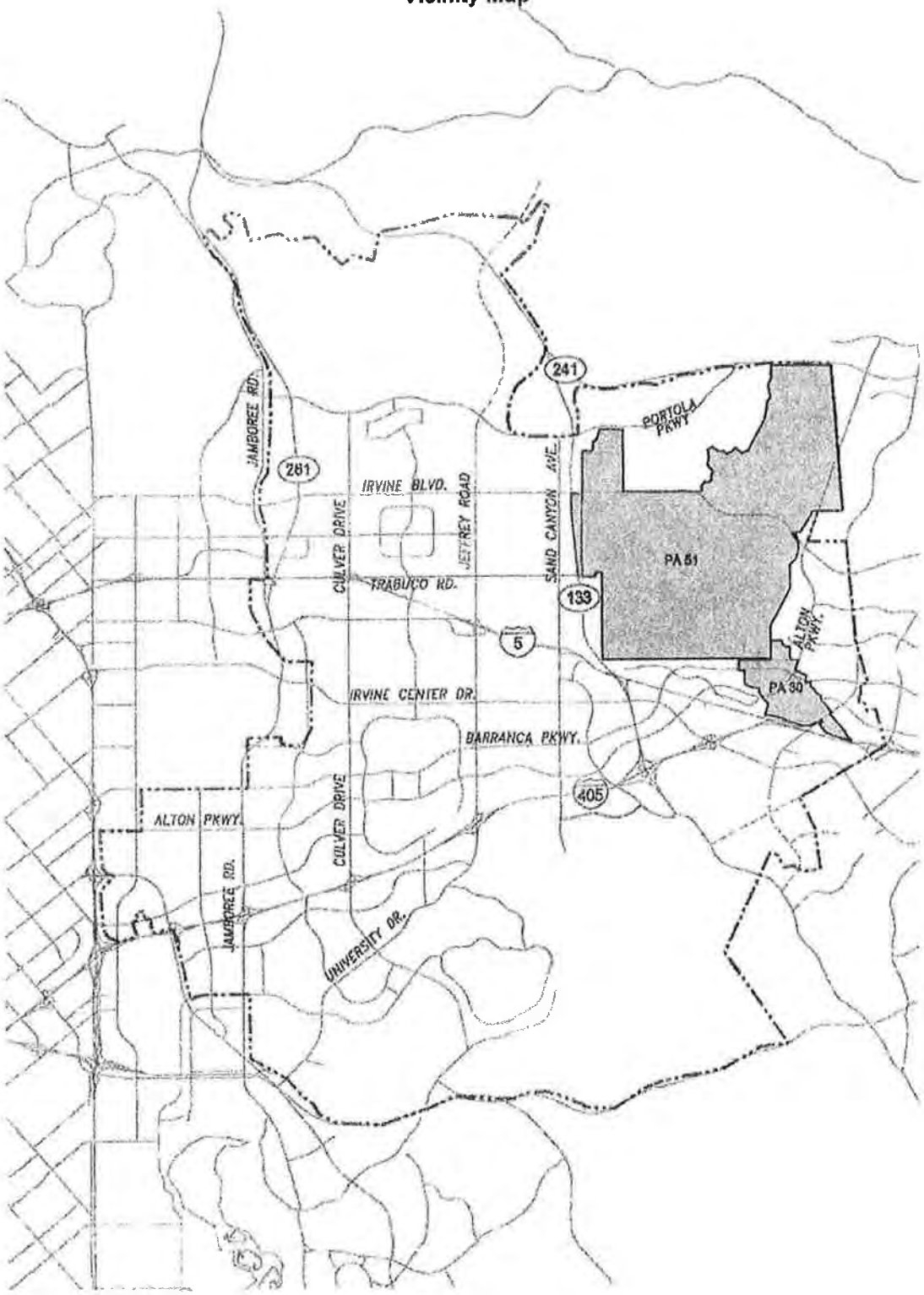


Exhibit B

Uses Included in Project

EXHIBIT "B"

April 4, 2012

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*)

The City of Irvine hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that a supplemental environmental impact report is required for the project.

Proposed Project Information

Project Title: Heritage Fields Project 2012- General Plan Amendment and Zone Change (see project description in Exhibit A)

Location of project: Former MCAS El Toro Base, Planning Areas 30 and 51. The boundaries of Planning Area 51 generally include the Eastern Transportation Corridor to the west, the Foothill Transportation Corridor to the east, the Southern California Regional Rail Authority (SCRRA) rail lines to the south, and Irvine Boulevard and the storm channel near Alton Parkway to the north. Planning Area 51 abuts Planning Areas 30 and 32 to the south, Irvine Spectrum 2 – Planning Area 35 to the east, and Planning Areas 9 and 40 to the west. The boundaries of Planning Area 30 generally include Interstate 5 (Santa Ana Freeway) to the south, the SCRRA rail lines to the north, and the Irvine Spectrum to the east and west (Irvine Spectrum 2- Planning Area 35 and Irvine Spectrum 3 - Planning Area 32). See attached Vicinity Map.

☐ Previous Water Supply Assessment including this project was prepared on: May 24, 2011. This application requests a new Water Supply Assessment, due to the following (check all that apply):
x Changes in the project have substantially increased water demand
☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project
☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment
(Enclose maps and exhibits of the project)

Type of Development:
x *Residential*: No. of dwelling units: 4,894 units (in prior assessment), 3,412 units converted from current non-residential entitlement, and 1,194 new density bonus units (overall total 9,500 units). An additional 889 units can be converted from 535,000 square feet of Multi-Use and 311 new density bonus units associated with this option conversion (potential for up to 1,200 additional units total).

☐ *Shopping center or business*: No. of employees_____ Sq. ft. of floor space _____
☐ *Commercial office*: No. of employees_____ Sq. ft. of floor space _____
☐ *Hotel or motel*: No. of rooms _____
☐ *Industrial, manufacturing, processing or industrial park*: No. of employees_____
No. of acres _____Sq. ft. of floor space _____
☐ *Mixed use* (check and complete all above that apply)
x *Other*: Non-Residential (220,000 square feet of Retail & 2,600,000 square feet of R&D) from current entitlement per previous Water Supply Assessment, 1,318,200 square feet of non-residential Multi-Use and 764,000 square feet of R&D converted from current non-residential entitlement per previous Water Supply Assessment with addition of (1) 2,600 student school and potential enhancements to some of the improvements of the previously approved Orange County Great Park Sports Park including additional athletic fields and athletic facilities, as well as additional seating within a previously approved soccer stadium.

Total acreage of project: per original Water Supply Assessment plus approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd

Acreage devoted to landscape: (per original Water Supply Assessment)
Greenbelt_____ golf course_____ parks_____
Agriculture_____ other landscaped areas_____

Number of schools addition of (1) 2,600 student school Number of public facilities_____

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:
Landscaped areas will be irrigated via reclaimed water

What is the current land use of the area subject to a land use change under the project?
Per previous Water Supply Assessment

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation_____

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF IRVINE /COUNTY OF ORANGE

By:_____

REQUEST RECEIVED:

Date: April 12, 2012

By: Kelli Welsh
Irvine Ranch Water District

REQUEST COMPLETE:

Date: April 23, 2012

By: Kelli Welsh
Irvine Ranch Water District

Exhibit A

Project Description: The Project proposes to combine Planning Areas 30 and 51 into a single Planning Area, Planning Area 51, and include the approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd, currently in Planning Area 9, in Planning Area 51 so that the Project will be a cohesive development governed by a unified set of land use and development regulations.

Consistent with the goal of unified land use and development regulations, the Heritage Fields Development located in District 6 (zoned 3.2 Transit Oriented Development), and in District 2 and District 3, consisting of 3.2 Transit Oriented Development, 5.4 B General Industrial, and 4.3 Vehicle Related Commercial will be rezoned to 8.1 Trails and Transit Oriented Development, consistent with the balance of the Heritage Fields Development Districts. In addition, a portion of District 5 currently zoned 8.1 Trails and Transit Oriented Development and the 13-acres currently zoned 1.1 Agriculture will be rezoned to 8.1C Trails and Transit Oriented Development (TTOD) to allow for flexible placement of approximately 132 acre wildlife corridor within the area designated as 8.1C TTOD. The approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd will be zoned 8.1 TTOD and designed as Orange County Great Park in the General Plan.

Amend the Master Plan of Arterial Highways, General Plan Figure B-1, and other General Plan maps as necessary to eliminate the extension of Rockfield from the Project boundary to Marine Way.

The Project also proposes to amend the General Plan and Zoning Ordinance to allow the following:

- Add 3,412 residential units within Planning Area 51, in addition to the 4,894 units already allocated in Districts 1 North, 1 South, 4, 7, and 8.

- Modify non-residential uses to allow:
  - 3,364,000 square feet of Medical and Science
  - 1,318,200 square feet of Multi-Use
    - The Project proposal includes an option to convert up to 535,000 square feet of the proposed Multi-Use intensity to residential intensity for an additional 889 dwelling units within District 6 and Lot 48 of 2nd Amended VTTM 17008, subject to a vehicle trip limit.
  - 220,000 square feet of Community Commercial
- Grant, pursuant to State law, up to 1,194 additional Density Bonus units (35% of 3,412) plus any additional Density Bonus units associated with the optional conversion and granted pursuant to State law.

- Encourage Accessory Retail within Planning Area 51, as defined in the City of Irvine Zoning Code.

- Revise figures, tables, sections within the General Plan and Zoning Code, as appropriate.

The Project consists of 4,894 already approved dwelling units plus 4,606 additional dwelling units (3,412 base units and 1,194 Density Bonus units) as well as a 2,600 student high school in District 5. The project also includes the option to convert up to 535,000 square feet of Multi-Use to up to 889 base units and 311 Density Bonus units, granted pursuant to State law. The Project will also designate 8.1C TTOD zoning. The current Great Park zoning includes a defined wildlife corridor location with a 1.4 Preservation zoning from Irvine Boulevard south to the boundary of the SCRRA rail lines, consisting of approximately 132 acres. This 8.1C TTOD zoning would provide flexibility for the wildlife corridor to be located appropriately considering planning and compatible land uses within a portion of District 5 and District 6. The wildlife corridor shall consist of approximately 132 acres. Once the exact location is finally determined, the Project would authorize the corridor to then be designated as 1.4 Preservation zoning and all other properties within the 8.1C TTOD zoning will be designated 8.1 Trails and Transit Oriented Development without further Planning Commission action.

June 11, 2012
Prepared by: K. Welch/M. Hoolihan
Submitted by: K. Burton/G. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

VERIFICATION OF SUFFICIENT WATER SUPPLIES FOR
SHEA BAKER RANCH (TENTATIVE TRACT MAP 16466)

SUMMARY:

In April 2012, staff approved a request by the City of Lake Forest to complete a Verification of Sufficient Water Supplies (WSV) for the Shea Baker Ranch proposed project within the City's Opportunities Study proposed development. Staff has completed the WSV for the Shea Baker Ranch and is recommending Board approval of this document.

BACKGROUND:

The City of Lake Forest's proposed Shea Baker Ranch project is located within the designation of the Opportunities Study development. On January 24, 2005, the Board approved a Water Supply Assessment (WSA) for the Opportunities Study area as requested by the City of Lake Forest in accordance with SB 610. The overall WSA was approved for 5,844 dwelling units and 648.7 thousand square feet (KSF) of mixed use (commercial and industrial).

As required under SB 221, and as part of the tract map approval process for projects including 500 or more dwelling units, the City has requested a WSV for Tentative Tract Map 16466, Shea Baker Ranch. The proposed project is within Planning Areas 1A to 1L of the Baker Ranch Planned Community and has a total acreage of 386.8 consisting of 2,379 dwelling units and 25,000 square feet of commercial use. The project is located in the northwestern portion of the City of Lake Forest and is bound by the Borrego Canyon Wash to the west, Commercentre Drive to the south, Bake Parkway to the southeast and Rancho Parkway to the north. This is the second WSV the City has requested for the Opportunities Study area and is attached as Exhibit "A".

The WSV for the requested tract map is based upon the WSA containing IRWD's determination that a sufficient water supply is available. The completed WSV contains supplemental information to the WSA concerning actions on state water supplies since the WSA was approved. This information, together with the WSA completed by IRWD, reflects IRWD's confirmation that the project water demands, together with demands from any other developments that have previously received a WSV, will-serves or other approvals by IRWD, are, in the aggregate, within the demands identified by that WSA. In accordance with this procedure, this WSV is based on the respective WSA and information contained in the WSV. In addition to reliance on the WSA, the WSV law requires several elements not covered or required in WSAs. These elements are primarily covered in Sections 1(b)(ii), 1(b)(iii), and 1(b)(iv) of the "Detailed Verification" section of the attached WSV.

Estimates show 546 acre-feet per year (AFY) of potable water demands and 217 AFY of non-potable demands are associated with the project. These demands were included in the WSA that was approved on January 24, 2005.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

This study is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15262 which provides exemption for planning studies.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on June 7, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE THE VERIFICATION OF SUFFICIENT WATER SUPPLIES FOR SHEA BAKER RANCH (TENTATIVE TRACT MAP 16466).

LIST OF EXHIBITS:

Exhibit "A" – Verification of Sufficient Water Supplies for Shea Baker Ranch (Tentative Tract Map 16466)

EXHIBIT "A"

IRVINE RANCH WATER DISTRICT
VERIFICATION OF SUFFICIENT WATER SUPPLY
Government Code §66473.7

To: (*Lead Agency*)
City of Lake Forest
25550 Commercentre Drive, Suite 100
Lake Forest, CA 92630

(*Applicant*)
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

Project Information

Project Title: Shea Baker Ranch (see Exhibit A)
☒Tentative Map Application No. 16466 ☐Verification requested prior to tentative map application

Number of residential units in Project: 2,379
Non-residential uses in Project (type, no. of employees, sq. ft. of floor space, acreage): (see Exhibit B)
Acreage to be devoted to landscape (excluding individual residence yards): (see Exhibit B)

☒ The projected water demand for the Project was included in IRWD's most recently adopted urban water management plan.

☒ A water supply assessment that included the Project was adopted by IRWD on January 24, 2005. A copy is attached hereto and incorporated herein by this reference (see Exhibit C).

Verification of Availability of Sufficient Water Supply

On _____, the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within Verification and made the following determination regarding the above-described Project:

☐ A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

☐ A sufficient water supply is not available for the Project.

The foregoing determination is based on the following Water Supply Verification Information and supporting information in the records of IRWD.

_____

Signature *Date* *Title*

In addition, this Verification includes the elements required by the Verification Law that are not included within the required contents of assessments.

Supporting Documentation

As noted above, the principal supporting document for this Verification is the Assessment. Other documentation supports the Assessment and this Verification: IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. (The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update was adopted in June 2011.)

In addition to the Assessment, the most recent WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 5 of this Verification. This includes the Metropolitan Water District of Southern California's Regional Urban Water Management Plan (RUWMP) detailing an evaluation by Metropolitan Water District of Southern California (MWD), the wholesaler of IRWD's imported water supplies, of the reliability of MWD's supplies. (2010 RUWMP adopted in November 2010.)

The Verification Law requires written proof of entitlement for "not currently available" (referred to herein as "under development") supplies. The Assessment includes such information for both currently available and under development supplies. Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2 of the Assessment. Copies of the summarized items have been provided to the City and can be obtained from IRWD.

Sufficiency Calculation Methodology

The methodology for IRWD's comparison of its demands and supplies is set forth in the Assessment, in the section entitled "Assessment Methodology" and subsections thereof entitled "water use factors; dry-year increases;" "planning horizon;" "assessment of demands;" "assessment of supplies;" and "comparison of demand and supply."

Summary of Results of Demand-Supply Comparisons

The Assessment contains Figures 1 through 8 comparing projected potable and nonpotable water supplies and demands which provide an overview of IRWD potable and nonpotable water supply capabilities through 2032. These Figures have been revised (pages 8 through 19) in order to reflect updated information on supplies, as well as updating the 20-year planning horizon through 2032. In addition, since the date of the approved Assessment for this project (January 2005), IRWD has recalibrated and updated demand projections based on water use and development phasing.

Recent Actions on Delta Pumping. The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern

portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cutback on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2007) and MWD's RUWMP (November 2005), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's

imported supplies over the years 2015 through 2035.[1] For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,682,000 acre-feet and Colorado average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 370,000 acre-feet which is approximately 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels. Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.[2] In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

[1] MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. DWR estimated that approximately 520,000 AF had been lost to the SWP for 2010 of which nearly 240,000 AF would have been available for MWD. This amount is equivalent to about 16% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

[2] In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2008-2009 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "an accumulated overdraft of 500,000 AF is only acceptable for short durations due to drought conditions...and an optimal basin management target of 100,000 AF of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also providing enough water in storage to offset decreased supplies during a two- to three-year drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2032 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply and 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and MWD has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has addressed supply interruption planning in its WRMP and UWMP.

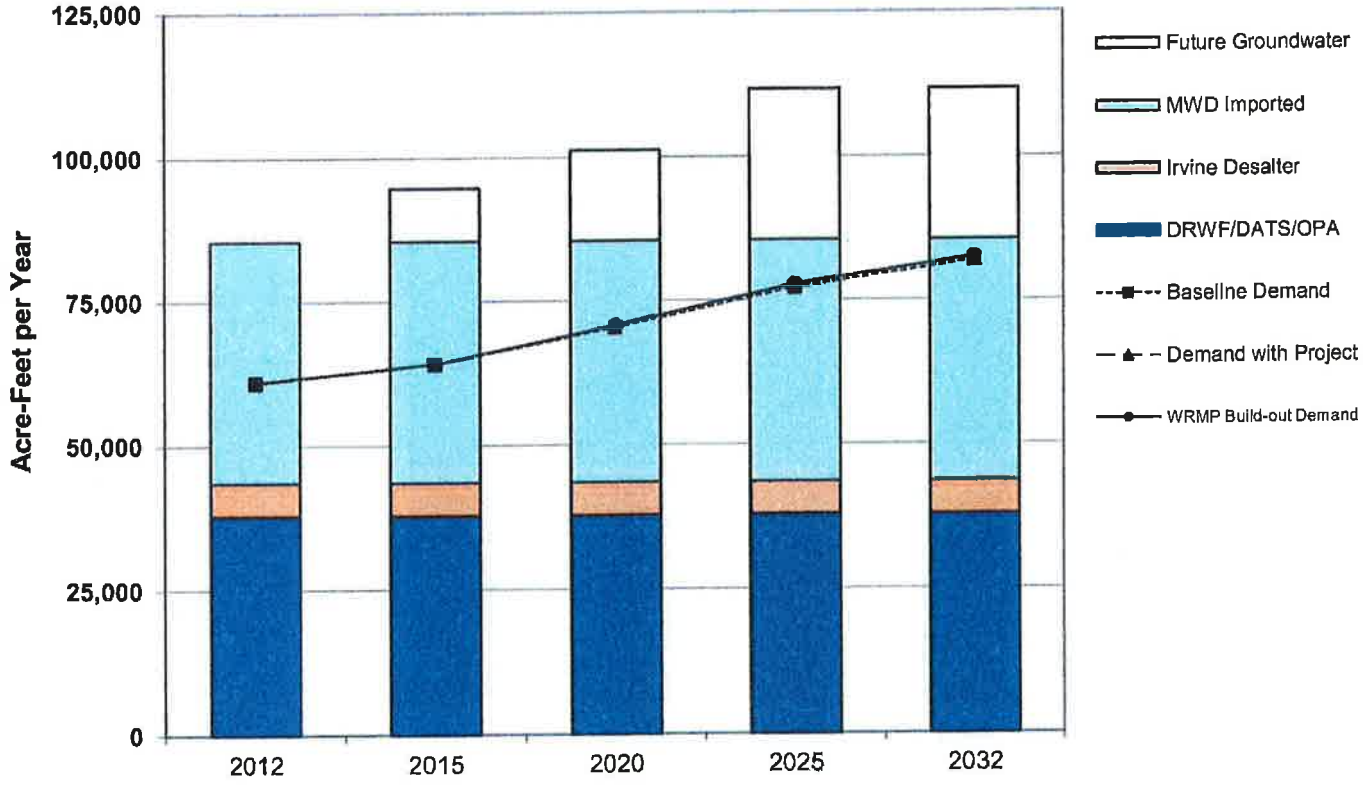
Detailed Verification

1. Determination of sufficiency of water supply

(a) Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the Assessment, Section 1, incorporated herein by reference and "Recent Actions on Delta Pumping" above.

Figure 1
IRWD Normal-Year Supply & Demand - Potable Water

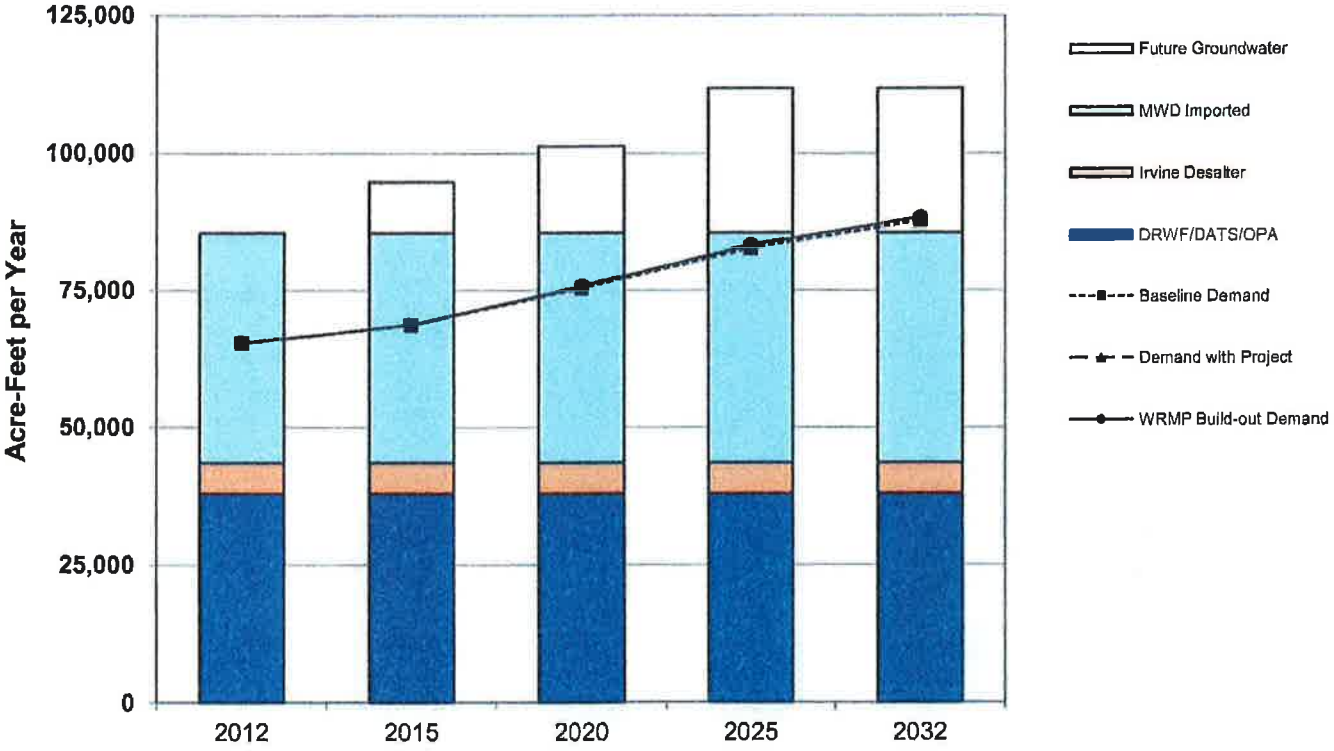


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	60,988	64,132	70,415	77,213	81,934
Demand with Project	60,988	64,182	70,713	77,759	82,480
WRMP Build-out Demand	60,988	64,182	70,713	77,759	82,480
Reserve Supply with Project	24,481	36,888	36,856	40,310	35,589

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water

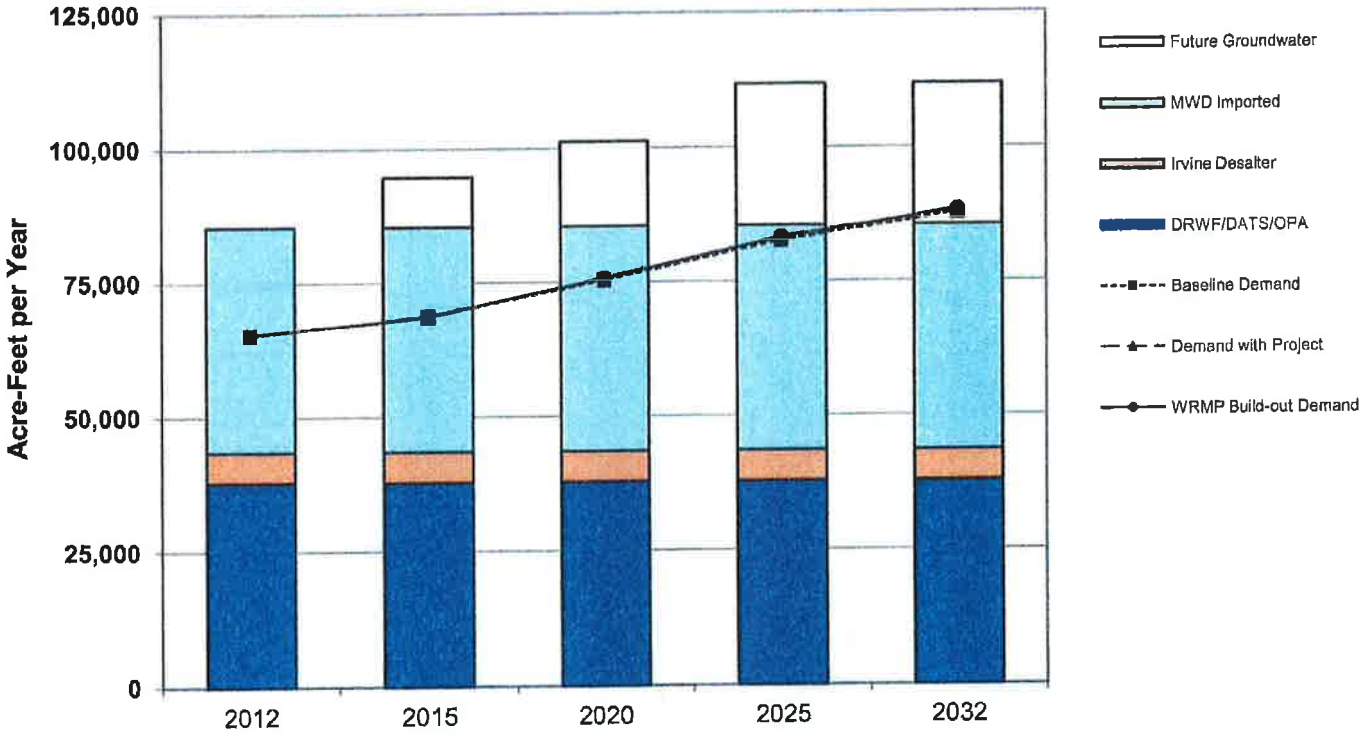


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	65,257	68,621	75,344	82,618	87,669
Demand with Project	65,257	68,674	75,663	83,202	88,254
WRMP Build-out Demand	65,257	68,674	75,663	83,202	88,254
Reserve Supply with Project	20,212	32,395	31,907	34,867	29,816

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water

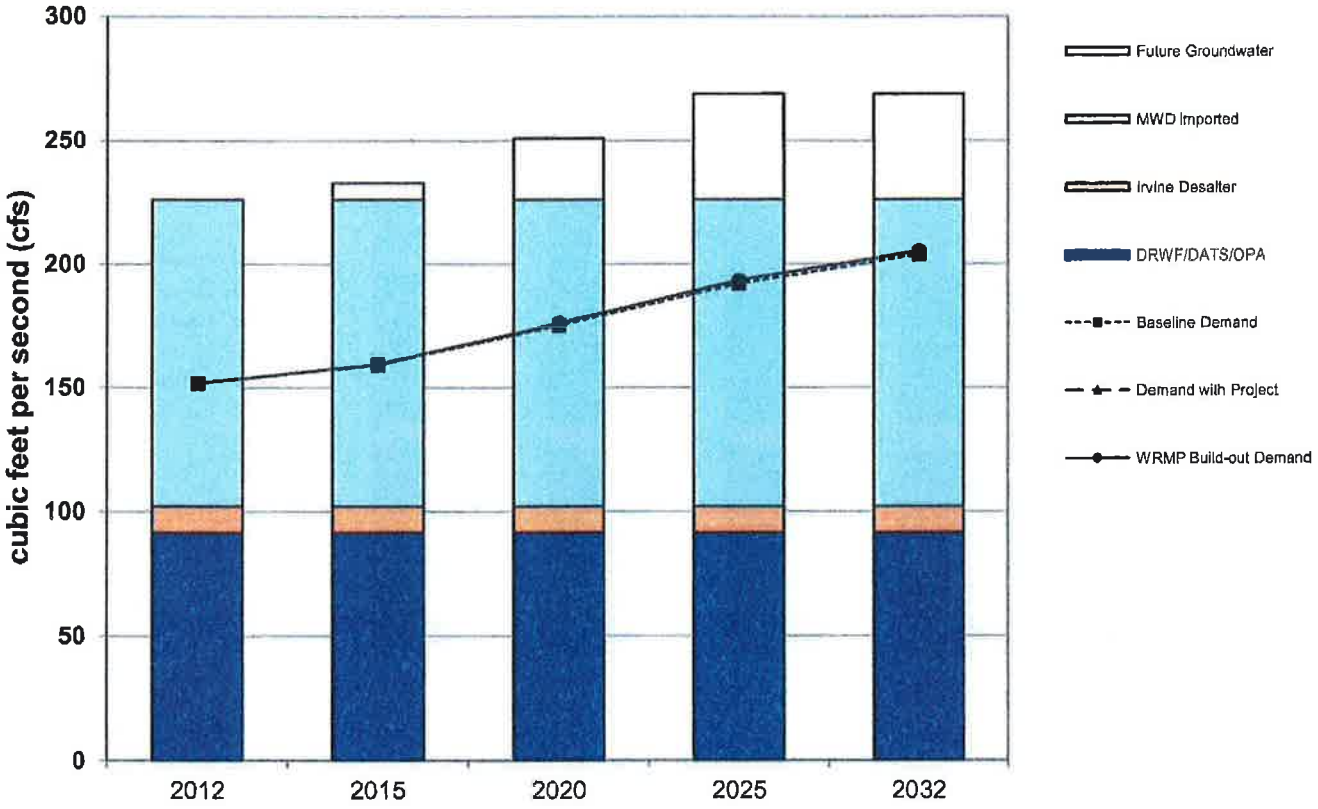


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	65,257	68,621	75,344	82,618	87,669
Demand with Project	65,257	68,674	75,663	83,202	88,254
WRMP Build-out Demand	65,257	68,674	75,663	83,202	88,254
Reserve Supply with Project	20,212	32,395	31,907	34,867	29,816

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

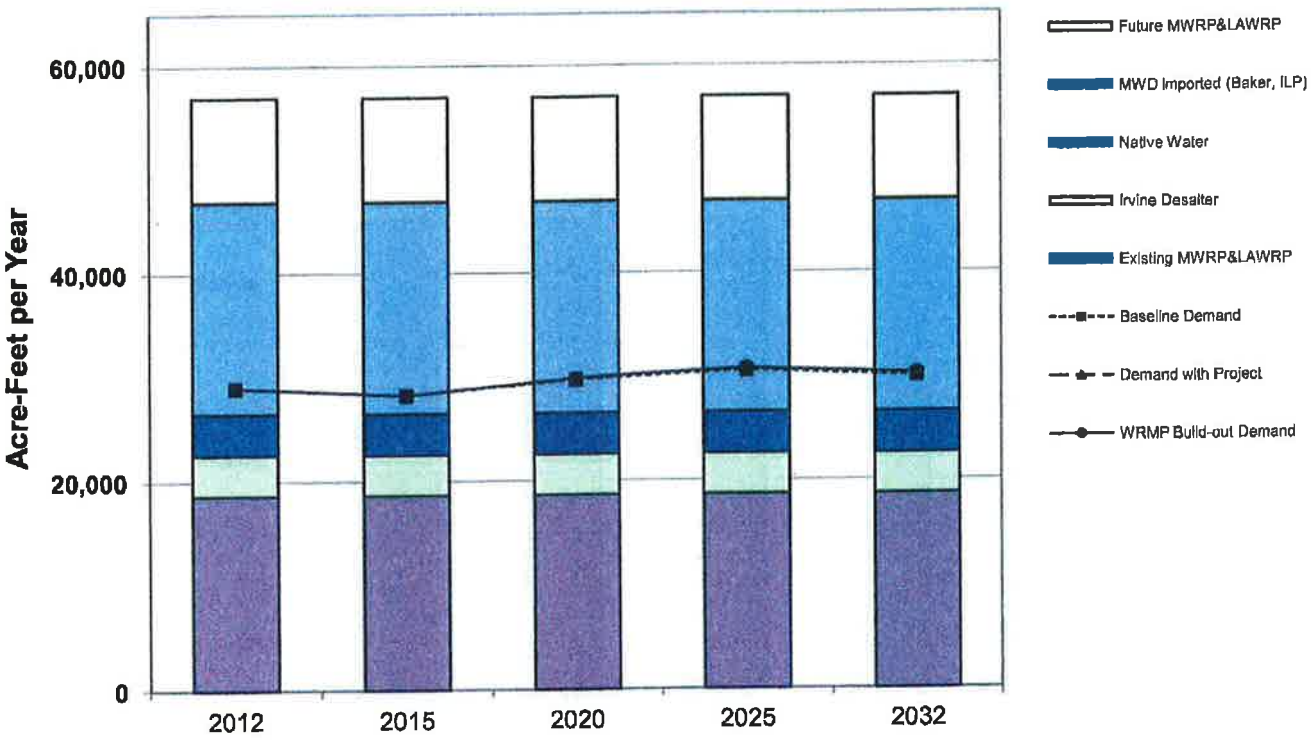
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water



(in cfs)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	91.4	91.4	91.4	91.4	91.4
Irvine Desalter	10.6	10.6	10.6	10.6	10.6
Wells 21 & 22	-	6.0	6.0	6.0	6.0
Supplies Under Development					
Future Groundwater	-	6.7	24.7	42.7	42.7
Maximum Supply Capability	226.1	238.8	256.8	274.8	274.8
Baseline Demand	151.6	159.4	175.1	192.0	203.7
Demand with Project	151.6	159.6	175.8	193.3	205.1
WRMP Build-out Demand	151.6	159.6	175.8	193.3	205.1
Reserve Supply with Project	74.5	79.3	81.0	81.5	69.8

Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water

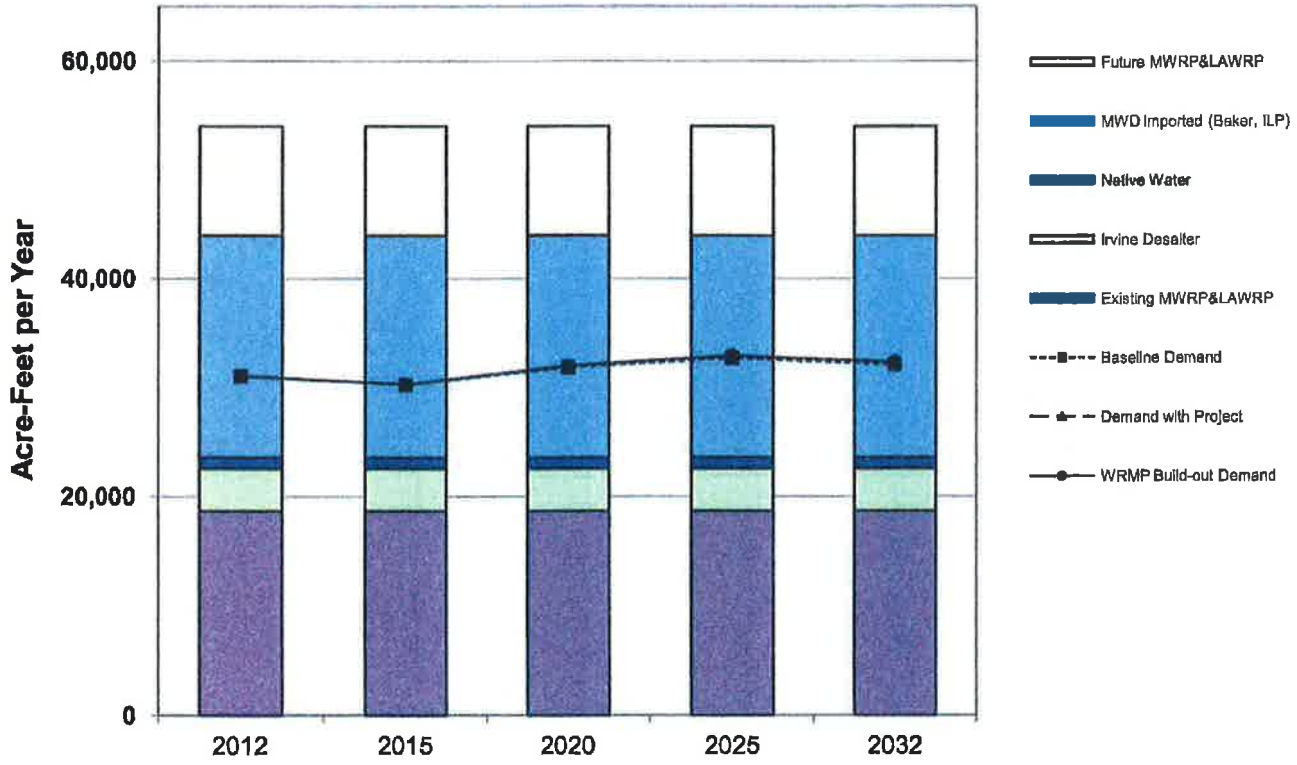


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	4,000	4,000	4,000	4,000	4,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	57,035	57,035	57,035	57,035	57,035
Baseline Demand	28,985	28,261	29,737	30,540	29,991
Demand with Project	28,985	28,281	29,856	30,757	30,208
WRMP Build-out Demand	28,985	28,281	29,856	30,757	30,208
Reserve Supply with Project	28,050	28,050	28,754	27,179	26,827

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water

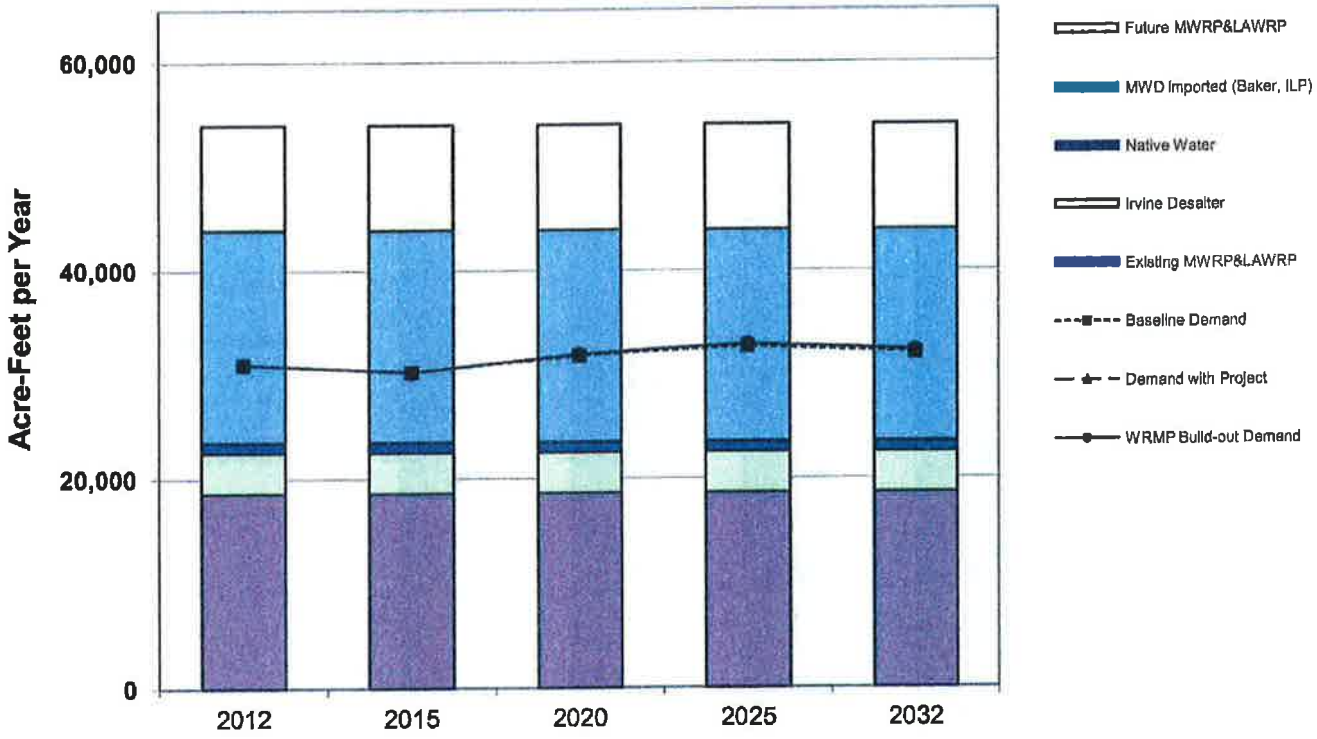


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	31,014	30,239	31,819	32,678	32,091
Demand with Project	31,014	30,261	31,946	32,910	32,323
WRMP Build-out Demand	31,014	30,261	31,946	32,910	32,323
Reserve Supply with Project	23,021	23,774	22,089	21,125	21,712

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water

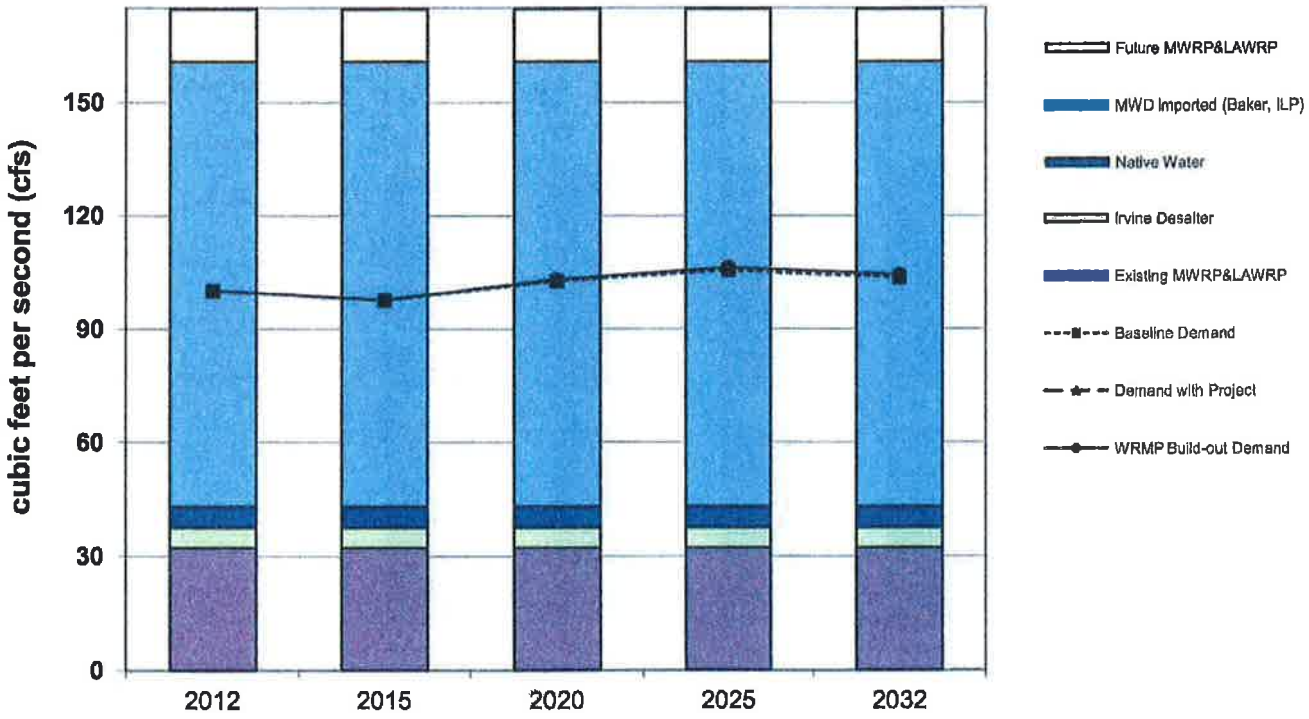


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	31,014	30,239	31,819	32,678	32,091
Demand with Project	31,014	30,261	31,946	32,910	32,323
WRMP Build-out Demand	31,014	30,261	31,946	32,910	32,323
Reserve Supply with Project	23,021	23,774	22,089	21,125	21,712

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

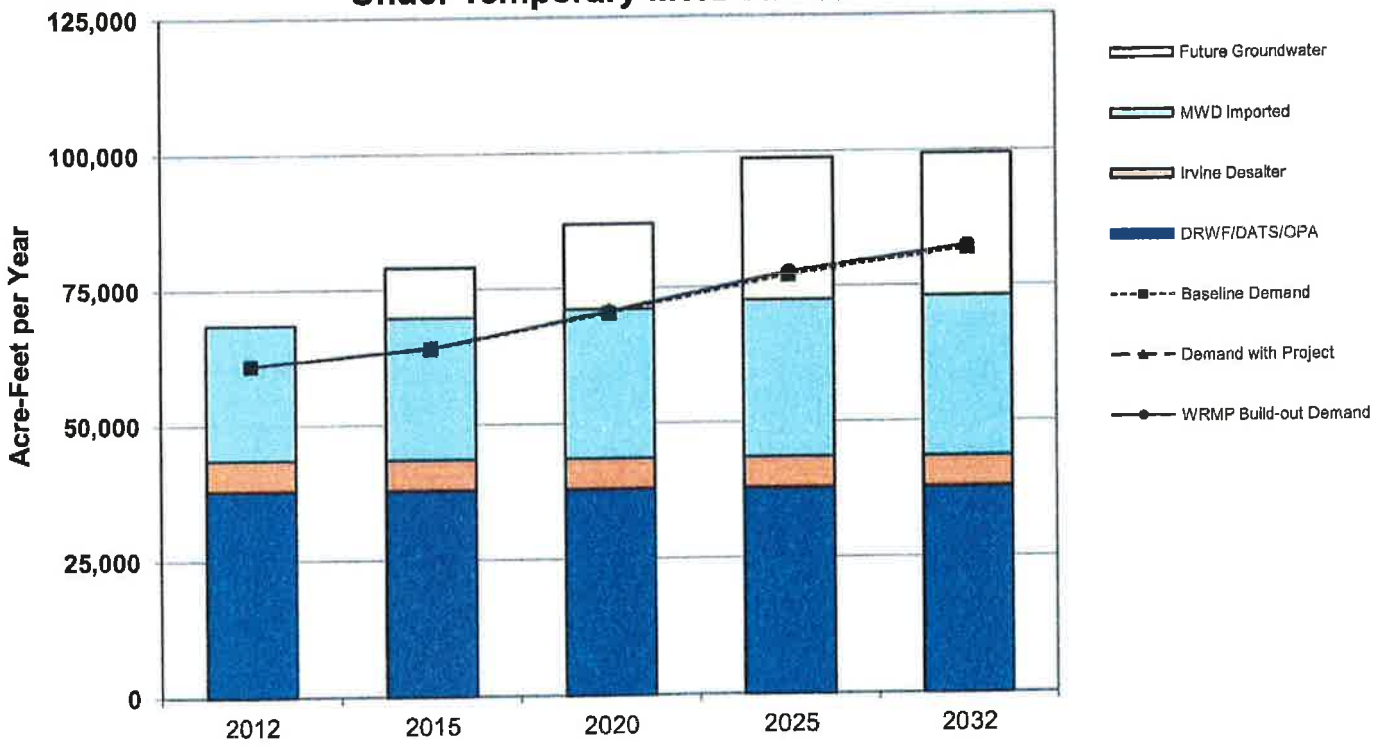
Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water



(in cfs)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	5.5	5.5	5.5	5.5	5.5
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
Supplies Under Development					
Future MWRP&LAWRP	14.0	14.0	14.0	14.0	14.0
Maximum Supply Capability	174.7	174.7	174.7	174.7	174.7
Baseline Demand	100.1	97.6	102.7	105.5	103.6
Demand with Project	100.1	97.7	103.1	106.2	104.3
WRMP Build-out Demand	100.1	97.7	103.1	106.2	104.3
Reserve Supply with Project	74.6	77.1	71.6	68.5	70.4

Note: Downward trend reflects reduction in agricultural use over time.

Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*

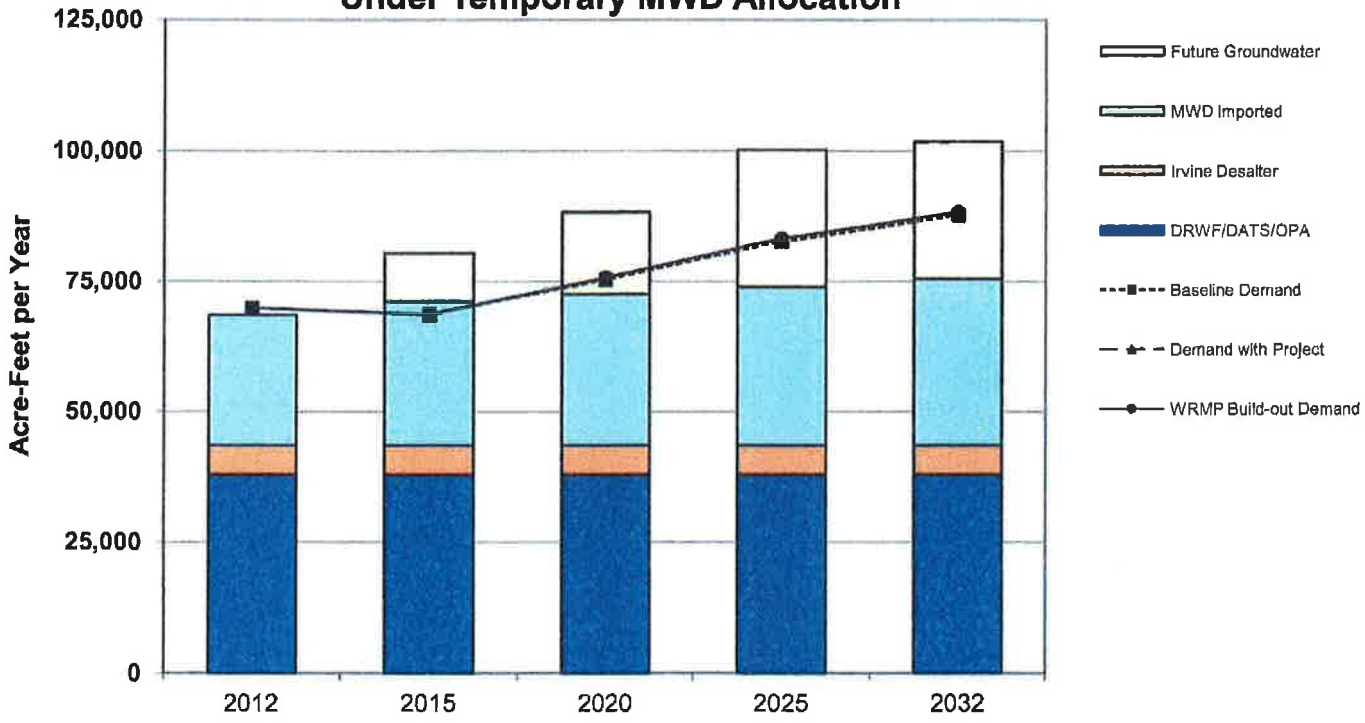


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	26,275	27,616	29,024	29,608
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	85,415	93,256	105,164	105,748
Baseline Demand	60,988	64,132	70,415	77,213	81,934
Demand with Project	60,988	64,182	70,713	77,759	82,480
WRMP Build-out Demand	60,988	64,182	70,713	77,759	82,480
Reserve Supply with Project	7,552	21,234	22,543	27,405	23,268

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

Figure 2a
IRWD Single Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*



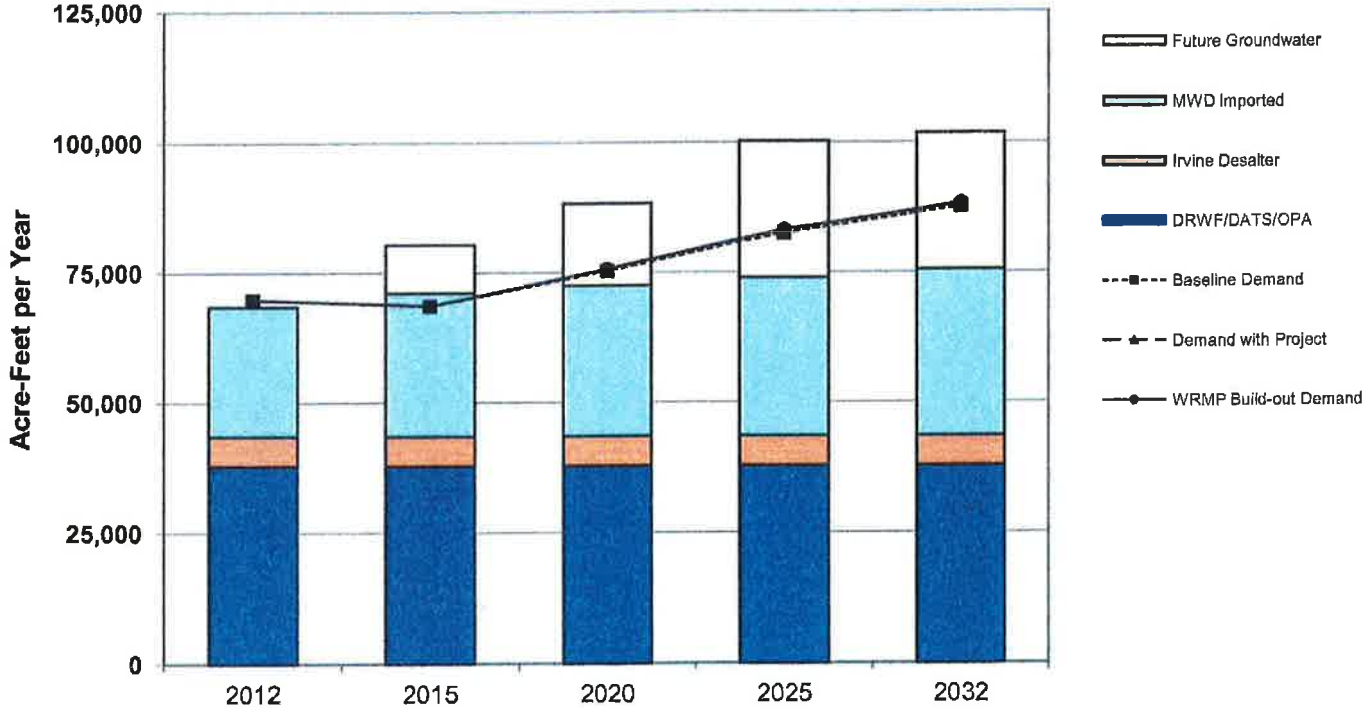
(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	69,825	68,621	75,344	82,618	87,669
Demand with Project	69,825	68,674	75,663	83,202	88,254
WRMP Build-out Demand	69,825	68,674	75,663	83,202	88,254
Reserve Supply with Project	(1,285)	18,055	18,946	23,355	19,824

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

Figure 3a

IRWD Multiple Dry-Year Supply & Demand - Potable Water Under Temporary MWD Allocation*



(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	69,825	68,621	75,344	82,618	87,669
Demand with Project	69,825	68,674	75,663	83,202	88,254
WRMP Build-out Demand	69,825	68,674	75,663	83,202	88,254
Reserve Supply with Project	(1,285)	18,055	18,946	23,355	19,824

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

	Max Day (cfs)	Avg. Annual (AFY)		Annual by Category (AFY)
Current Supplies				
Potable - Imported				
East Orange County Feeder No. 2	41.4	16,652	1	
Allen-McColloch Pipeline*	64.7	26,024	1	
Orange County Feeder	18.0	7,240	1	49,916
Potable - Groundwater				
Dyer Road Wellfield	80.0	28,000	2	
OPA Well	1.4	1,000		
Deep Aquifer Treatment System-DATS	10.0	8,900	2	
Wells 21 & 22	6.0	6,300	2	
Irvine Desalter	10.6	5,640	3	49,840
Total Potable Current Supplies	232.1			99,756
Nonpotable - Reclaimed Water				
MWRP (18 mgd)	23.9	17,340	4	
LAWRP (5.5 mgd)	8.3	5,975	4	23,315
Nonpotable - Imported				
Baker Aqueduct	52.7	15,262	5	
Irvine Lake Pipeline	65.0	9,000	6	24,262
Nonpotable - Groundwater				
Irvine Desalter-Nonpotable	5.4	3,898	7	3,898
Nonpotable Native				
Irvine Lake	5.5	4,000	8	4,000
Total Nonpotable Current Supplies	160.8			55,475
Total Combined Current Supplies	392.9			155,231
Supplies Under Development				
Potable Supplies				
Well 106	2.2	1,300		
Well 53	4.5	3,000		
Future OPA Wells	8.0	5,000		
Anaheim wellfield	10.0	6,500		
Wells 51 & 52	9.0	5,500		
Tustin Legacy wells	9.0	5,000	9	
Total Potable Under Development Supplies	42.7	26,300		26,300
Nonpotable Supplies: Future MWRP&LAWRP Reclaimed	20.0	14,450	10	14,450
Total Under Development	105.4			40,750
Total Supplies				
Potable Supplies	274.8			126,056
Nonpotable Supplies	180.7			69,925
Total Supplies (Current and Under Development)	455.6			195,981

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 3, page 22).

2 Contract amount - See Potable Supply-Groundwater(iii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 3, page 22).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70 years historical average of Santiago Creek inflow into Irvine Lake.

9 Estimated combined capacity of wells.

10 Future estimated MWRP & LAWRP reclaimed water production.

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(b) Factors considered in determining the sufficiency of the water supply:

(i) The availability of water supplies over a historical record of at least 20 years.

Source	1980	1985	1990	1995	2000	2005	2010
Potable – imported	29,510	43,320	44,401	28,397	36,777	19,306	19,306
Potable – groundwater	827	38	10,215	20,020	20,919	37,160	37,160
Nonpotable - reclaimed	9,196	12,399	11,589	10,518	14,630	15,296	15,296
Nonpotable - imported*	9,556	12,260	24,899	2,333	16,343	5,304	5,304
Nonpotable – groundwater	-	36	816	1,834	2,890	2,285	2,285
Nonpotable – native	11,909	3,587	2,778	5,980	4,949	7,251	7,251
Total	60,998	71,639	94,699	69,082	96,508	86,602	86,602

See also the Assessment, Section 1, incorporated herein by reference.

The following information is added:
On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin. (See Assessment, Section 2(b) – POTABLE SUPPLY – GROUNDWATER.)

(ii) The applicability of a water shortage contingency analysis prepared pursuant to Water Code Section 10632 that includes actions to be undertaken by IRWD in response to water supply shortages.

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect the implementation of water shortage emergency measures. In February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan, which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for any water savings that could be achieved by these measures.

(iii) Reduction by IRWD in water supply allocated to a specific water use sector, pursuant to a resolution, ordinance or contract uses.

The supply and demand comparisons incorporated from the Assessment into this Verification (see 1(a)) do not reflect any allocated reductions by IRWD. As noted under the preceding item (ii), IRWD's water shortage contingency plan and Rules and Regulations provide for voluntary and mandatory water conservation measures that could be invoked in declared water shortage emergencies. These include reductions to certain water uses. However, in order to be conservative, IRWD has not reduced its single-dry or multiple-dry year demand projections or increased its single-dry or multiple-dry year supply projections in the Assessment to account for water savings that could be achieved by any allocated reductions.

With respect to items (ii) and (iii) above, it is noted that MWD has in effect a management plan for dealing with periodic surplus and shortage conditions, known as Metropolitan Report No. 1150, *Water Surplus and Drought Management Plan* (*RUWMP, II-15* and also in 2010 RUWMP pages 2-20 through 2-2-22). MWD's demand projections account for the effects of long-term conservation best management practices.

(iv) The amount of water that IRWD can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state and local water initiatives such as CALFED and Colorado River tentative agreements, based on the inclusion of information with respect to such supplies in Section 2, below.

Local. IRWD directly relies (for a portion of its full build-out annual demand in single and multiple dry-year projections) on the following under development supplies (see 1(a), above): the Irvine Wells (see the Assessment, Section 2(b)(1)(vi) – "POTABLE SUPPLY – GROUNDWATER"). In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan ("LTFP") which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin. OCWD has an optimal basin management target of 100,000 acre-feet of accumulated overdraft which provides sufficient storage space to accommodate increased supplies from one wet year while also provides enough water in storage to offset decreased supplies during a two- to three year drought. (Source: 2009-10 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District).

With the implementation of OCWD's preferred projects, the Basin yield in the year 2030 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.

IRWD's own reclaimed water expansion program is also shown as an under development supply. IRWD also has a currently available reclaimed water supply from its own existing reclamation program. The reclaimed water supplies are discussed in Section 2 below (see the Assessment, Section 1 – Figures 5, 6, 7 and 8 (supplies denominated "MWRP" and "LAWRP"), Section 2(a), and Section 2(b)(1) - "NONPOTABLE SUPPLY – RECLAIMED"), IRWD has prepared a Final Environmental Impact Report for the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project (February, 2006) and the expansion project is under construction. With this expansion, IRWD plans to increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2032. (Initial upgrades that are within existing permit authorizations and CEQA compliance are completed.) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

As noted in the Assessment, IRWD's demand projections reflect the effect of IRWD's water conservation pricing and other conservation practices; in particular, IRWD's water use factors used to derive its demand projections are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other long-term water conservation programs. System losses at a rate of approximately 5% are built into the water use factors. As discussed above, IRWD's supply and demand projections do not take into account water

savings that could be achieved by water shortage emergency measures.

Imported. MWD, the supplier of IRWD's imported supplies, relies upon several of the listed projects and programs. MWD supports and provides financial incentives to water reclamation, groundwater recovery, water conservation, ocean desalination and other local resource development programs. MWD calculates its demand forecast by first estimating total retail demand for the region and then factoring in impacts of conservation. Next, it derives projections of local supplies using data on current and expected local supply programs and Integrated Resource Planning (IRP) Local Resource Program Target. The difference between the resulting local demands is the expected regional demand on MWD. These estimates of demands on MWD were developed for a single dry year, multiple dry years and average years. (2010 *RUWMP*, pages 2-12 to 2-14)

MWD also relies upon the implementation of the CALFED Bay-Delta Program, as an under development supply, to attain an increase in its existing Bay-Delta deliveries. Other under development programs relied upon by MWD include: additional transfers and storage agreements such as ICS Exchange, Agreements with CVWD, Additional Palo Verde Irrigation District Transfers, Arizona Programs – CAP, Hayfield Groundwater Extraction Project, Mojave Groundwater Storage Program, North of Delta/In-Delta Transfers, San Bernardino Valley Water MWD Central Feeder, Shasta Return, and Semitropic Agricultural Water Reuse. (2010 *RUWMP*, Sections 3.1, 3.2, and 3.3) See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to MWD's current and under development supplies.

In addition to MWD's existing regional supply assessments, the water supply verification has considered MWD information concerning recent events. See the above "Recent Actions on Delta Pumping."

2. Required information concerning *under-development* supplies

(a) Written contracts or other proof of valid rights to the identified supplies

See the Assessment, Section 2(b)(1), incorporated herein by reference. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to written contracts and other proof related to MWD's supplies.

(b) Adopted capital outlay program to finance delivery of the supplies

See the Assessment, Section 2(b)(2), incorporated herein by reference. With respect to future groundwater wells (PR Nos. 10285, 15423, 15427, 15428, 15051 and 15052) and the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), IRWD adopted its fiscal year 2011/12 capital budget on June 13, 2011 (Resolution No. 2011-20), budgeting portions of the funds for such projects. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(c) Federal, state and local permits to construct of delivery infrastructure

See the Assessment, Section 2(b)(3), incorporated herein by reference. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(d) Regulatory approvals for conveyance or delivery of the supplies

See the Assessment, Section 2(b)(4), incorporated herein by reference. In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board. See also MWD's 2010 *RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Foreseeable impacts of the Project on the availability of water for agricultural and industrial uses in IRWD's service area not currently receiving water

Based on city planning and other information known to IRWD, there are no agricultural or industrial uses in IRWD's service area that are not within either existing and committed demand or future demand, both of which are included within the supply and demand comparison and determination of sufficiency (see 1(a)).

4. Information concerning the right to extract additional groundwater included in the supply identified for the Project:

Where the water supply for the Project includes groundwater, the verification is required to include an evaluation of the extent to which IRWD or the landowner has the right to extract the additional groundwater needed to supply the Project. See the Assessment, Section 2(b)(1), "POTABLE SUPPLY – GROUNDWATER" and "NONPOTABLE SUPPLY – GROUNDWATER," and Section 4, incorporated herein by reference.

5. References

Water Resources Master Plan, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

2010 Urban Water Management Plan, Irvine Ranch Water District, June 2011

The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California, November, 2005

Integrated Water Resources Plan Update, Metropolitan Water District of Southern California, July, 2004

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

Board Information Report, Metropolitan Water District of Southern California, October 9, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October, 2007

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

2010 Regional Urban Water Management Plan, Metropolitan Water District of Southern California, November 2010

Exhibit A

Depiction of Project Area

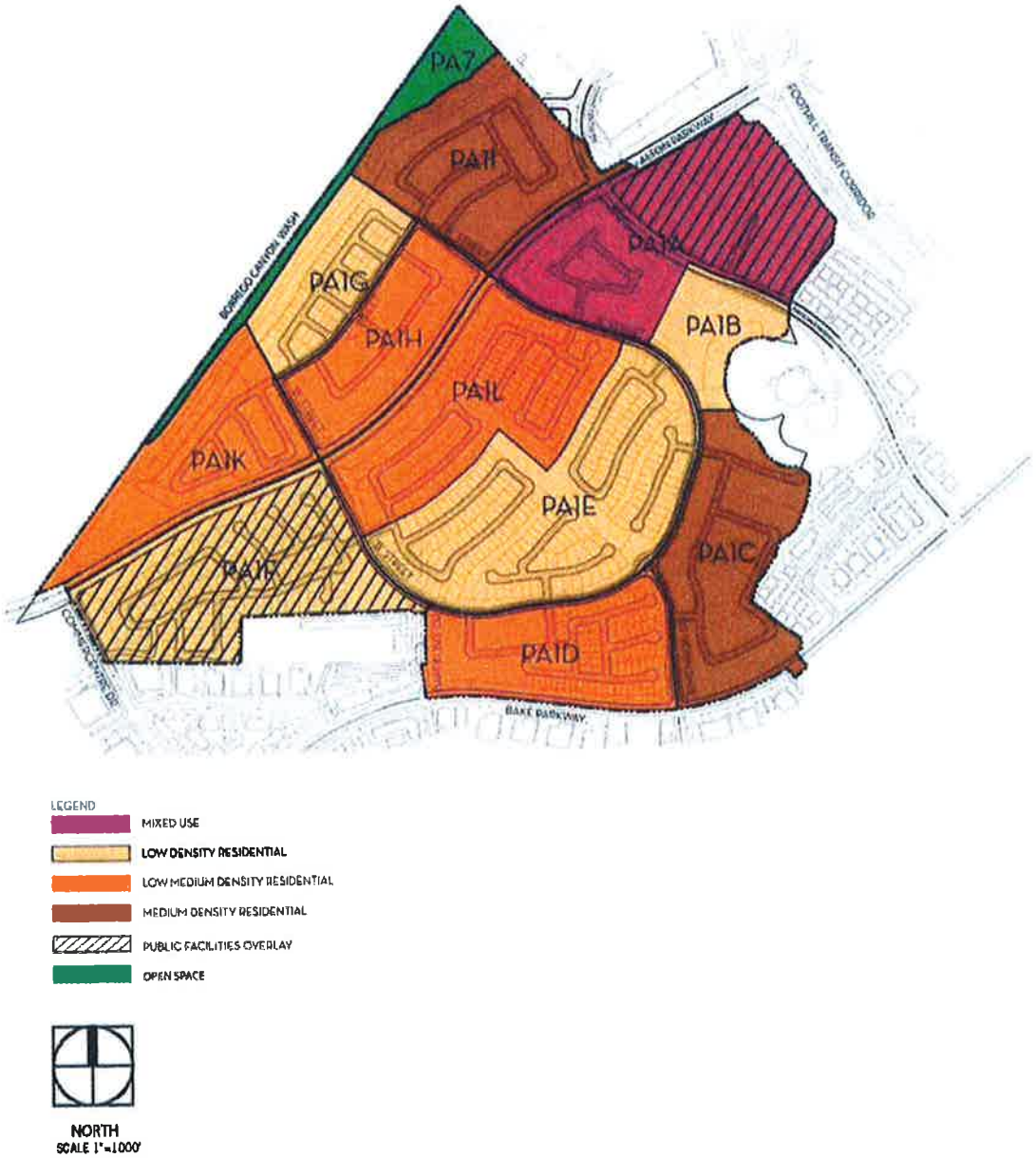


Exhibit 2.4 –Land Use Plan

Exhibit B

Non-residential Uses Included in Project

EXHIBIT "B"

CITY OF LAKE FOREST

April 12, 2012

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Verification of Sufficient Water Supplies (Government Code §66473.7(b)(1)

The City of Lake Forest, on behalf of the subdivision applicant, Shea / Baker Ranch Properties, LLC, is requesting a verification of the availability of a sufficient water supply for the below-described project. Under Government Code §66473.7(b)(1), the approving body of a tentative tract map must include a condition in any tentative map that includes a subdivision, a requirement that a sufficient water supply shall be available. Written verification may be requested by the subdivision applicant or the local agency. While the condition shall be incorporated, the City is hereby requesting such verification in advance of project approval.

The City has determined that the subject project (1) includes a subdivision meeting the criteria requiring verification of availability of sufficient water supply, in that it may result in the development of more than 500 dwelling units, and (2) does not fall within one of the statutory exemptions for previously developed urban sites, sites surrounded by urban use, or low-income housing sites.

Proposed Project Information

Project Title: Shea / Baker Ranch

Location of project: Project is located in the northwestern portion of the City of Lake Forest and is bound by the Borrego Canyon Wash to the west, Commercentre Drive to the south, Bake Parkway to the southeast, and Rancho Parkway to the north.; 610-421-07 through 09; 610-422-01; 610-431-01 through 12; 410-432-01 through 17; 612-132-01 and 612-134-05 (See attached aerial photograph)

Planning Area(s):1A to 1L of the Baker Ranch Planned Community: See attached Tentative Tract Map and Land Use Plan.

Was the project included as part of a previously completed Water Supply Assessment (Water Code §10910)? ☒ yes ☐ no
If yes, date and project title of Water Supply Assessment 1/24/2005 Opportunities Study. (See attached).

25550 Commercentre Dr., Suite 100
Lake Forest, CA 92630
(949) 461-3400
City Hall Fax: (949) 461-3511

If no, state reason: ☐ CEQA documentation not requiring a Water Supply Assessment was completed prior to January 1, 2002 ☐ other:____

Was a Water Supply Verification previously completed for the project? ☐ yes ☒ no

If yes, indicate reason for reverification: ☐ tract map expiration ☐ new Water Supply Assessment required due to project revisions, changed circumstances or new information.

☐ Tentative Map Application No.* See Tract Number ☒ Tentative Tract No.* 16466

☐ Verification is being requested prior to tentative map application (Government Code §66473.7(1) (Indicate next project approval sought: June 5, 2012)

(*A copy of the tentative map application including the proposed subdivision was sent to IRWD on: February 2011, (Government Code §66455.3))

Type of development included in the project:

☒ *Residential*: No. of dwelling units: 2,379
☒ *Shopping center or business*: No. of employees_____ Sq. ft. of floor space 25,000
☐ *Commercial office*: No. of employees_____ Sq. ft. of floor space ____
☐ *Hotel or motel*: No. of rooms _____
☐ *Industrial, manufacturing, processing or industrial park:* No. of employees
No. of acres _____Sq. ft. of floor space _____
☒ *Mixed use* (check and complete all above that apply)
☒ *Other*:

Total acreage of project: 386.8 (approximately 14 acres currently developed with Alton Parkway as part of the Alton Parkway extension project)

Acreage devoted to landscape:

Greenbelt	None
Golf course	None
Parks	Approximately 30 acres
Agriculture	None
Other landscaped areas	70 acres

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements:None

Shea / Baker Ranch
Water Supply Verification
April 12, 2012

Is the project included in the existing General Plan? Yes
If no, describe the existing General Plan Designation _____

The City acknowledges that IRWD's verification will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the verification, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project changes or the tentative map approval expires after the issuance of a Water Supply Verification, the City will request a new Water Supply Verification if required. In the event of changes in the project, circumstances or conditions of the availability of new information, it will be necessary for the City to request a new Water Supply Assessment prior to completion of the new Water Supply Verification.

The City acknowledges that the Water Supply Verification shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Verification shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF LAKE FOREST

By: _____
Carrie Tai, AICP, Senior Planner

REQUEST RECEIVED:

Date: April 13, 2012

By: _____
Irvine Ranch Water District

REQUEST COMPLETE:

Date: April 20, 2012

By: _____
Irvine Ranch Water District

Exhibit C

Water Supply Assessment

Exhibit "C"

IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY
Water Code §10910 *et seq.*

To: (*Lead Agency*)
City of Lake Forest
25550 Commercentre Drive, Suite 100
Lake Forest, CA 92630

(*Applicant*)
City of Lake Forest
25550 Commercentre Drive, Suite 100
Lake Forest, CA 92630

Project Information
Project Title: Opportunities Study (see Exhibit A)

☐ *Residential*: No. of dwelling units: _____
☐ *Shopping center or business*: No. of employees_____ Sq. ft. of floor space _____
☐ *Commercial office*: No. of employees_____ Sq. ft. of floor space _____
☐ *Hotel or motel*: No. of rooms _____
☐ *Industrial, manufacturing or processing*: No. of employees_____ No. of acres _____
Sq. ft. of floor space _____
☒ *Mixed use* (check and complete all above that apply) (see Exhibit B)
☐ *Other*: _____

Assessment of Availability of Water Supply

On 1/24/05 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

☒ The projected water demand for the Project ☐ was ☒ was not included in IRWD's most recently adopted urban water management plan.

☒ A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.

☐ A sufficient water supply is not available for the Project. *[Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]*

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

Leslie McKarsh 1/24/05 District Secretary
Signature *Date* *Title*

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. (The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's next update of that document is anticipated in 2005. With changes that have occurred in land uses since the last update of the UWMP in 2000, IRWD's year 2020 water demand, as reflected by the WRMP, is currently projected to be approximately 9% lower than the projected demand shown in the 2000 UWMP.)

The land use changes incorporated in the WRMP since the date of the 2000 UWMP include the following:

•In 2001, IRWD consolidated with the neighboring Los Alisos Water District (LAWD), thereby adding the majority of the City of Lake Forest to IRWD's service area. IRWD has now integrated the supplies and demands of the two districts.

•In late 2001, The Irvine Company announced the planned dedication of a large area as permanent open space. The majority of this land is located in the northwestern portion of IRWD (City of Orange sphere of influence), with an additional area near Laguna Canyon Road. IRWD has made appropriate reductions in its demand calculations.

•Proposed development uses have replaced agricultural uses previously used to compute demand for portions of the Project and the adjacent Northern Sphere Area project.

•The alternative proposals for reuse of the MCAS-El Toro property that preceded the current Project had different water demands. To ensure that IRWD would be able to provide a sufficient water supply capacity irrespective of which reuse proposal was implemented, the 1999 WRMP assumed the highest water-demand generating land use plan for the property. This plan, the "Millennium Plan," was subsequently replaced by a non-aviation "great park" alternative. The park proposal resulted in lower overall demand, but higher nonpotable demand (for irrigation) than the Millennium Plan. In the most recent WRMP, the updated water demand information for the park has been substituted for the previous information related to the park proposal.

• All other refinements of future land uses have been included in the WRMP, along with updated information on existing land uses.

In addition to the WRMP and the 2000 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items have been provided to the City and can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2000 UWMP and historical regional demand variation as documented in the Metropolitan Water District of

Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

Planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2025, which is considered to represent build-out or "ultimate development". This exceeds the 20-year projection required by the statute (see Water Code Sections 10631 and 10910).

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2025):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.

- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.

- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County ("MWDOC"). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).
- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).

- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system's ability to meet the highest day's demand of the fluctuating demands that will be experienced in a year's time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

Figure 1: Normal Year Supply and Demand – Potable Water
Figure 2: Single Dry-Year Supply and Demand – Potable Water
Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
Figure 4: Maximum-Day Supply and Demand – Potable Water
Figure 5: Normal Year Supply and Demand – Nonpotable Water
Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD's potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD's nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD projects that through the continued implementation of MWD's supplies under development, it can meet 100 percent of its member agencies' supplemental water demands over the next 20 years, even in a repeat of the worst drought. (See Section 2(b)(1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2025. (Figures 1 through 3.)

• Sufficient *currently available* potable supplies are also available to meet annual *full build-out* demands under normal conditions. (Figure 1.)

• Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of a small amount of the *under-development* supplies. (Figures 2 and 3.)

• Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections including full build-out. (Figure 4.)

• With respect to nonpotable water, *currently available* supplies are more than adequate to meet all demand projections including full build-out, under both annual and peak-flow (maximum day) conditions, in both normal and dry years. However, IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions. (Figures 5 through 8.)

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

• Significant quantities of "reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.

• The potential exists for the treatment and conversion of some reserve nonpotable supplies to potable water.

• Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and information provided by MWD.

• Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of margins of safety and reserves in its regional supply assessments.

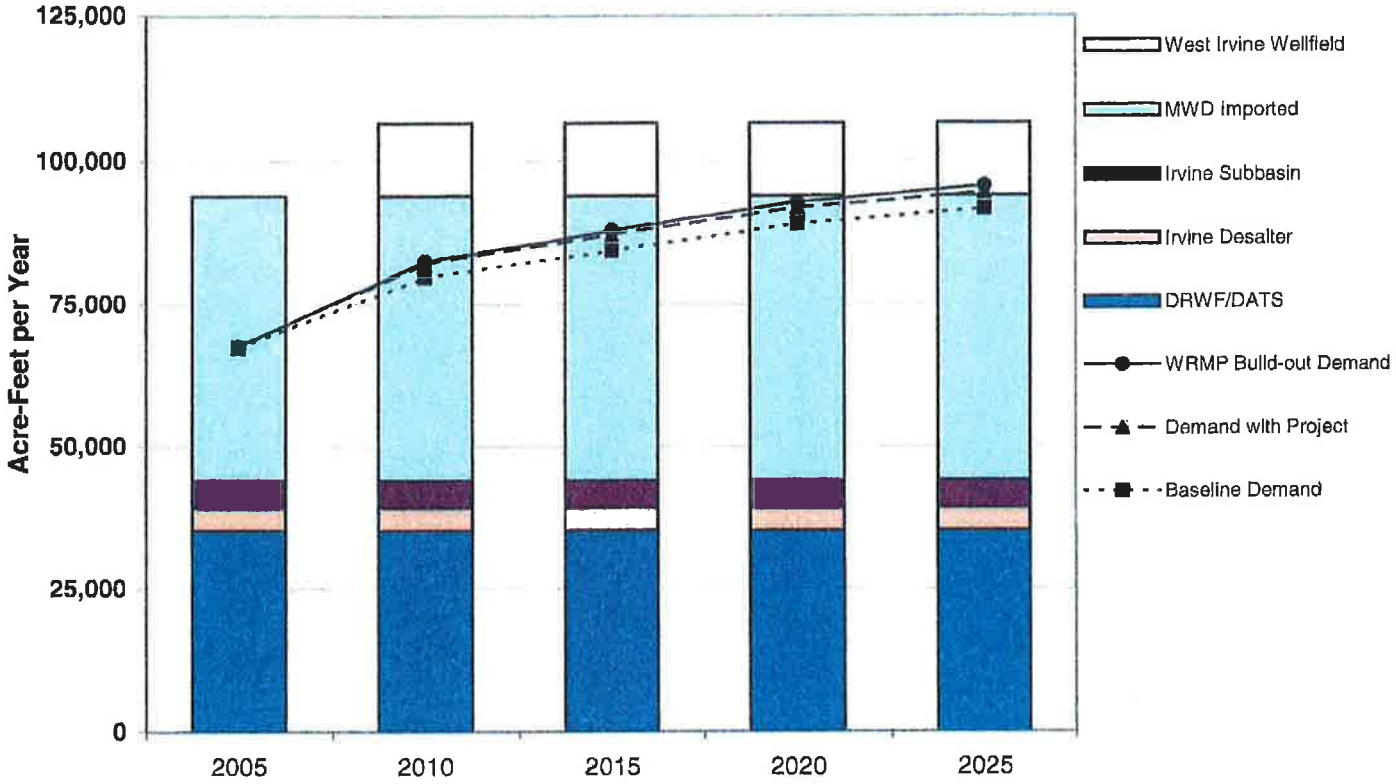
• Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1 - 4 (potable water) and Figures 5 - 8 (nonpotable water):

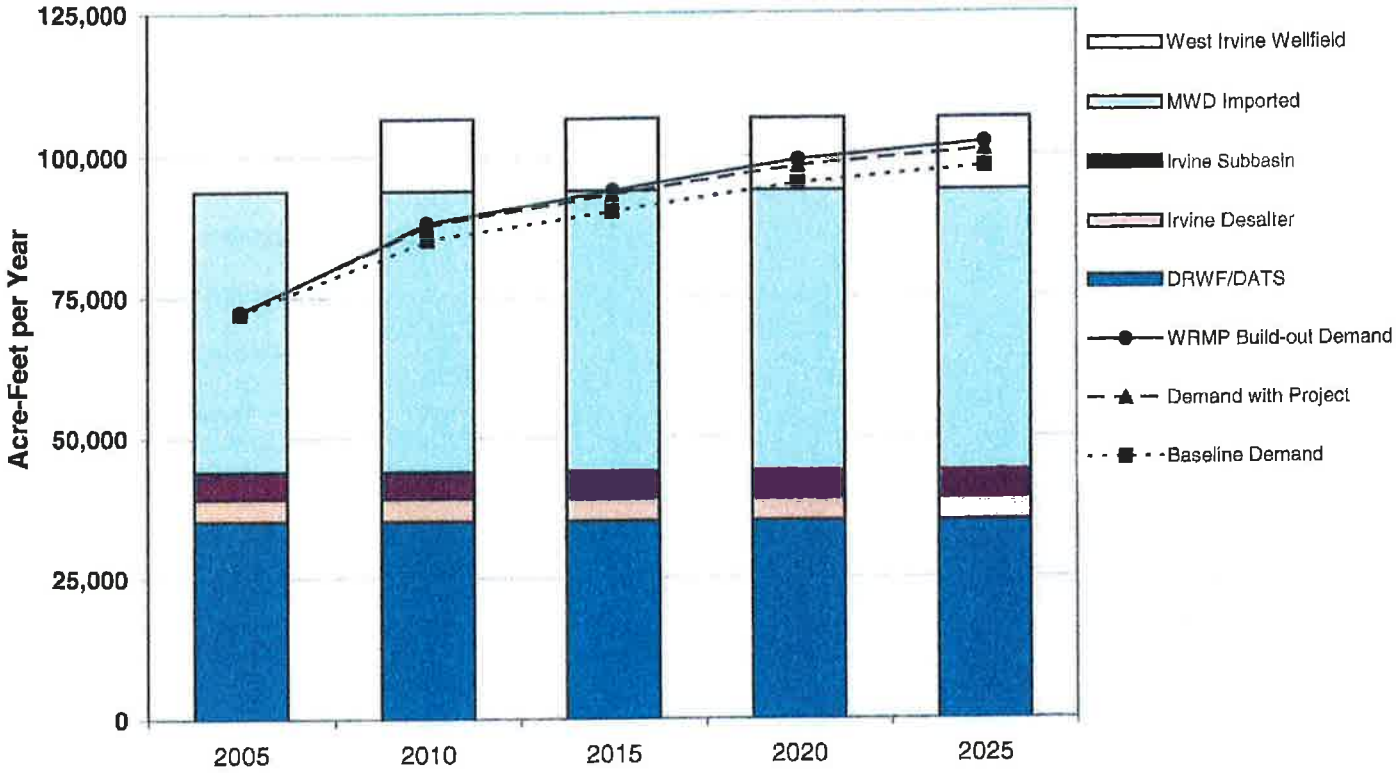
Figure 1
IRWD Normal-Year Supply & Demand - Potable Water



(in acre-feet per year)	2005	2010	2015	2020	2025
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	49,916	49,916	49,916	49,916	49,916
DRWF/DATS	35,200	35,200	35,200	35,200	35,200
Irvine Subbasin	4,800	4,800	4,800	4,800	4,800
Irvine Desalter	3,982	3,982	3,982	3,982	3,982
Supplies Under Development					
West Irvine Wellfield	-	12,700	12,700	12,700	12,700
Maximum Supply Capability	93,898	106,598	106,598	106,598	106,598
Baseline Demand	67,399	79,648	84,350	88,977	91,705
Demand with Project	67,635	82,070	87,146	91,792	94,520
WRMP Build-out Demand	67,635	82,402	87,819	92,807	95,654
Reserve Supply with Project	26,263	24,528	19,452	14,806	12,078

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

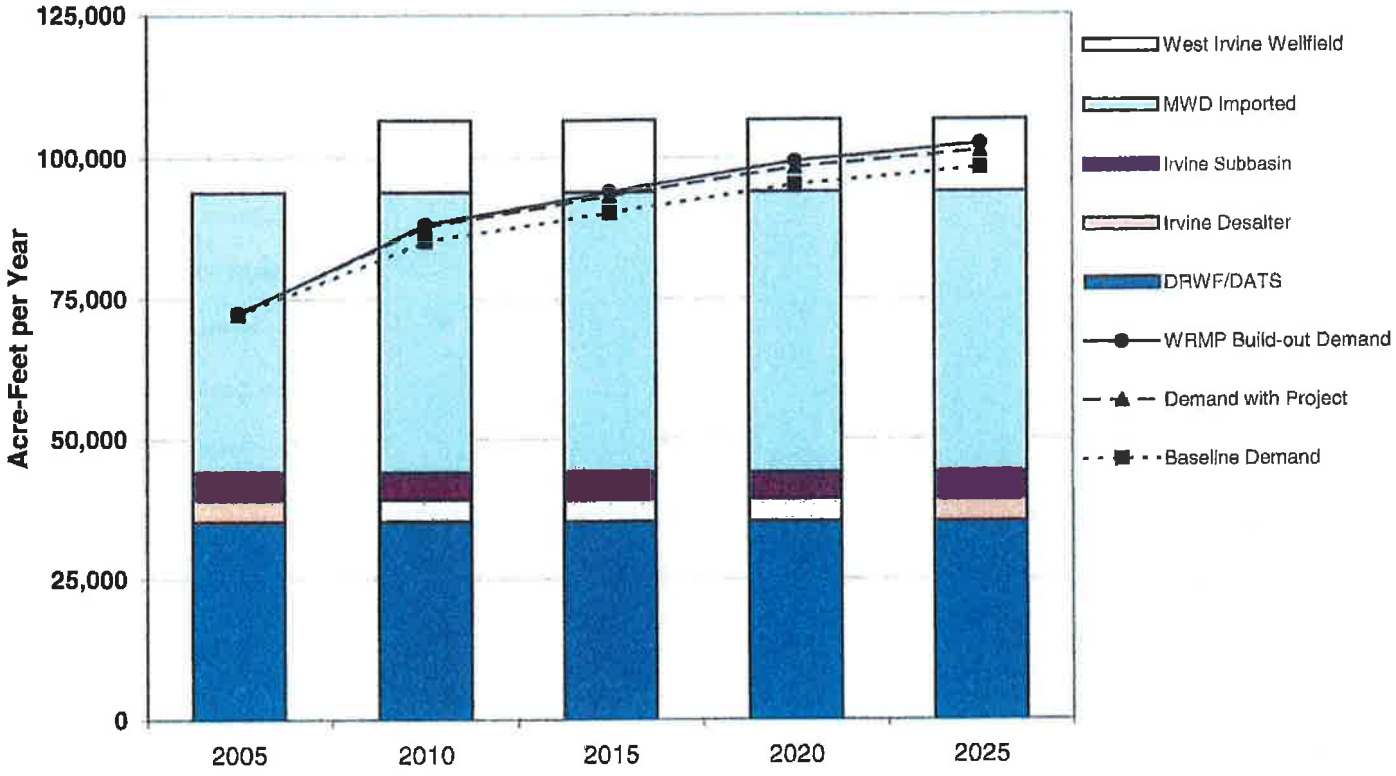
Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water



(in acre-feet per year)	2005	2010	2015	2020	2025
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	49,916	49,916	49,916	49,916	49,916
DRWF/DATS	35,200	35,200	35,200	35,200	35,200
Irvine Subbasin	4,800	4,800	4,800	4,800	4,800
Irvine Desalter	3,982	3,982	3,982	3,982	3,982
Supplies Under Development					
West Irvine Wellfield	-	12,700	12,700	12,700	12,700
Maximum Supply Capability	93,898	106,598	106,598	106,598	106,598
Baseline Demand	72,117	85,223	90,254	95,206	98,124
Demand with Project	72,369	87,815	93,246	98,217	101,136
WRMP Build-out Demand	72,370	88,170	93,967	99,303	102,350
Reserve Supply with Project	21,528	18,783	13,351	8,380	5,462

Notes: Supplies identical to Normal-Year based on Report on Metropolitan's Water Supplies (3/25/03) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

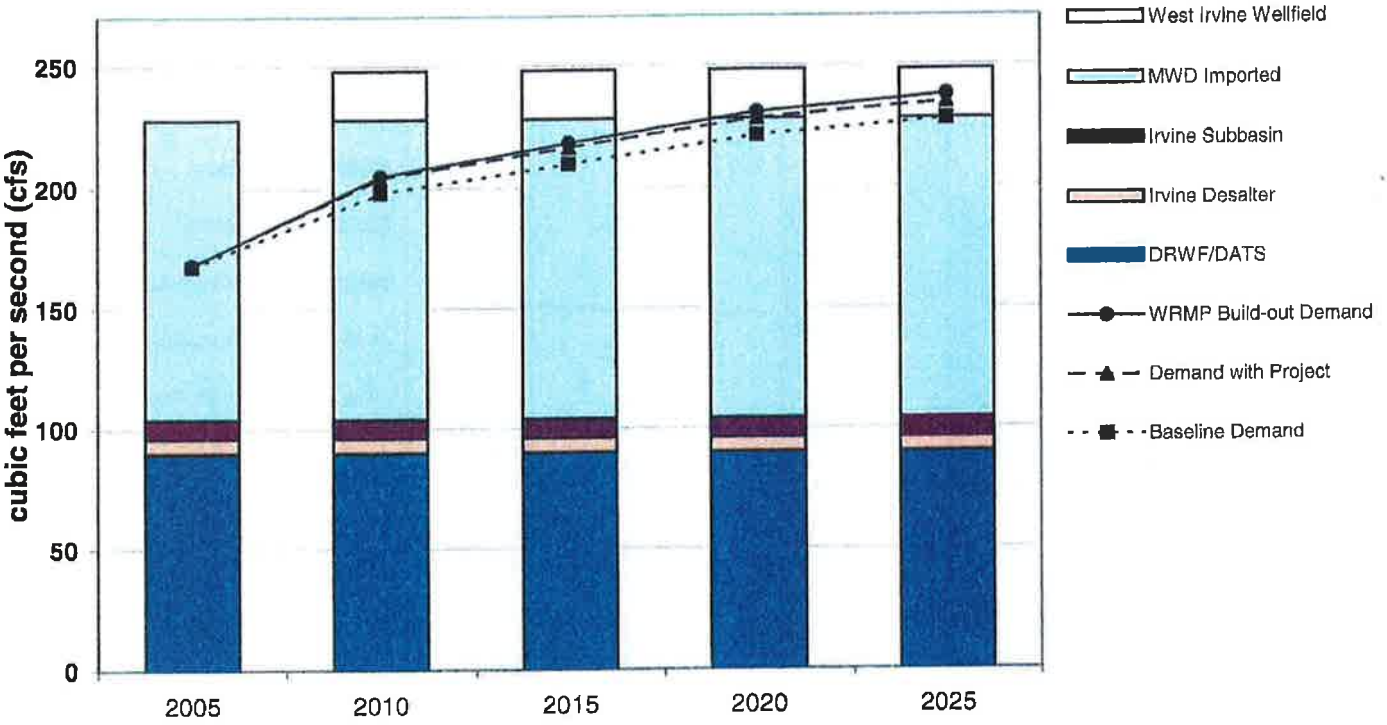
Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water



(in acre-feet per year)	2005	2010	2015	2020	2025
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	49,916	49,916	49,916	49,916	49,916
DRWF/DATS	35,200	35,200	35,200	35,200	35,200
Irvine Subbasin	4,800	4,800	4,800	4,800	4,800
Irvine Desalter	3,982	3,982	3,982	3,982	3,982
Supplies Under Development					
West Irvine Wellfield	-	12,700	12,700	12,700	12,700
Maximum Supply Capability	93,898	106,598	106,598	106,598	106,598
Baseline Demand	72,117	85,223	90,254	95,206	98,124
Demand with Project	72,369	87,815	93,246	98,217	101,136
WRMP Build-out Demand	72,370	88,170	93,967	99,303	102,350
Reserve Supply with Project	21,528	18,783	13,351	8,380	5,462

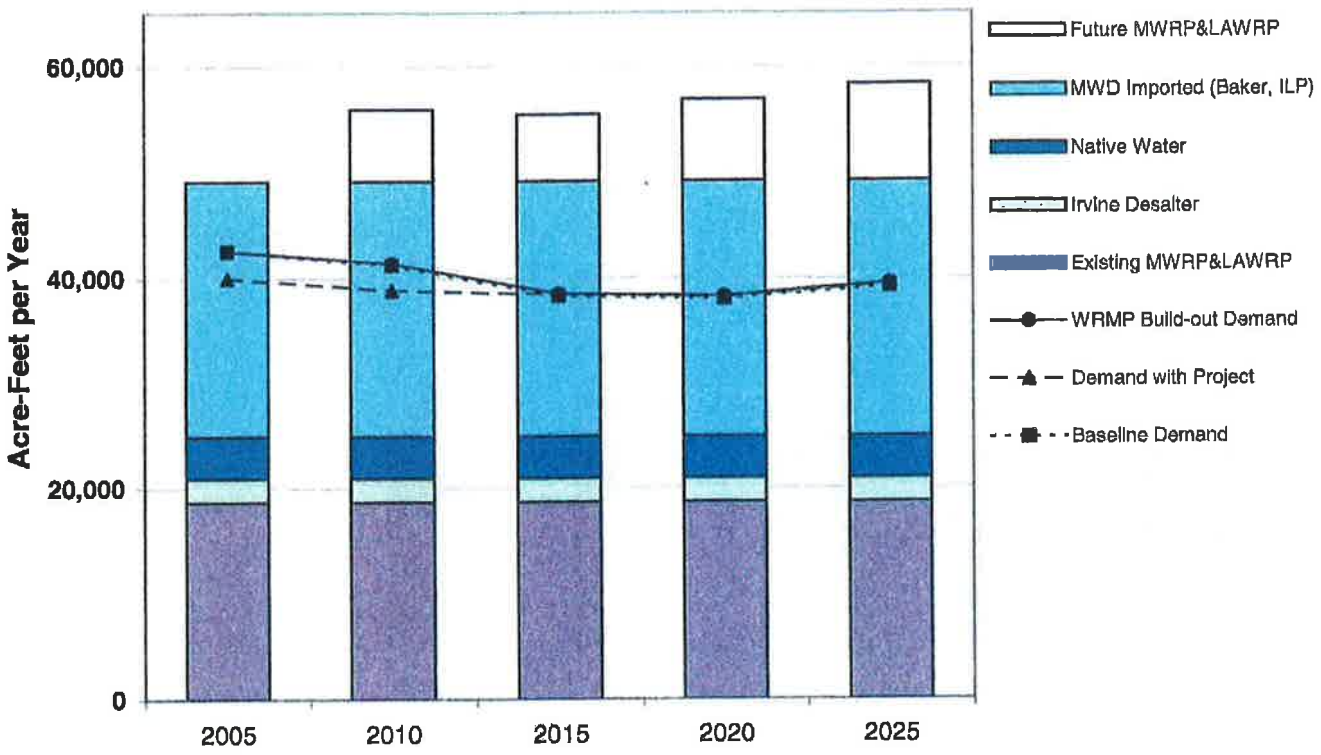
Notes: Supplies identical to Normal-Year based on Report on Metropolitan's Water Supplies (3/25/03) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water



(in cfs)	2005	2010	2015	2020	2025
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS	90.0	90.0	90.0	90.0	90.0
Irvine Subbasin	8.0	8.0	8.0	8.0	8.0
Irvine Desalter	6.0	6.0	6.0	6.0	6.0
Supplies Under Development					
West Irvine Wellfield	-	20.0	20.0	20.0	20.0
Maximum Supply Capability	228.1	248.1	248.1	248.1	248.1
Baseline Demand	167.6	198.0	209.7	221.2	228.0
Demand with Project	168.2	204.0	216.7	228.2	235.0
WRMP Build-out Demand	168.2	204.9	218.3	230.7	237.8
Reserve Supply with Project	65.3	44.1	31.4	19.9	13.1

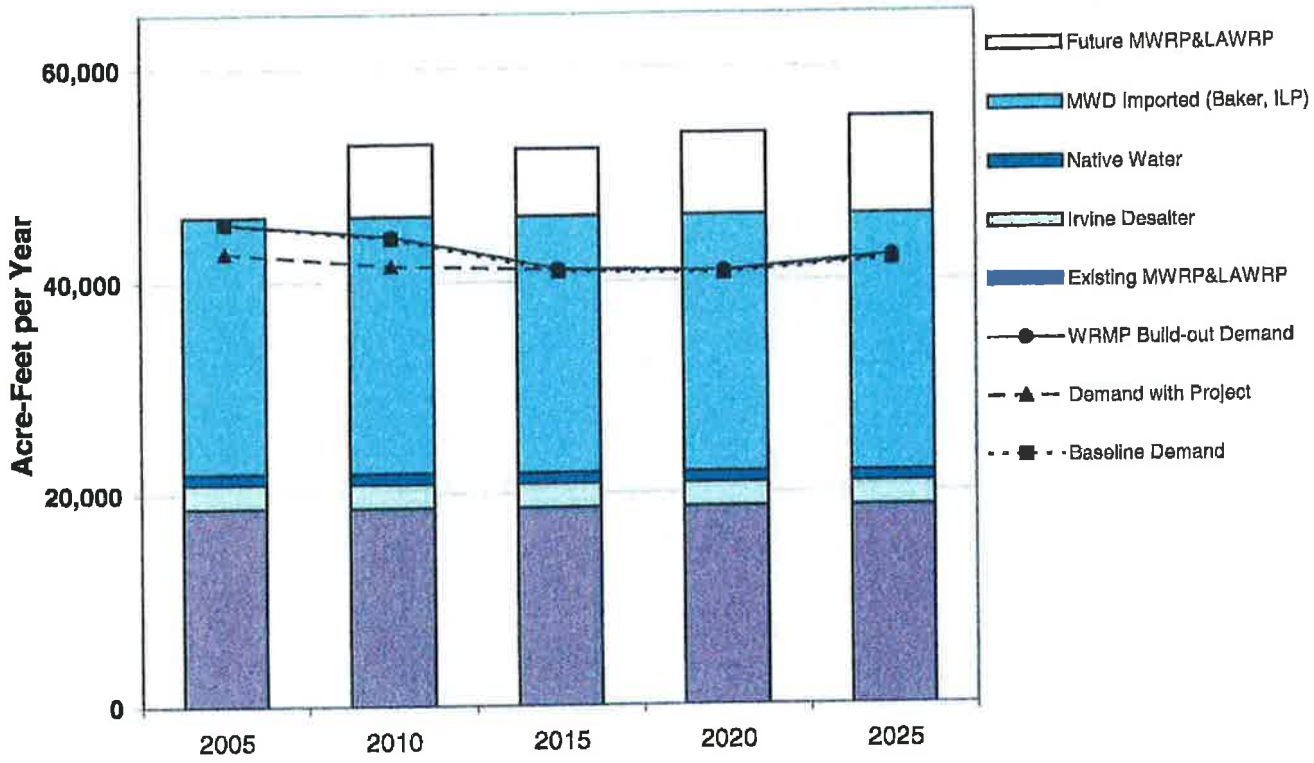
Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2005	2010	2015	2020	2025
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	24,262	24,262	24,262	24,262	24,262
Irvine Desalter	2,282	2,282	2,282	2,282	2,282
Native Water	4,000	4,000	4,000	4,000	4,000
Supplies Under Development					
Future MWRP&LAWRP	-	6,794	6,311	7,687	9,107
Maximum Supply Capability	49,201	55,995	55,512	56,888	58,308
Baseline Demand	42,580	41,247	38,303	38,020	39,231
Demand with Project	40,027	38,835	38,481	38,199	39,410
WRMP Build-out Demand	42,594	41,420	38,525	38,268	39,568
Reserve Supply with Project	9,174	17,160	17,030	18,689	18,898

Note: Downward trend reflects reduction in agricultural use over time.

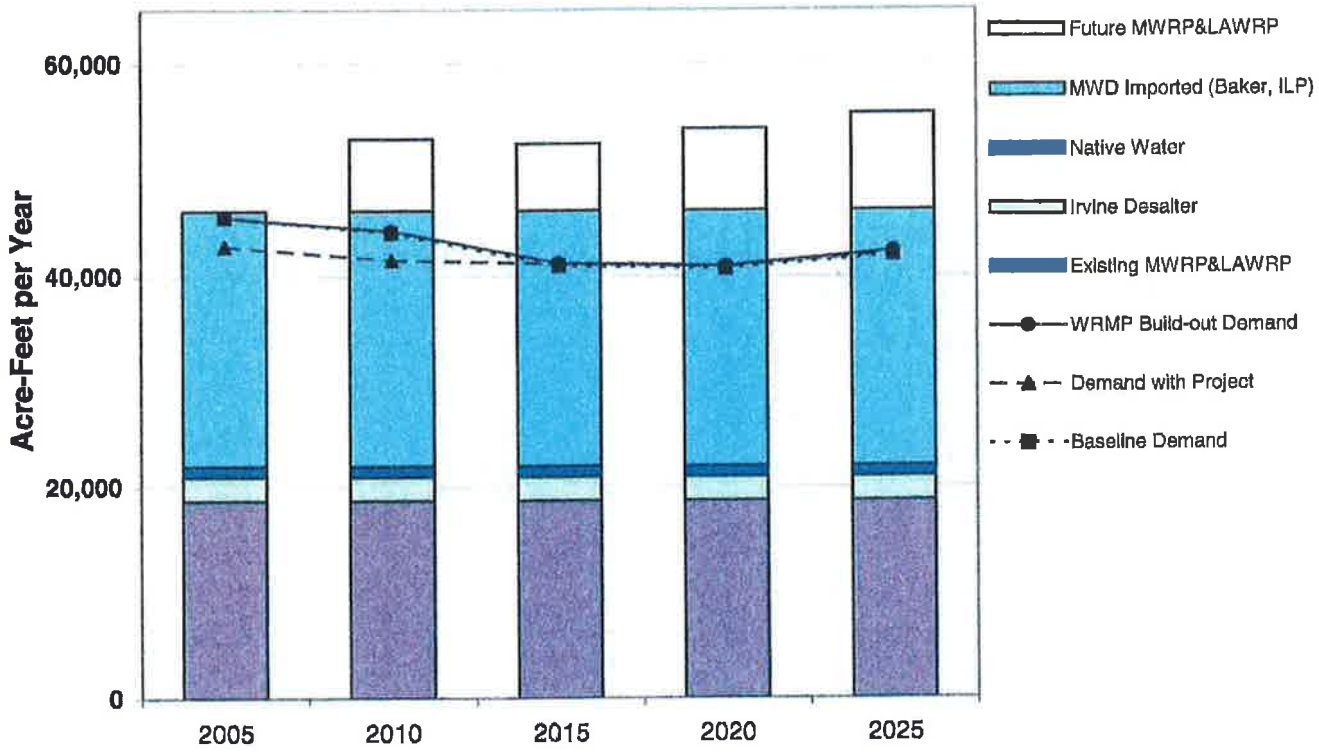
Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2005	2010	2015	2020	2025
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	24,262	24,262	24,262	24,262	24,262
Irvine Desalter	2,282	2,282	2,282	2,282	2,282
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	-	6,794	6,311	7,687	9,107
Maximum Supply Capability	46,201	52,995	52,512	53,888	55,308
Baseline Demand	45,561	44,134	40,984	40,682	41,978
Demand with Project	42,829	41,554	41,175	40,873	42,169
WRMP Build-out Demand	45,576	44,320	41,221	40,946	42,337
Reserve Supply with Project	3,372	11,441	11,337	13,015	13,139

Note: Downward trend reflects reduction in agricultural use over time.

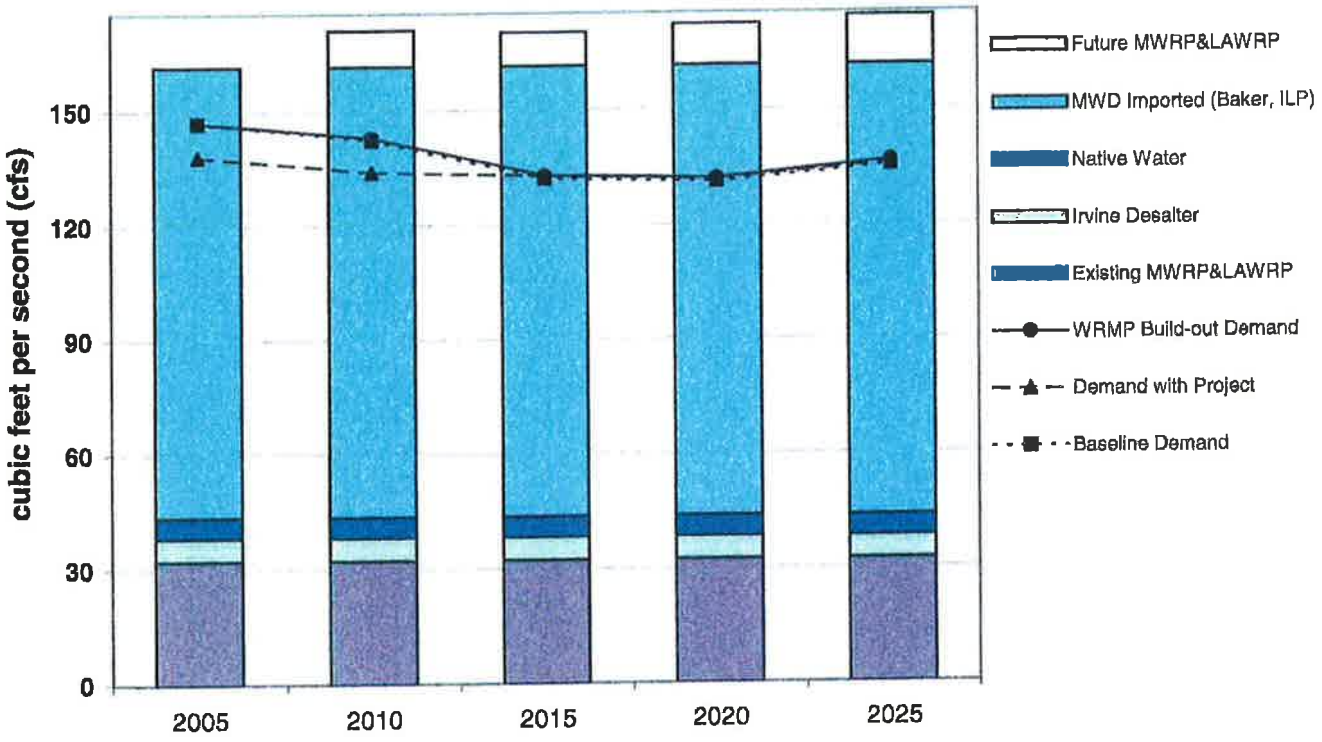
Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water



(in acre-feet per year)	2005	2010	2015	2020	2025
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	24,262	24,262	24,262	24,262	24,262
Irvine Desalter	2,282	2,282	2,282	2,282	2,282
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	-	6,794	6,311	7,687	9,107
Maximum Supply Capability	46,201	52,995	52,512	53,888	55,308
Baseline Demand	45,561	44,134	40,984	40,682	41,978
Demand with Project	42,829	41,554	41,175	40,873	42,169
WRMP Build-out Demand	45,576	44,320	41,221	40,946	42,337
Reserve Supply with Project	3,372	11,441	11,337	13,015	13,139

Note: Downward trend reflects reduction in agricultural use over time.

Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water



(in cfs)	2005	2010	2015	2020	2025
Current Nonpotable Supplies					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
Irvine Desalter	6.0	6.0	6.0	6.0	6.0
Native Water	5.5	5.5	5.5	5.5	5.5
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
Supplies Under Development					
Future MWRP&LAWRP	-	9.4	8.7	10.6	12.6
Maximum Supply Capability	161.4	170.8	170.1	172.0	174.0
Baseline Demand	147.0	142.4	132.3	131.3	135.5
Demand with Project	138.2	134.1	132.9	131.9	136.1
WRMP Build-out Demand	147.1	143.0	133.0	132.1	136.6
Reserve Supply with Project	23.2	36.7	37.2	40.1	37.9

Note: Downward trend reflects reduction in agricultural use over time.

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project:
IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

	Max Day (cfs)	Avg. Annual (AFY)		Annual by Category (AFY)
Current Supplies				
Potable - Imported				
East Orange County Feeder No. 2	41.4	16,652	1	
Allen-McColloch Pipeline	64.7	26,024	1	
Orange County Feeder	18.0	7,240	1	
Potable - Groundwater				
Dyer Road Wellfield	80.0	28,000	2	
Deep Aquifer Treatment System-DATS	10.0	7,200	2	
Irvine Desalter	6.0	3,982	3	
Irvine Subbasin	8.0	4,800	3	
Total Potable Current Supplies	228.1			93,898
Nonpotable - Reclaimed Water				
MWRP (18 mgd)	23.9	17,340	4	
LAWRP (5.5 mgd)	8.3	5,975	4	23,315
Nonpotable - Imported				
Baker Aqueduct	52.7	15,262	5	
Irvine Lake Pipeline	65.0	9,000	6	24,262
Nonpotable - Groundwater				
Irvine Desalter-Nonpotable	6.0	2,282	7	2,282
Nonpotable Native				
Irvine Lake	5.5	4,000	8	4,000
Total Nonpotable Current Supplies	161.4			53,859
Total Combined Current Supplies	389.5			147,757
Supplies Under Development				
Potable Groundwater - West Irvine Wellfield	20.0	12,700	9	12,700
Nonpotable Reclaimed - Future MWRP&LAWRP Reclaimed	20.0	14,450	10	14,450
Total Supplies (Current and Under Development)				
Potable Supplies	248.1			106,598
Nonpotable Supplies	181.4			68,309
Total Supplies	429.5			174,907

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 1, page 18).
2 Contract amount - See Potable Supply-Groundwater(iii).
3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity (cfs) is compatible with contract amount.
4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)
5 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 1, page 18).
6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.
7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.
8 Based on 69 years historical average of Santiago Creek inflow into Irvine Lake.
9 Estimated combined capacity of wells.
10 Future estimated MWRP & LAWRP reclaimed water production.

(2) Quantities received in prior years from existing sources identified in (a)(1):

Source	1980	1985	1990	1995	2000
Potable - imported	29,510	43,320	44,401	28,397	36,777
Potable - groundwater	827	38	10,215	20,020	20,919
Nonpotable - reclaimed	9,196	12,399	11,589	10,518	14,630
Nonpotable - imported*	9,556	12,260	24,899	2,333	16,343
Nonpotable - groundwater	-	36	816	1,834	2,890
Nonpotable - native	11,909	3,587	2,778	5,980	4,949
Total	60,998	71,639	94,699	69,082	96,508

*Includes water purchased for delivery to storage in Irvine Lake.

(Source: water purchase and production records.)

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.[1] [2]

•POTABLE SUPPLY - IMPORTED[3]

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),[4] identified as "Participants" therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD agrees to operate the AMP as any other MWD pipeline. MWD has the right to

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1 In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second ("cfs"). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands, and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

2 In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, IRWD has no current plans to do so.

3 See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

4 IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

operate the AMP on a "utility basis," meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD's capacity along the AMP, at MWD's expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 ("AMP Allocation Agreement"). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD's capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD's first four AMP connections, 49.69 cfs at IRWD's next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD's remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant's peak flow exceeds its capacity, the Participant shall "purchase" additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD's obligation under the AMP Sale Agreement to meet all Participants' demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or "FAP" Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 ("EOCF#2") (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 ("IRWD MWDOC Assignment Agreement"); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 ("IRWD Coastal Assignment Agreement"). East Orange County Feeder No. 2 ("EOCF#2"), a feeder linking Orange County with MWD's feeder system, was constructed pursuant to a joint powers

agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC"), provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

•<u>POTABLE SUPPLY - GROUNDWATER</u>

(i) Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of municipal appropriators' rights and may include overlying and riparian rights.

The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6)(c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999.

(ii) *Irvine Ranch Water District v. Orange County Water District*, OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield (DWRF) / Deep Aquifer Treatment System (DATS) (currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, restating May 5, 1988 agreement ("Irvine Subbasin Agreement"). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.)

The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations have been superseded as a result of TIC's commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights will be transferred from TIC to IRWD, and IRWD will assume the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD plans to treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC has reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC will transfer its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD's entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water will be delivered into the IRWD potable system, and the remainder will be delivered into the IRWD nonpotable system.

West Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine portion of the Basin, located approximately between the 55 freeway and Peters Canyon Channel. This supply is considered to be under development; however, one well has been drilled (1992), a site for an additional well and treatment facility has been acquired by IRWD, and IRWD is in negotiation for the purchase of a third well site. The production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•<u>NONPOTABLE SUPPLY - RECLAIMED</u>

Water Reclamation Plants (currently available)

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP).

MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

Water Reclamation Plant Expansion (under development)

IRWD has prepared its Waste Water Management and Action Program Final Environmental Impact Report (November, 1979) to address impacts associated with its Wastewater Management and Action Program (WMAP). IRWD plans to increase its capacity on the existing plant sites to produce sufficient reclaimed water to meet the projected demand in the year 2025. (Initial capacity increases that are within existing permit authorizations and CEQA compliance are underway.) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

•<u>NONPOTABLE SUPPLY - IMPORTED</u>[5]

Baker Pipeline (currently available)

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

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5 See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(i) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriative rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.[6] The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

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6 The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

•NONPOTABLE SUPPLY - GROUNDWATER

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater, paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

•IMPORTED SUPPLY - ADDITIONAL INFORMATION

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply, MWD has provided information concerning the availability of the supplies to its entire service area. This report, entitled "Report on Metropolitan's Water Supplies" (March 25, 2003) ("MWD Report"), is consistent with MWD's Regional Urban Water Management Plan (December, 2000) ("RUWMP"). The MWD Report indicates that MWD's regional water demand projections used in the RUWMP are 6% to 16% percent higher than the aggregated projections of MWD's member agencies. As stated in the MWD Report, "this difference indicates that Metropolitan's supplies, developed in accordance with this water supply update, provide a level of "margin of safety" or flexibility to accommodate delays in local resource development or adjustments in development plans."

The MWD Report is intended to serve four primary purposes, described therein

> "Address recent changes in demand and supply conditions as compared to Metropolitan's December 2000 Regional Urban Water Management Plan and February 11, 2002 *Report on Metropolitan's Supplies."*
>
> "Demonstrate Metropolitan's abilities to meet projected demands over the next 20 years and provide additional resource reserves as a "margin-of-safety" that mitigates against uncertainties in demand projections and risks in implementing supply programs."
>
> "Demonstrate that Metropolitan has a blueprint for water supply reliability and is implementing a comprehensive plan to secure reliable water supplies in accordance with policy principles and objectives established by Metropolitan's Board of Directors."
>
> "Provide a planning tool for local and retail agencies providing local water supplies."

The MWD Report finds "Metropolitan has and will continue to have the capability to develop supplies that are available at least ten years in advance of need and

ensure water supply reliability." Furthermore, demand and supply comparisons "demonstrate that sufficient supplies can be reasonably relied upon to meet projected supplemental demands and that additional reserve supplies could provide a "margin of safety" to mitigate against uncertainties in demand projections and risks in fully implementing all supply programs under development."

More particularly, MWD has documented sufficient *currently available* supplies to meet 100% of MWD's member agencies' supplemental water demands for 20 years under average-year conditions, for 15 years under multiple dry-year conditions (with 8-26% reserve capacity), and for 15 years under single dry-year conditions (with 8-25% reserve capacity). With the addition of *supplies under development*, MWD will be able to meet 100% of its agencies' supplemental water needs under all supply and demand conditions through 2030 with 20-25% reserve capacity. Reference is made to the MWD Report for more detailed discussion. It is anticipated that MWD will revise its regional supply availability analysis annually to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the Assessment Law provides for the use of UWMP information to support water supply assessments. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD Report. IRWD has not been made aware of any significant changes that would adversely affect those conclusions. In a detailed May 14, 2003 report, San Diego County Water Authority (SDCWA) questioned several conclusions of the MWD Report. MWD has provided a reply dated July 17, 2003, containing a general response that SDCWA's assertions are based on outdated water resource management strategies. MWD's reply discusses several MWD supply capabilities which MWD states were overlooked by SDCWA, and is accompanied by MWD's detailed responses to the specific criticisms.

MWD's margin of safety in its demand projections and MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of west Irvine wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the subregional and local distribution systems.

With respect to west Irvine wells (PR No.19540) and the MWRP expansion (PR Nos. 202147 and 20276), IRWD has adopted its fiscal year 2004/05 capital

budget on June 14, 2004 (Resolution No. 2004-20), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AA public bond ratings. IRWD has approximately $500 million (water) and $720 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval. Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. Water has not been produced from the Irvine Desalter, which has not been constructed, but other Irvine Subbasin water has been produced by IRWD. As described under Potable Supply - Groundwater, paragraph (iv), TIC also holds water rights and contractual entitlements to the Irvine Subbasin groundwater, but existing contract provides that those rights and entitlements will be transferred to IRWD. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2000 UWMP, section III-3.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin ("Basin") is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 ("MPR"). The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 297,192 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over $250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an "overdraft" condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD also operates the basin to keep the target dewatered basin storage at 200,000 acre-feet as an appropriate accumulated overdraft. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term "mining" overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (Source: 2002-2003 Engineer's Report on Groundwater Conditions, Water Supply and

Basin Utilization in the Orange County Water District; OCWD MPR, *supra.*)

OCWD's efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD's management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

Year (ending 6/30)	DRWF/DATS	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD[7]
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744
2001	20,377	1,687	3,967	543
2000	20,580	2,890	4,862	346

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from the its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's production from the Subbasin has declined as its use of the Subbasin for agricultural water has diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Under the Irvine Subbasin Agreement, all of the Subbasin production capability will be turned over by TIC to IRWD. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply, with wells in the West Irvine Wellfield (characterized as *under-development* supplies herein). (IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.)

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7 The water produced from IRWD's Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF[8]	W Irvine[9]	Subbasin[10]	IDP (Potable)	IDP (Nonpotable)
2005	35,200	0	4,800	3,982	2,282
2010	35,200	12,700	4,800	3,982	2,282
2015	35,200	12,700	4,800	3,982	2,282
2020	35,200	12,700	4,800	3,982	2,282
2025	35,200	12,700	4,800	3,982	2,282

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. According to the OCWD MPR, production from the Basin can be maintained at 75% of the Basin producers' 2020 demand level, including demands from areas in IRWD and other producers to be annexed to OCWD.[11]

Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD is moving forward with a number of replenishment supply projects, including the Groundwater Replenishment System project ("GWRS"). The OCWD MPR indicates that the GWRS will produce over 100,000 afy of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or

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8 See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply.

9 Under development.

10 Subbasin potable water production (other than Irvine Desalter Project). Amounts shown are available as potable-quality production, without treatment.

11 OCWD adopted a basin production percentage of 66% for 2004 and the basin production percentage could be further reduced. This is anticipated by IRWD to be a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. This reduction is not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

5. ☐ This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Date of prior assessment: _____. Check all of the following that apply:

☐ Changes in the Project have substantially increased water demand.

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

2000 Urban Water Management Plan, Irvine Ranch Water District/Los Alisos Water District, December, 2000

The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California, December, 2000

Southern California's Integrated Resources Plan, Metropolitan Water District of Southern California, March, 1996

Report on Metropolitan's Water Supplies, Metropolitan Water District of Southern California, March 25, 2003

Master Plan Report, Orange County Water District, April, 1999

2002-2003 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

Review of Report on Metropolitan's Water Supplies, San Diego County Water Authority Water Policy Committee board letter, May 14, 2003

Response to San Diego County Water Authority Review of the "Report on Metropolitan's Water Supplies", Metropolitan Water District of Southern California letter, July 17, 2003

Exhibit A

Depiction of Project Area

Exhibit A

Opportunities Study Properties

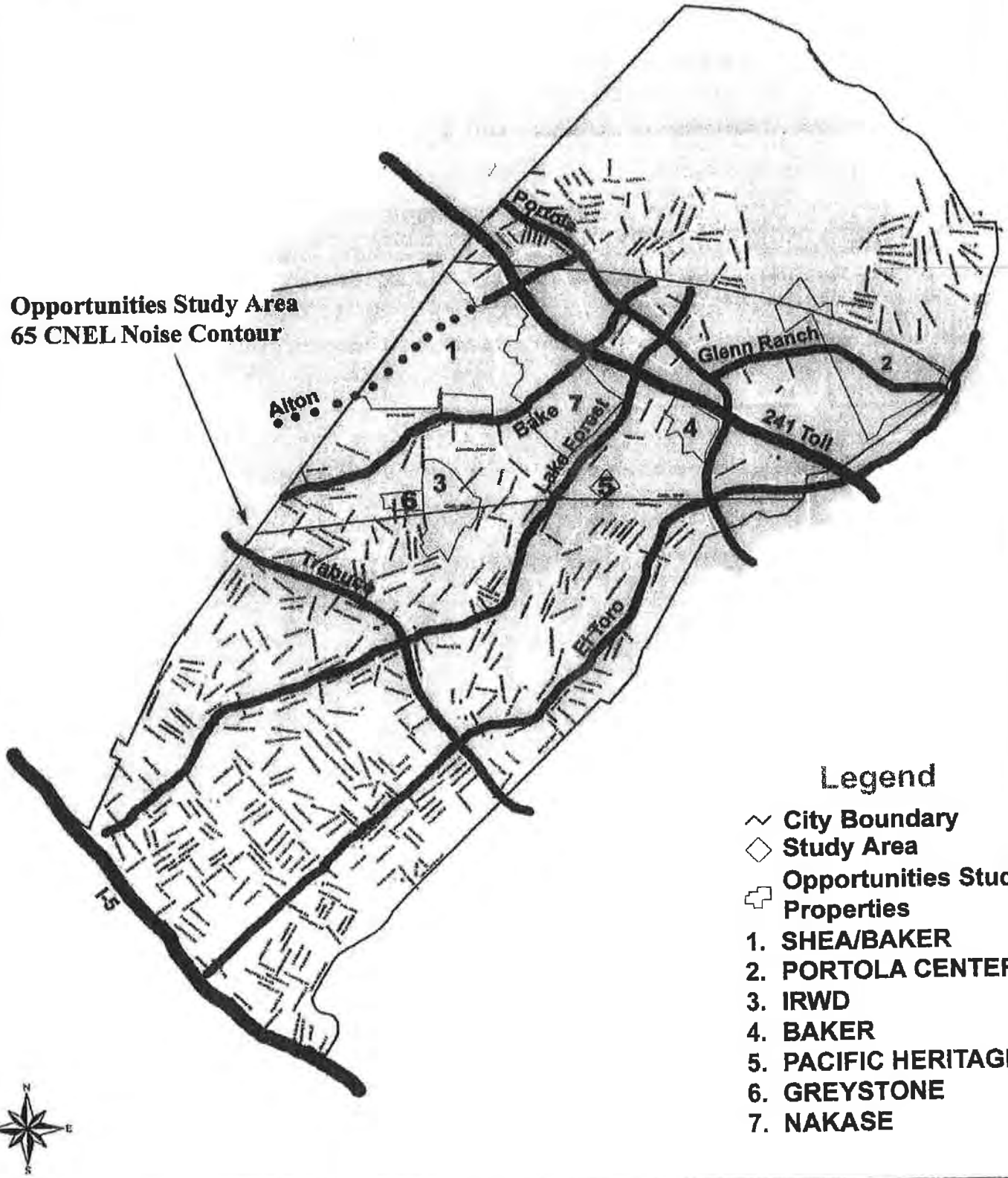


Exhibit B

Uses Included in Project

Exhibit B

CITY OF LAKE FOREST

October 11, 2004

ENGINEERING AND PLANNING

OCT 13 2004

IRVINE RANCH
WATER DISTRICT

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*)

The City of Lake Forest hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that an Environmental Impact Report is required for the project.

Proposed Project Information

Project Title: Opportunities Study

Location of project: The proposed project focuses on approximately 950 acres of vacant land located in the City of Lake Forest, Orange County, north and south of the Foothill Transportation Corridor and adjacent to the former MCAS El Toro. The project area is the area formerly encumbered by the 65 Community Noise Equivalent Level (CNEL) contours, which restricted the development of noise-sensitive land uses in the project area due to aircraft flight patterns at the former MCAS El Toro (see Figure 1 in the attached Project Description). There are thirteen vacant properties within the project area, ranging in size from four acres to 380 acres. Eleven properties are south of the Foothill Transportation Corridor and two are north of the Corridor. The majority of the properties are not contiguous. Eight properties are involved with the Opportunities Study, totaling approximately 950 acres.

☒ No Water Supply Assessment has been prepared for this project or area. This application requests a Water Supply Assessment, because this project meets the criteria for preparation of a Water Supply Assessment.

☐ Changes in the project have substantially increased water demand

☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project

☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment

25550 Commercentre Dr., Suite 100
Lake Forest, CA 92630
(949) 461-3400
City Hall Fax: (949) 461-3511
Building/Planning/Public Works Fax: (949) 461-3512

Type of Development:

☐ *Residential*: No. of dwelling units: 5,844

☐ *Mixed Use - Shopping center or business, Commercial office, Industrial, manufacturing, processing or industrial park:* Sq. ft. of floor space 648,720

☐ *Other*: _____

Please see the attached project description and absorption schedule for more detailed information on the project and development timing.

Total acreage of project: 950

Acreage devoted to landscape:
Greenbelt/Landscaped Slopes/Landscaped Medians 115 golf course 0 parks 96
Agriculture 0 other landscaped areas none

Number of schools Approx. 1 - 2 Number of public facilities Community Center (44,000 sq ft) and City Hall (44,000 sq ft)

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:
None

What is the current land use of the area subject to a land use change under the project?
The properties that are part of the Opportunities Study total more than 950 acres. The properties are vacant land; however, the majority of this land has been permitted for development of more than seven million square feet of industrial and commercial land uses

Is the project included in the existing General Plan? Yes; the properties are designated for commercial and office land uses.

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water

District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF LAKE FOREST

By: Jeremy Krout
Jeremy Krout, Associate Planner

REQUEST RECEIVED:

Date: Kellei Wilson Oct. 28, 2004

By: _____
Irvine Ranch Water District

REQUEST COMPLETE:

Date: 11/4/04

By: _____
Irvine Ranch Water District

Attachments: Absorption Schedule
Project Description

June 11, 2012
Prepared by: K. Welch
Submitted by: P. Weghorst/G. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

SUSPENSION OF NATURAL TREATMENT SYSTEM SITE NO. 62 AND SMALL AREA MITIGATION SITE 1 PROJECTS

SUMMARY:

The Natural Treatment System Site No. 62 (NTS 62) and San Joaquin Marsh Small Area Mitigation Site 1 (SAMS 1) projects are proposed to develop and enhance wetland habitat and to improve the quality of surface water runoff within the San Diego Creek Watershed. The NTS 62 project was awarded a grant through the United States Environmental Protection Agency (EPA) and the District entered into a grant agreement in 2007. Based on uncertainty associated with the regulatory environment under which the projects would be constructed and operated, staff recommends not proceeding with construction of the projects. Staff recommends that the Board authorize staff to notify the EPA of the District's intent not to construct the NTS 62 project and to request termination of the grant agreement.

BACKGROUND:

The proposed NTS 62 project, included in the NTS Master Plan, is a water quality treatment wetland that would provide additional water quality benefits to surface flows in San Diego Creek by expanding upon the current San Joaquin Marsh system. The SAMS 1 site is a 16.9-acre wetlands mitigation site constructed by The Irvine Company. The SAMS 1 site was planted with riparian trees in 1990 and maintained by The Irvine Company until the site was deemed to have successfully achieved mitigation criteria. IRWD took possession of the site in 1995. The site is currently dominated by relatively open native riparian woodland and the trees on a large portion of the site are in poor health and many have died or are dying, mainly due to a lack of sufficient water supply.

In early 2010, an opportunity was recognized to improve the riparian vegetation and water supply conditions at the SAMS 1 site in conjunction with the NTS 62 project by conveying surface flow to NTS 62 through the SAMS 1 site via an earthen channel. The SAMS 1 project would include construction of conveyance pipelines that will connect the existing San Joaquin Marsh discharge and San Diego Creek Pump Station to the SAMS 1 site and construction of an open conveyance earthen channel through the northwestern portion of the site.

In August 2007, IRWD was awarded a grant from the EPA for the NTS 62 project. The agreement calls for the EPA to cost-share 46.7% of approved costs for the project (design, construction, sampling and analysis plan development and permitting) up to $992,800. In October 2009, the EPA granted a schedule extension through December 31, 2012. Staff has been working to complete the project submittals including preliminary and final design, a Quality Assurance Project Plan (QAPP), and regulatory agency permits. A draft QAPP was prepared and submitted to EPA and designs were finalized in March 2012.

Regulatory Uncertainties:

Significant uncertainty exists with respect to the existing and future regulatory environment under which the projects would be constructed and operated. The Regional Water Quality Control Board has inferred that the projects and the San Joaquin Marsh may be regulated and managed under the federal Clean Water Act. Based on this uncertainty, staff recommends not proceeding with construction of the NTS 62 and SAMS 1 projects. Staff recommends that the Committee direct staff to notify the EPA that the District intends not to construct the NTS 62 project and to request that the grant agreement be terminated. The EPA has indicated that if the grant agreement was terminated, that the District would receive credit on the cost-match percentage of 46.70% for all approved expenditures to date including the completion of design.

The designs for the NTS 62 and SAMS 1 projects are complete. These designs will be retained by the District for use in the future at such a time when the regulatory environment is conducive to the construction and operation of the projects. Staff will withdraw permit applications for the projects.

FISCAL IMPACTS:

As of March 31, 2012 the District has allowable expenditures of $631,377 for planning, design, sampling and analysis plan development and regulatory coordination costs for the NTS 62 project. As of March 31, 2012, the EPA has paid IRWD $152,235 towards the grant award for the project. Upon termination of the grant agreement with the EPA, staff will invoice all remaining allowable expenditures on the approved 46.70% cost-share percentage. It is expected that IRWD will receive at least $142,000 additional matching funds as a result of this final invoice.

ENVIRONMENTAL COMPLIANCE:

The NTS 62 project is subject to CEQA and in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7, an Environmental Impact Report (SCH # 2002021120) was certified by IRWD in 2004.

The SAMS 1 project is subject to CEQA and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration for the SAMS 1 Project was filed with the County of Orange on October 26, 2011 and an IS/MND was made available for public review for a period of 30 days beginning October 26, 2011 and concluded November 28, 2011.

COMMITTEE STATUS:

This item was reviewed at the San Joaquin Marsh Ad Hoc Committee on May 31, 2012.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE STAFF TO NOTIFY THE ENVIRONMENTAL PROTECTION AGENCY OF THE DISTRICT'S INTENT NOT TO CONSTRUCT THE NATURAL TREATMENT SYSTEM SITE 62 PROJECT AND REQUEST THAT THE GRANT AGREEMENT BE TERMINATED.

LIST OF EXHIBITS:

None.

June 11, 2012
Prepared by: R. Thatcher/M. Hoolihan
Submitted by: K. Burton
Approved by: Paul Cook

CONSENT CALENDAR

QUITCLAIM OF REAL PROPERTY

SUMMARY:

IAC Apartment Development JV LLC ("IAC") is in the process of developing the former Lion Country Safari site into Los Olivos Village. RBF Consulting, on behalf of IAC, has requested that the District quitclaim the existing sewer pipeline easements per Instrument Nos. 88-125043 and 88-281211. The facilities within these easements were relocated as part of IAC's development of this site. New easements for the relocated facilities have already been dedicated to the District on the subdivision map of Tract No. 17216. Staff recommends the Board adopt a resolution approving execution of the Quitclaim Deed to IAC, which is attached as Exhibit "A". The Quitclaim Deed to IAC is attached as Exhibit "B" and a map showing the location of the easements to be quitclaimed and the new easement areas is attached as Exhibit "C".

FISCAL IMPACT:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable. Not a project as defined under CEQA.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2012-___

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
APPROVING EXECUTION OF THE QUITCLAIM DEED TO
IAC APARTMENT DEVELOPMENT JV LLC

LIST OF EXHIBITS:

Exhibit "A" – Resolution
Exhibit "B" – Quitclaim Deed
Exhibit "C" – Location Map

EXHIBIT "A"

RESOLUTION NO. 2012 - _____

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT
APPROVING EXECUTION OF THE QUITCLAIM DEED TO
IAC APARTMENT DEVELOPMENT JV LLC

WHEREAS, IAC Apartment Development JV LLC, has requested that the Irvine Ranch Water District (IRWD) Board approve the quitclaim of the existing sewer pipeline easements that were granted to IRWD per Instrument Nos. 88-125043 and 88-281211, both of Official Records of Orange County; and

WHEREAS, the purpose of the quitclaim is to allow the development of the property known as Los Olivos Village by IAC Apartment Development JV LLC and clear title; and

WHEREAS, relocated sewer facilities were installed and a new easement has been dedicated on the map of Tract No. 17216; and

WHEREAS, staff has reviewed and confirmed that the easements herein referred can be quitclaimed; and

WHEREAS, the proposed Quitclaim has been presented to this Board of Directors, copy of which is attached hereto as Exhibit "B".

NOW, THEREFORE, BE IT RESOLVED, the Quitclaim Deed attached hereto as Exhibit "B" to IAC Apartment Development JV LLC, a Delaware limited liability corporation, herein described and hereby is approved and execution by the District's officers is authorized.

ADOPTED, SIGNED and APPROVED this 11th day of June, 2012.

_____
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
IRWD Legal Counsel

By _____

EXHIBIT "B"

RECORDING REQUESTED BY AND WHEN RECORDED RETURN TO:

The Irvine Company
550 Newport Center Drive
Newport Beach, CA 92660
Attn: Hilary Shalla

ASSESSOR PARCEL NO(S).:

_____

(Space Above This Line For Recorder's Use)

IRWD Doc. No. E_____
IRWD Res. No. _____

DOCUMENTARY TRANSFER TAX $ consideration less than $100
_____ Computed on the consideration or value of property conveyed; OR
_____ Computed on the consideration or value less liens or encumbrances remaining at time of sale.

_____
Signature or Declarant or Agent determining tax – Firm Name

EASEMENT QUITCLAIM DEED

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, IRVINE RANCH WATER DISTRICT, a California Water District organized under and existing pursuant to Section 34000 *et seq.* of the California Water Code, does hereby REMISE, RELEASE, AND FOREVER QUITCLAIM to IAC APARTMENT DEVELOPMENT JV LLC, a Delaware limited liability company, or the current owner of record,

all RIGHT, TITLE and INTEREST in the real property located in the City of City of Irvine, County of Orange, State of California, as more particularly described in Exhibit "A", attached hereto and by this reference, made a part hereof.

The rights hereby quitclaimed are not necessary or useful in the performance of the duties of said Irvine Ranch Water District.

Dated: _____, 2012

IRVINE RANCH WATER DISTRICT,
a California Water District

By: _____
Name: Mary Aileen Matheis
Title: President

By: _____
Name: Leslie Bonkowski
Title: District Secretary

MAIL TAX STATEMENTS TO THE ABOVE ADDRESS

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

On _____, 2012, before me, _____, a Notary Public in and for said State, personally appeared Mary Aileen Matheis and Leslie Bonkowski , who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (SEAL)

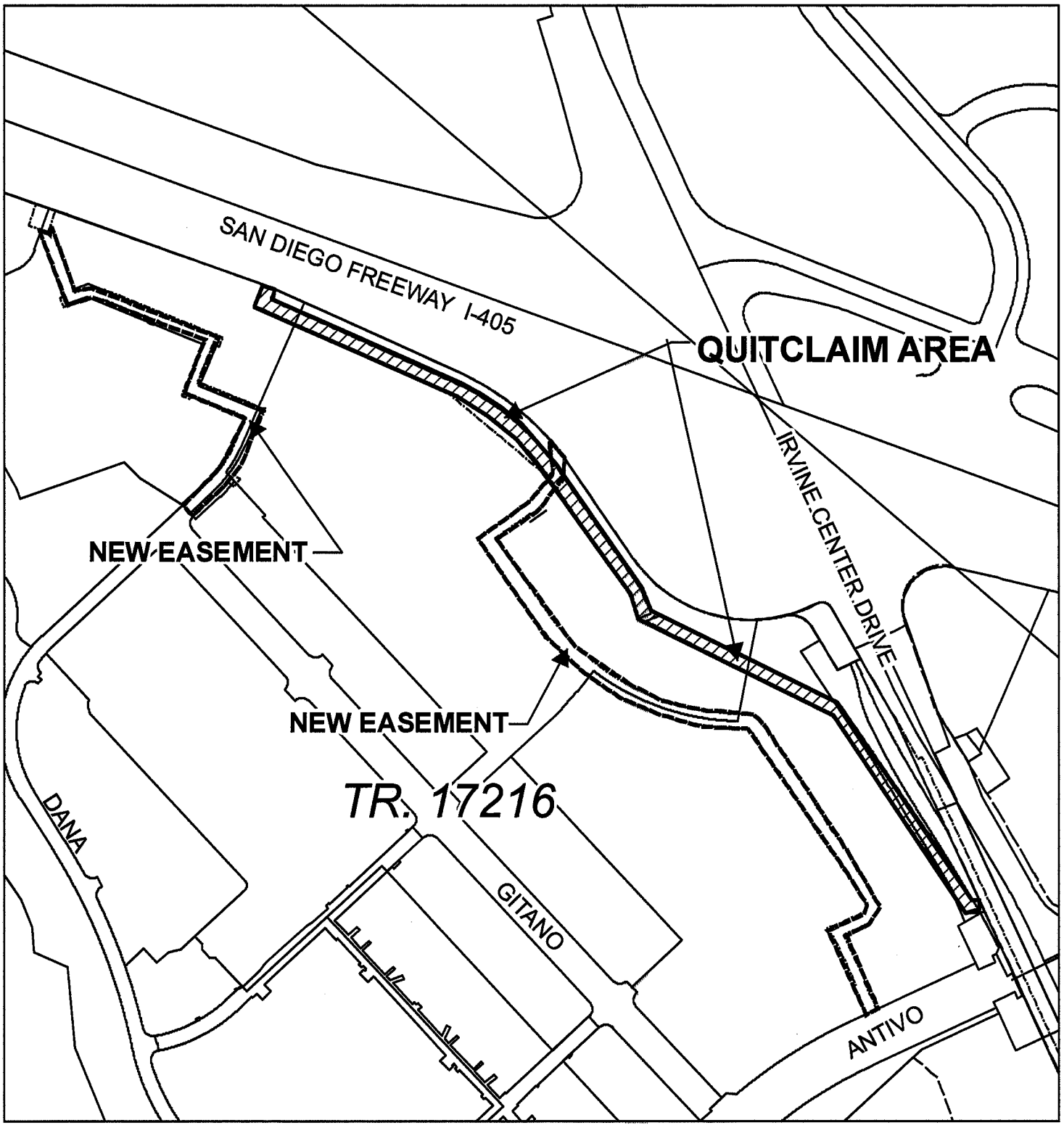
Notary Public in and for said State

EXHIBIT "A"

Legal Description

That certain real property in the City of Irvine, County of Orange, State of California being those certain easements granted to Irvine Ranch Water District in the Grant of Easements recorded March 18, 1988 as Instrument No. 88-125043 and June 14, 1988 as Instrument No. 88-281211, both of Official Records in the Office of the County Recorder of said County.

EXHIBIT "C"
LOCATION MAP



QUITCLAIM OF SEWER PIPELINE EASEMENTS
TO IAC APARTMENT DEVELOPMENT JV LLC

IRVINE RANCH WATER DISTRICT

June 11, 2012
Prepared by: C. Kessler
Submitted by: P. Weghorst /G. P. Heiertz
Approved by: Paul Cook

CONSENT CALENDAR

ORANGE PARK ACRES WELL REPLACEMENT PROJECT
FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

SUMMARY:

The Orange Park Acres (OPA) Well Replacement Project (Project) is proposed to replace the groundwater well and ancillary equipment located at the former OPA Mutual Water Company Headquarters at 678 N. Gravier Street, Orange. A Final Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared for the Project. Staff recommends that the Board adopt the Final IS/MND and approve the Project.

BACKGROUND:

In June of 2011, IRWD circulated the OPA Wells Project Draft IS/MND for public review. This Draft IS/MND analyzed the destruction of the existing poor performing OPA Well-3 and the construction, installation, testing and operation of two new groundwater wells (OPA Well-1 and OPA Well-2) located at the former OPA Mutual Water Company Headquarters at 678 N. Gravier Street, Orange. OPA Well-1was proposed to replace the existing OPA Well-3 and OPA Well-2 was proposed to serve the future demands of the Santiago Hills II and East Orange developments. IRWD has since determined that environmental review of IRWD OPA Well-2 is not necessary at this time. Therefore, IRWD modified the project to only include OPA Well-1 and modified the IS/MND accordingly.

A modified Draft IS/MND for the Project was circulated pursuant to the California Environmental Quality Act (CEQA) and comment letters were received from the City of Orange, Department of Toxic Substances Control (DOTSC), East Orange County Water District (EOCWD), and the Native American Heritage Commission (NAHC). A Response to Comments section was added to the Draft IS/MND and the document was modified where necessary to accommodate the comments. The Final IS/MND is attached as Exhibit "A" and is titled Orange Park Acres Well Replacement Project Final Initial Study/Mitigated Negative Declaration. Staff recommends the Board adopt the Final IS/MND and approve the Orange Park Acres Well Replacement Project.

The location and custodian of the documents or other material which constitute the record of proceedings upon which the proposed decision is based are at Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, CA 92618, Attn: Leslie Bonkowski.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item has not been reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD FIND ON THE BASIS OF THE WHOLE RECORD BEFORE IT (INCLUDING THE INITIAL STUDY AND THE COMMENTS RECEIVED), THAT THERE IS NO SUBSTANTIAL EVIDENCE THAT THE ORANGE PARK ACRES WELL REPLACEMENT PROJECT WILL HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND THAT THE NEGATIVE DECLARATION REFLECTS IRWD'S INDEPENDENT JUDGMENT AND ANALYSIS; ADOPT THE PROPOSED NEGATIVE DECLARATION FOR THE ORANGE PARK ACRES WELL REPLACEMENT PROJECT AND MITIGATION MONITORING AND REPORTING PROGRAM INCORPORATED WITHIN THE MITIGATED NEGATIVE DECLARATION AND APPROVE THE PROJECT; AND DIRECT STAFF TO POST AND FILE A NOTICE OF DETERMINATION AND SUBMIT PAYMENT FOR THE CALIFORNIA DEPARTMENT OF FISH AND GAME FILING FEE.

LIST OF EXHIBITS:

Exhibit "A" – Orange Park Acres Well Replacement Project Final Initial Study/Mitigated Negative Declaration

FINAL

IRVINE RANCH WATER DISTRICT
ORANGE PARK ACRES WELL REPLACEMENT PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PREPARED FOR:

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

PREPARED BY:

ICF International
1 Ada, Suite 100
Irvine, CA 92618
Contact: Chad Beckstrom
949-333-6600

June 2012

ICF International. 2012. Irvine Ranch Water District Orange Park Acres Well Replacement Project Initial Study/Mitigated Negative Declaration. Final. June. (ICF 00550.09.) Irvine, CA. Prepared for Irvine Ranch Water District, Irvine, CA.

Contents

Tables

Figures

Acronyms and Abbreviations

AB 32	Assembly Bill 32
AELUP	Airport Environs Land Use Plan
AFY	acre feet per year
AQMP	Air Quality Management Plan
Basin	Orange County Groundwater Basin
BAU	Business As Usual
BEA	Basin Equity Assessment
bgs	below ground surface
BMPs	Best Management Practices
BPP	Basin Production Percentage
Cal/OSHA	California Occupational Safety and Health Administration
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CMU	concrete masonry unit
Committee	Joint Groundwater Engineering and Management Committee
DAMP	Drainage Area Management Plan
EFZs	Earthquake Fault Zones
EIR	Environmental Impact Report
EOCWD	East Orange County Water District
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FTA	Federal Transit Administration
GHG	greenhouse gas
gpm	gallons per minute
IRWD	Irvine Ranch Water District
IS/MND	Initial Study/Final Mitigated Negative Declaration
IS	Initial Study
LAFCO	Local Agency Formation Commission
LDR	Low Density Residential
LST	Localized Significance Threshold
MGD	Million gallons per day
MND	Mitigated Negative Delcaration
MUTCD	Manual on Uniform Traffic Control Devices
NCCP/HCP	Natural Community Conservation Plan and Habitat Conservation

NPDES	National Pollutant Discharge Elimination System
OCFA	Orange County Fire Authority
OCFCD	Orange County Flood Control District
OCHCA	Orange County Health Care Agency
OCTA	Orange County Transportation Authority
OCWD	Orange County Water District
OPA	Orange Park Acres
OPAMWC	Orange Park Acres Mutual Water Company
OSHA	Occupational Safety and Health Administration
PLC	Programmable Logic Controller
PPV	peak particle velocity
RA	Replenishment Assessment
RCPG	Regional Comprehensive Plan and Guide
SAMP	Subarea Master Plan
SARWQCB	Santa Ana Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SOI	Sphere of Influence
SWPPP	stormwater pollution prevention plan
TMDL	total maximum daily load

Chapter 1
Introduction

Overview

Irvine Ranch Water District (IRWD) has prepared this Final Initial Study/Mitigated Negative Declaration (IS/MND) to evaluate the potential environmental consequences associated with replacing a groundwater well located at the former Orange Park Acres (OPA) Mutual Water Company Headquarters, 678 N. Gravier Street, in Orange. Prior to consideration of the project by the IRWD Board of Directors, the proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA).

Authority

The preparation of this IS/MND is governed by two principal sets of documents: CEQA (Public Resources Code Section 21000 *et seq.)* and the State CEQA Guidelines (California Code of Regulations Section 15000 *et seq.*).

One of the main objectives of CEQA is to disclose to the public and decision makers the potential environmental impacts of proposed activities. CEQA requires that the lead agency determine whether a project is subject to CEQA review or exempt under statutory exemptions (CEQA Guidelines, Article 18, Sections 15260 *et seq*.) or categorical exemptions (CEQA Guidelines, Article 19, Section 15300 *et seq*.). IRWD determined that the proposed project is not exempt from CEQA and therefore proceeded with the preparation of an initial study (IS) to determine whether an environmental impact report, a negative declaration, or a mitigated negative declaration (MND) is appropriate. IRWD is the lead agency for the proposed project under CEQA.

The preparation of an IS is guided by Section 15063 of the State CEQA Guidelines, and Sections 15070–15075 of Article 6 guide the process for the preparation of an MND. Where appropriate and supportive to an understanding of the issues, reference will be made to the statute, the State CEQA Guidelines, or appropriate case law.

This IS/MND meets CEQA content requirements by including a project description; a description of the environmental setting, potential environmental impacts, and mitigation measures for any significant impacts; discussion of consistency with plans and policies; and names of preparers.

Scope of the Initial Study/Mitigated Negative Declaration

This IS/MND evaluates the proposed project's impacts on the following resource topics:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

Impact Terminology

The following terminology is used to describe the level of significance of impacts.

- A finding of *no impact* is appropriate if the analysis concludes that the proposed project would not affect the particular resource in any way.
- An impact is considered *less than significant* if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that it would cause no substantial adverse change to the environment with the inclusion of environmental commitments that have been agreed to by the applicant.
- An impact is considered *potentially significant* if the analysis concludes that it could have a substantial adverse impact on the environment.

Organization of the Initial Study/Mitigated Negative Declaration

The content and format of this report are designed to meet the requirements of CEQA. The report contains the following sections.

- Chapter 1, "Introduction," identifies the purpose and scope of this IS/MND and the terminology used in the report.

- Chapter 2, "Project Description and Environmental Setting," identifies the location, setting description, background, and planning objectives of the proposed project and describes the proposed project in detail.
- Chapter 3, "Environmental Checklist," presents the CEQA environmental checklist and responses for each resource topic in the checklist. This section includes a brief setting section for each resource topic and identifies the impacts of implementing the proposed project and identifies any mitigation measures.
- Chapter 4, "References," identifies all printed and Internet references and individuals cited in this IS/MND.
- Chapter 5, "List of Preparers," identifies the individuals who prepared this report and their roles in the proposed project.

Chapter 2
Project Description and Environmental Setting

Introduction and Overview

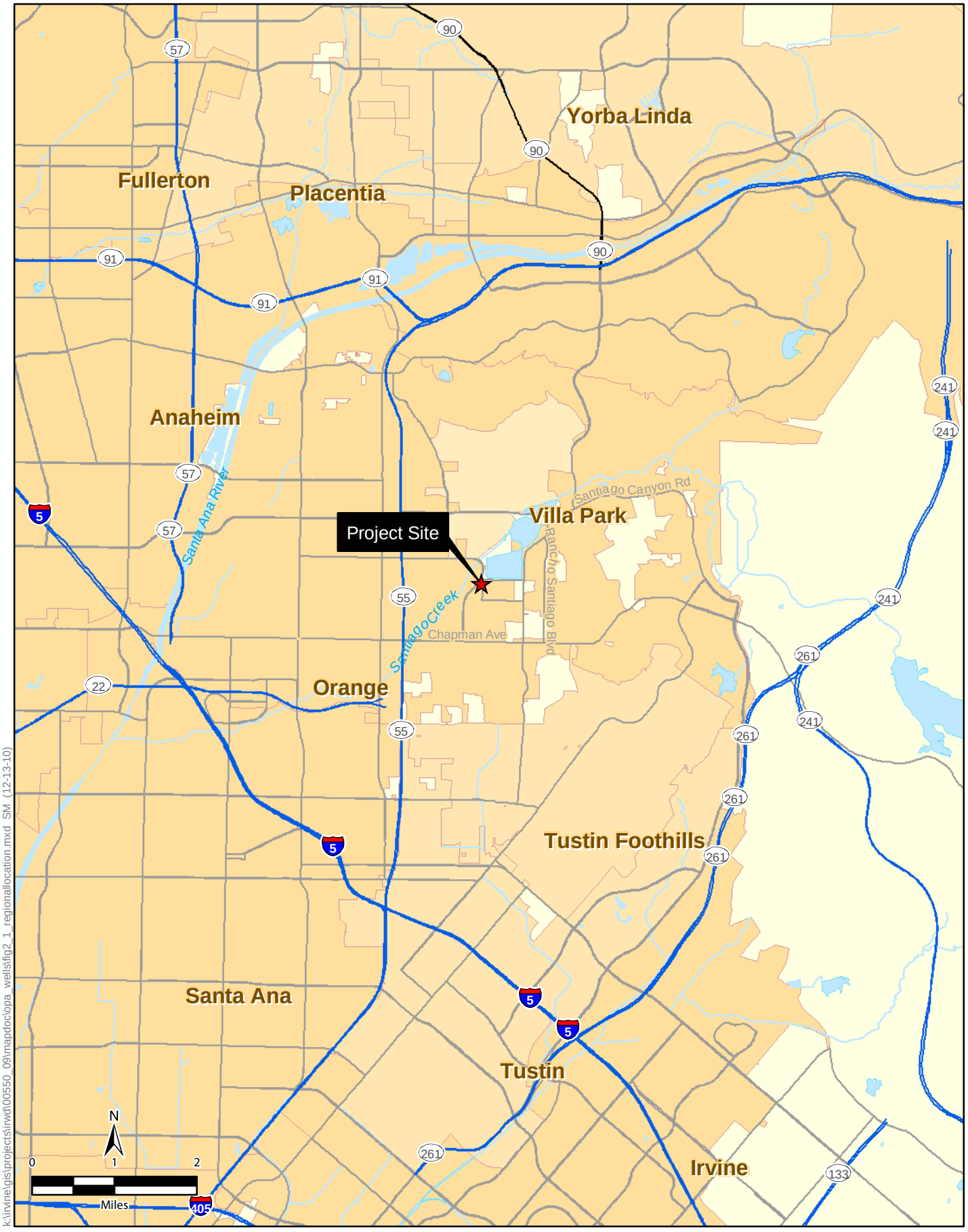
The Irvine Ranch Water District proposes to replace an underperforming groundwater well (OPA Well-3) that is approaching the end of its useful life. The proposed project would include the destruction of OPA Well-3 and the construction, installation, and operation of a new well (referred to as IRWD OPA Well-1 in this document) and ancillary equipment and facilities on the same site located at 678 N. Gravier Street in the City of Orange. The project area is located in north-central Orange County, within the City of Orange, south of Villa Park. Figure 2-1 depicts the regional location of the project area. The proposed project would serve areas of OPA that are serviced by IRWD (referred to as the OPA service area), depicted in Figure 2-2. Details regarding the project objectives, location, environmental setting, and construction and operation of the proposed project are included in this chapter.

Project Background

The OPA service area was formerly operated as the Orange Park Acres Mutual Water Company (OPAMWC) before consolidation with IRWD in June 2008. The OPA service area covers approximately 646 acres primarily within unincorporated Orange County, with some areas within the City of Orange. The service area is generally bounded to the north and east by Santiago Canyon Road and Villa Park Drive, to the east by Cannon Street and Rancho Santiago Boulevard, and to the south by Chapman Avenue.

Historically, water supply for the OPA service area has been provided primarily by an existing groundwater well (OPA Well-3) located at the former OPAMWC headquarters at 678 N. Gravier Street. On an as needed basis, demand for the OPA service area is met by importing water from the East Orange County Water District (EOCWD) via the existing EOCWD turnout No. 5 located at the reservoir site along Calle Grande or from various City of Orange sources including imported water from the Metropolitan Water District of Southern California and local groundwater basins (City of Orange 2009). Historically, groundwater provides for two-thirds of the annual demands, and imported water supplies the remaining one-third of the water supply for the OPA service area. The average annual groundwater production from OPA Well-3 for 2004 to 2008 was approximately 892 acre-feet per year (AFY) or about 0.80 million gallons per day (MGD).

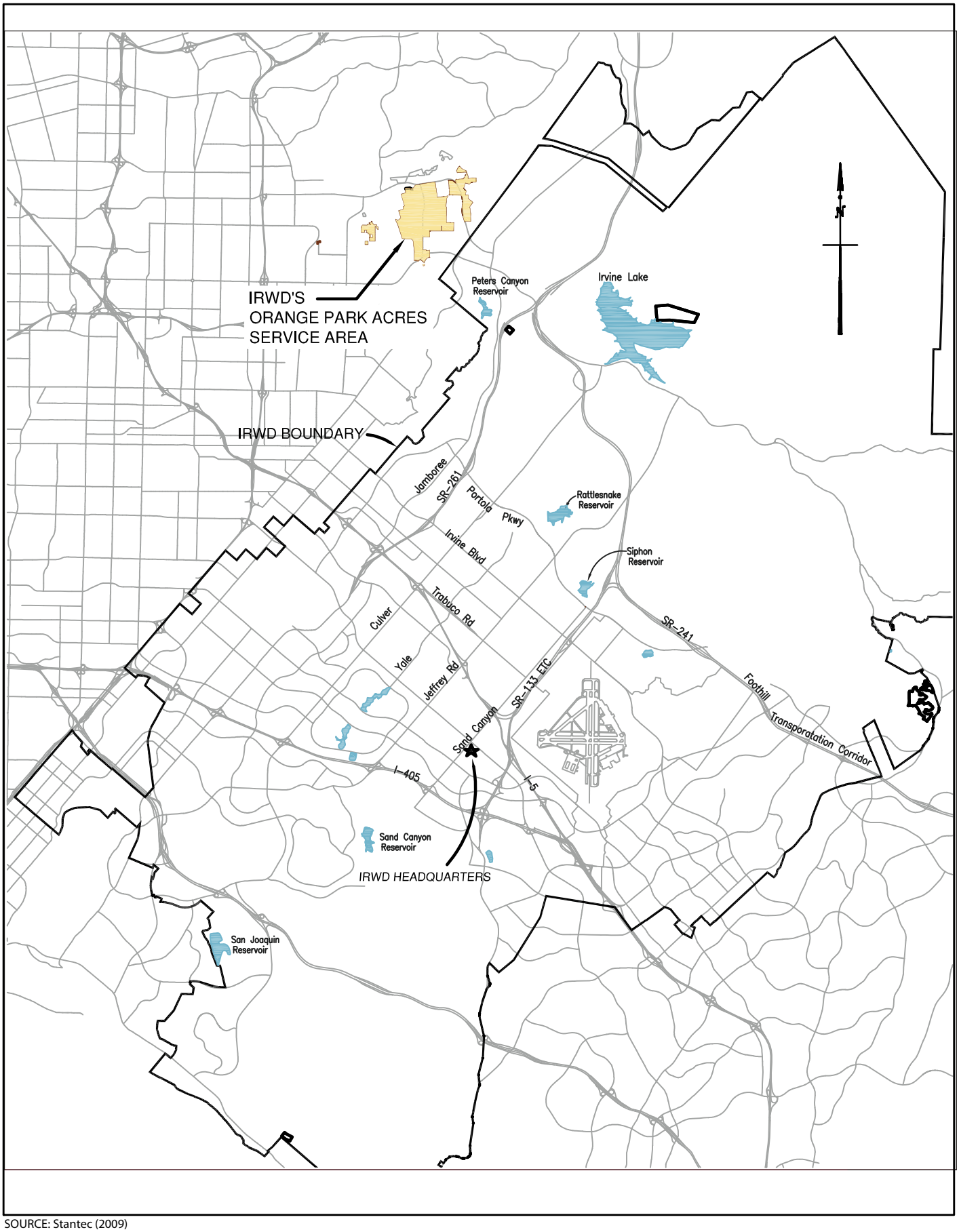
IRWD prepared a Sub Area Master Plan (SAMP) for the OPA service area, which (based on existing and projected water demand) identified the need for upgrades and improvements to the domestic water distribution and transmission system (Stantec 2009), OPA Well-3 (the existing groundwater well), and a future sanitary sewer system. An IS/MND was prepared, distributed for public review, and adopted by the IRWD Board of Directors in August of 2010 for the Orange Park Acres Domestic Water Distribution and Transmission System Improvements Project. This previously approved IS/MND evaluated potential impacts associated with phased improvements and upgrades to the OPA distribution and transmission system, including upgrading the OPA transmission main to a 20-inch line connecting to the existing Zone 5 16-inch line at Jamboree and Chapman; upgrading



SOURCE: ESRI 2008

ICF INTERNATIONAL

Figure 2-1
Regional Location



k:\irvine\gis\projects\irwd\00550_09\mapdoc\opa_wells\2011feb\fig2_2_opa_service_area.mxd SM (02-14-11)

SOURCE: Stantec (2009)

Figure 2-2
OPA Service Area

distribution lines; removing an emergency bypass line; installing pressure reducing stations, telemetry, and bidirectional meters; modifying the EOCWD turnout; upgrading the Meads pump station; and demolishing the Orange Park Acres reservoir and four booster pump stations. This project is currently under construction.

Recommendations for a new well (referred to in this document as IRWD OPA Well-1) to be drilled at the existing OPA Well-3 site were included as part of the SAMP based on the poor condition of the existing OPA Well-3. The existing OPA Well-3 has significantly degraded over the years since its original construction in 1980 and is in need of replacement. The original capacity of the OPA Well-3 was approximately 1,900 gallons per minute (gpm) in 1980, but the well has degraded over the years and is currently producing approximately 900 gpm.

In June of 2011, IRWD circulated for public review a Draft IS/MND, which analyzed the destruction of existing OPA Well-3, and construction and operation of two new wells (IRWD OPA Well-1 and OPA Well-2). IRWD OPA Well-1 was proposed to replace OPA Well-3 to serve the demands of the existing OPA service area, and IRWD OPA Well-2 was proposed to serve the future demands of the approved Santiago Hills II and East Orange developments. IRWD determined that environmental review of IRWD OPA Well-2 was not necessary at this time. Therefore, IRWD has modified the project to include only the IRWD OPA Well-1 to replace the deteriorating OPA Well-3, and has removed IRWD OPA Well-2 from the proposed project. It should be noted that the proposed IRWD OPA Well-1 and the potentially needed OPA Well-2 have independent utility and are not dependent on one another for ongoing operations of the OPA Service Area.

IRWD has decided not to go forward with the IRWD OPA Well-2 project at this time. Further environmental review will be required for the installation of an additional well (IRWD OPA Well-2) to serve the future developments associated with Santiago Hills II and East Orange as well as a sanitary sewer system to serve the OPA area in the future. The environmental review of these potential projects and potential cumulative impacts, including the determination of the type of environmental document to be prepared, will be conducted in accordance with the California Environmental Quality Act statute and guidelines. IRWD will coordinate with the City of Orange and EOCWD during the environmental review process.

Project Location

The project area is located in the City of Orange, south of the City of Villa Park (Figure 2-1). The project site is at 678 N. Gravier Street (Assessor's Parcel Number 383-294-02), the former location of the OPAMWC Headquarters, which is currently owned and operated by the IRWD. Land uses in the general vicinity of the project site are primarily residential single-family homes. Three schools are located within 0.5 mile of the project site: Prospect Elementary School (within 0.25 mile), Eldorado School, and a private elementary school (Esplanade Elementary School). Additionally, Grijalva Community Park is located approximately 0.5 mile south–southwest of the project site. Santiago Creek is within 0.25 mile of the project site to the west, and the Santiago Creek Recharge Basin (operated by the Orange County Water District) is about 300 feet to the north–northeast. Figure 2-3 depicts the project site and local vicinity of the project area.

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SOURCE: ESRI 2008; Digital Globe Imagery (2008)

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Figure 2-3
Local Vicinity

Existing Site Conditions

The project site comprising the former OPAMWC headquarters building pad is approximately 16,000 square feet (0.37 acre). According to the City of Orange General Plan, the land use designation of the site is Low Density Residential (LDR). Per the City of Orange Zoning Ordinance, the project site is zoned Single Family Residential with a 7,000 square foot minimum lot size (R-1-7). The project site contains an aboveground well pump, support infrastructure for the well, ~~a single-family home,~~ the former OPAMWC headquarters building pad (2,000 square feet), an enclosure for a chlorine disinfection system, and other associated appurtenances. Each of these components is discussed in additional detail below. Approximately 9,000 square feet (29%) of the project site contains impervious surfaces (buildings, building pads, concrete, asphalt), while the rest is pervious surfaces (lawn, dirt, trees, gravel). Figure 2-4 depicts details of the project site including the existing well and buildings in relation to the surrounding residential land uses.

OPA Well-3

The existing OPA Well-3 is located in the northwest corner of the project site, as shown on Figure 2-4. It was drilled in 1980 and has a 100-foot sanitary seal. A 20-inch diameter well casing (within a 28-inch diameter borehole) extends to a depth of 800 feet below ground surface (bgs). Casing perforations, which allow the well to draw in groundwater from the surrounding water bearing strata, are set at various depths between 315 and 760 feet bgs. There is no gravel pack at the bottom of the well; however, there is a desanding unit that removes sand from the well.

OPA Well-3 originally had a pumping rate of approximately 1,900 gpm but overtime, OPA Well -3 began underperforming. The production of OPA Well -3 decreased to a point where the pump, which was designed for higher capacity, could no longer operate efficiently. In early 2009, the pump and bowl assembly was replaced with equipment of lower capacity to allow the pump to operate efficiently at a rate of approximately 900 gpm. Historical pumping data indicates the well produced between 700 AFY and 800 AFY.

OPA Well-3 is currently in poor operating condition and is nearing the end of its useful life. Recent inspections revealed that the upper portion of the casing appeared to have an extreme amount of exfoliation of metal, leaking was observed in the casing joint at about 210 feet bgs, and the well casing was covered with a considerable amount of biofilm.

The existing disinfection system sits adjacent to the well and is contained within a closed and locked storage shed. There is outdoor lighting currently located on the chlorine disinfection system near the OPA Well-3. The system holds two 55 gallon drums that are refilled with sodium hypochlorite solution. This solution is stored offsite at the Michelson Water Recycling Plant and transported to the site and refilled by IRWD personnel as needed (approximately once per month). Sodium hypochlorite solution is used to disinfect the groundwater prior to discharge into the distribution system. IRWD performs regularly scheduled maintenance on the well, including checking and refilling the disinfection system needed, checking the operation of the well pump, and performing required water quality testing.

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SOURCE: ESRI USA Imagery (2009)

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Figure 2-4
Project Site

Former OPAMWC Headquarters Building Pad

The former OPAMWC headquarter building was built in 1980 and was approximately 2,000-square-feet located on the northern end of the project site. This single story building was nearing the end of its useful life and no longer served a purpose for IRWD. The building was demolished in June of 2011 as part of a separate action from the proposed IRWD OPA Well-1 project under a Notice of Exemption filed on March 23, 2011. The former OPAMWC headquarter building pad remains and is surrounded by a fence (both chain link and concrete masonry unit [CMU] wall approximately 6 to 8 feet high and has a padlocked iron gate that provides access to the site).

Single Family Home

An approximately 2,000-square-foot single-family home is located on the south end of the project site as shown on Figure2-4. The single-story home is owned by IRWD, and has a yard and garage. Based on the architectural features of the home, it was likely built in the 1960s or 1970s and is currently being leased by IRWD for residential use. The single family home is currently connected to the existing water, sewer, and storm drain system. The single family home has a chain link fence surrounding the back yard which is approximately 6 to 8 feet high. The single family home has some outdoor nighttime lighting.

Orange County Groundwater Basin

The project site is located within the Coastal Plain of the Orange County Groundwater Basin (Basin) and within the boundaries of the Orange County Water District (OCWD) service area. The Basin is managed by OCWD under the Orange County Water District Act (see Regulatory Setting below for a description). The Basin covers approximately 350 square miles, bordered by Chino Hills to the north, the Santa Ana Mountains to the northeast, and the Pacific Ocean to the southwest (OCWD 2009). The Basin is dominated by a deep structural depression containing a thick accumulation of freshwater-bearing marine sand, silt, and clay deposits (City of Orange 2009). Groundwater conditions in the Basin are influenced by natural hydrologic conditions such as rainfall, groundwater seepage, stream flow, and measured artificial recharge performed by OCWD. Groundwater recharge occurs near OPA Well-3 at the Santiago Creek Recharge Basin and within Santiago Creek south of the Recharge Basin. Additional artificial recharge is performed at OCWD Forebay percolation facilities and water injection facilities at the Talbert Barrier and Alamitos Barrier. The static groundwater level fluctuates regularly depending on the amount of recharge and seasonal rainfall; therefore, the static groundwater level can change over time. The depth to static groundwater in the project location varies, but it was approximately 293 feet bgs on February 18, 2009, at the existing OPA Well-3 site when the pump was replaced.

Groundwater production is managed by OCWD through financial incentives, which is detailed in the Orange County Water District Act (see Regulatory Setting). IRWD is a producer/operator of existing groundwater facilities in the Basin and therefore is subject to OCWD management.

Proposed Project

Project Objectives

The CEQA Guidelines (Section 15124[b]) require that a project description contain a statement of objectives, including the underlying purpose of a proposed project. The objective for the proposed project is to provide a reliable source of groundwater for the OPA service area by replacing existing OPA Well-3, which is at the end of its useful life, with a new well that will operate at the same historic pumping levels of OPA Well-3 ranging from 700 to 900 afy.

Project Description

The proposed project includes the destruction and abandonment of the existing OPA Well-3 and the drilling, construction, and operation of IRWD OPA Well-1 at the former OPAMWC headquarters site. Figure 2-5 depicts the preliminary site layout for the project and is subject to minor changes resulting from the final design phase of the project. The project facilities would be constructed within the project boundary shown in Figure 2-4.

The proposed well would serve the existing OPA service area within the City of Orange (per the terms of the 2006 agreement with the City of Orange [Appendix A]). As part of the Local Agency Formation Commission (LAFCO) approval of the OPAMWC consolidation into IRWD, the August 2006 agreement between the City of Orange and IRWD states that groundwater wells operated by IRWD within the City of Orange's Sphere of Influence (SOI) shall only serve water customers within the City's SOI**.** Per this agreement, no groundwater pumped from the proposed IRWD OPA Well-1 can be exported out of the City of Orange's SOI. The groundwater well would be operated in accordance with the 2006 agreement and the LAFCO approval. IRWD OPA Well-1 would have a maximum extraction capability of approximately 2,000 gpm which would be restricted to a maximum production of 900 acre-feet per year. Records related to actual pumping rates, durations, pumping levels, static water levels and annual pumping volumes will be maintained by IRWD. These records will be made available for review by others including the City of Orange and EOCWD to confirm that the annual water extraction from Well-1 does not exceed 900 acre-feet per year. IRWD OPA Well-1 would only serve demand within the OPA service area per the August 2006 agreement with the City of Orange.

The chlorine disinfection system for OPA Well-3 would be removed and replaced with a new system, and a surge tank system would be placed on site. The new onsite disinfection system would be similar to the existing disinfection facility, and would utilize chloramination to disinfect the groundwater pumped by the well prior to delivery of the water into the existing distribution system. The disinfection system would consist of two tanks—one tank would contain the 12.5% sodium hypochlorite and the other tank would contain the 29% ammonia. It is estimated that the sodium hypochlorite and ammonia tanks would be approximately 2,500 gallons and 200 gallons in size, respectively. Both tanks would have double containment by being located in a spill contaminant area. The tanks would be located in an enclosed and locked stucco enclosure with an intrusion alarm. The enclosure would have a pitched roof similar to those on the surrounding residences.

Additionally, a wet well and pump station would be constructed on site to receive and deliver water from IRWD OPA Well-1. The wet well would be an underground concrete vault that will temporarily store disinfected water before being pumped to another location. IRWD OPA Well-1 would pump

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SOURCE: ESRI USA Imagery (2009)
NOTE: Project facilities will be constructed within the project site boundary.
Preliminary site layout is subject to change based upon final design.

Figure 2-5
Preliminary Site Layout

water to the wet well that would hold approximately 50,000 gallons of water. The associated pump station would then pump the disinfected well water to Santiago Hills Zone 5 Reservoir. The wet well would be constructed below the ground surface and the associated pump and motor would be located on top of or near the wet well in an enclosure. Other ancillary facilities will include, but are not limited to, electrical panels, radio mast, Supervisory Control and Data Acquisition (SCADA)/Programmable Logic Controller (PLC), meters, valves, sand separator, chemical tanks, and enclosures for various facilities. Once the well is constructed, IRWD would also perform regular well inspection and maintenance at the project site. The construction activities associated with each of these project elements is described in greater detail below.

Construction Activities

Construction activities will include the destruction of OPA Well-3 well and construction of IRWD OPA Well-1 and the associated facilities and would occur within the project site boundary as shown in Figure 2-4. These activities would last approximately 14 months. As part of the proposed project, temporary sound walls at a height of 24 feet would be installed within the project site boundary during well drilling, well construction, and testing to reduce construction noise impacts on the surrounding residential neighborhood. The project site would also be surrounded by a 7- to 8-foot high temporary chain link fence for security purposes. The fence would have green mesh screens or other acceptable paneling to reduce visibility during construction.

Destruction of OPA Well-3 would follow the State of California Department of Water Resources, City of Orange, and Orange County Health Care Agency (OCHCA) requirements for properly abandoning wells in accordance with the California Well Standards Bulletins 74-81 and 74-90. Generally, destruction of water wells includes filling with either cement grout, or bentonite grout and cutting and capping the upper several feet of well casing. Destruction of the well would require a well demolition and abandonment permit from the City of Orange and would be observed and monitored by City Water Division staff in the field (discussed further in the Regulatory Setting). Destruction of OPA Well-3 would take place during normal working hours (i.e., 7:00 a.m. to 8:00 p.m.), per the City of Orange's Noise Ordinance (Title 17, Section 8.24.070, of the City of Orange Municipal Code).

As part of the proposed project, IRWD will seek, as necessary, a variance from the noise ordinance to allow drilling, water quality testing, construction, well development and pump testing of the proposed well between 8:00 p.m. and 7:00 a.m.

The drilling phase of construction for IRWD OPA Well-1 would include site preparation, mobilization of equipment to the project site, well drilling, water quality testing, installing the well casing, gravel packing, constructing a cement seal, well development, pump testing, and other incidental construction-related activities. IRWD OPA Well-1 would be constructed to a depth of approximately 900 feet bgs. Construction contractors working in City areas would adhere to traffic control standards identified in the Manual on Uniform Traffic Control Devices (MUTCD) (Federal Highway Administration 2001).

Construction of IRWD OPA Well-1 would require periodic 24-hour drilling that would take place over approximately 6 to 8 weeks. The drill rig would need to run 24 hours a day to prevent the borehole walls from collapsing and compromising the integrity of well construction. In addition, well development and pump testing would also have to occur 24 hours per day. The City's Noise Ordinance exempts construction activities performed between the hours of 7:00 a.m. and 8:00 p.m. from the provisions of the noise ordinance (Title 17, Section 8.24.070, of the City of Orange

Municipal Code). Construction activities conducted outside of those hours are required to comply with the City's noise ordinance (including limits on noise levels generated during nighttime hours). As mentioned above, IRWD will seek as necessary a variance from the noise ordinance to allow drilling, well development, construction and pump testing of the well between 8:00 p.m. and 7:00 a.m.

During construction of IRWD OPA Well-1, water would be provided to OPA service areas from the EOCWD Turnout No. 5 and various City of Orange emergency inter-connections. IRWD will contact the City of Orange and EOCWD prior to the start of the project to confirm availability of obtaining water from existing Orange/IRWD interconnections. Water discharged during well drilling would be conveyed to onsite settling tanks (known as Baker tanks)and discharged to the storm drain in compliance with the National Pollutant Discharge Elimination System (NPDES) Permit issued by the Santa Ana Regional Water Quality Control Board (SARWQCB). IRWD will also need to obtain a flood control encroachment permit from the Orange County Flood Control District (OCFCD) for well construction discharge flows. IRWD would notify the City Engineer 7 days prior to well discharges and would coordinate with OCWD in managing releases to the storm drain. Additionally, IRWD would avoid discharges within 72 hours of rain whenever possible given the accuracy of available weather forecasts. Furthermore, IRWD will inspect, test, and monitor the 18-inch storm drain line leading from the site to ensure adequate capacity to handle the discharges from well testing.

In addition, all drill cutting, rotary fluid, and other by-products would be retained on site to be transported and disposed of per applicable regulations. All soil cuttings and fluids generated during the drilling process would be contained and tested prior to disposal at an offsite facility. The excavated soil would be stored at the project site while awaiting analytical results. Using a State of California certified hazardous waste testing laboratory, the samples would be submitted for Toxicity Characteristic Leaching Procedure (TCLP), Soluble Threshold Limit Concentration (STLC), or Total Threshold Limit Concentration (TTLC) metals analysis or any combination of the three analyses in order to accurately classify the cuttings as hazardous or non-hazardous material. If analytical reports show that the cuttings are hazardous, they would be placed on plastic sheeting and IRWD would arrange for appropriate disposal per applicable regulations. Non-hazardous drill cuttings would be disposed of at an offsite facility. The proposed project does not include the importation of soil to backfill excavated areas. Additional regulatory requirements such as permits, approvals, or coordination to construct and operate the well from the California Department of Public Health, the City of Orange, and other regulatory agencies are discussed below in the Regulatory Setting.

A permanent noise attenuating enclosure or enclosures would be constructed around the IRWD OPA Well-1 and pumps. This structure would likely consist of an enclosed stucco structure with a pitched roof similar to the residential roofs in the area to be consistent with the surrounding residential neighborhood. Structures such as these currently contain most of IRWD's existing wells and are equipped with concrete-lined and concrete masonry walls with internal sound blankets inside the structures to attenuate noise generated by the operating well pumps.

A surge tank used to protect from system pressure surges would also be constructed on the project site. The surge tank does not generate noise because it is only used to prevent spikes in pressure. If the surge tank requires an air compressor, the compressor will be located in a building to attenuate the sound. The surge tank would not be enclosed in a structure. The height of the surge tank depends on the needs of the well once it is drilled; however, it would likely be a metal structure less than 15 feet tall. It would be painted neutral colors to match other onsite and surrounding structures. The wet well would be located below ground and would have pumps located above it to

move disinfected water from the wet well to the Santiago Hills Zone 5 Reservoir. The wet well pumps would be located within an enclosure. Finally, a tapered pole antenna of approximately 25 feet in height and several inches in diameter would be installed on the project site to convey information to IRWD regarding well operation. All construction activities would occur within the project site boundary shown in Figure 2-4.

A chemical building would be constructed that houses the sodium hypochlorite and ammonia tanks and a restroom. A spill containment area would be constructed outside the building to capture chemicals that may spill or leak during deliveries. A secondary containment area would be constructed within the chemical building that will contain the chemicals in the event of a leak from the tank.

Well Operations

IRWD OPA Well-1 would pump water to the wet well facilities that would then pump the disinfected well water to the Santiago Hills Zone 5 Reservoir where it would be stored and used to meet daily OPA service area demands. Figure 2-6 depicts the location of the Santiago Hills Zone 5 Reservoir. Although IRWD OPA Well-1 could be operated at any time of the day, it would generally be operated during off peak hours to take advantage of lower energy costs to fill the Santiago Hills Zone 5 Reservoir. The well would be equipped for an extraction capability of approximately 2,000 gpm which would be restricted to a maximum production of 900 acre-feet per year. Water from the well would be delivered to the Santiago Zone 5 Reservoir where releases would then be made to meet an average demand of approximately 900 AFY of potable water to the OPA service area, which is based on the OPA SAMP.

IRWD would conduct regularly scheduled inspection and maintenance on the well and project facilities similar to current activities for OPA Well-3. The maintenance would be scheduled as needed and would include checking the disinfection system and the operation of the pumps, as well as testing water quality. The inspection would include confirming the condition of existing facilities, condition of fencing and CMU wall, and operational integrity of onsite security systems. It is estimated that the disinfection tanks will be refilled once a month.

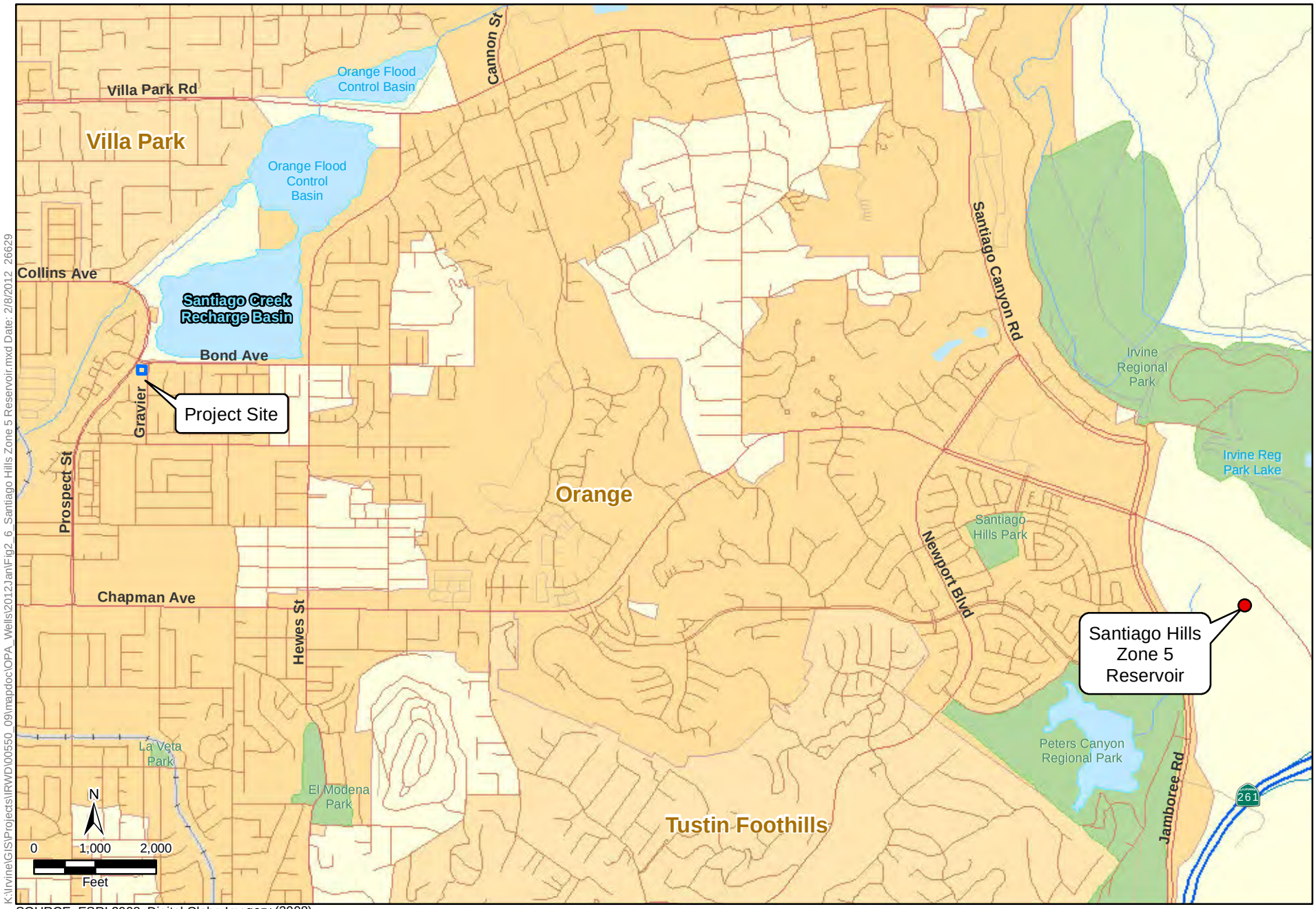
Joint Groundwater Engineering and Management Committee

At the time of the annexation of the OPAMWC by IRWD, the City of Orange expressed concerns over the pumping and use of groundwater in the annexation area (currently the OPA Service Area). In order to coordinate groundwater production, monitoring, and the mitigation of impacts from new wells, IRWD and the City of Orange have established a Joint Groundwater Engineering and Management Committee (Committee) in accordance with the Annexation Agreement. The primary purpose of the Committee is to facilitate communication between IRWD and the City of Orange, as well as to coordinate its activities and recommendations with OCWD. The Committee is charged with the following tasks to cooperatively monitor and evaluate groundwater production activities in Orange Park Acres and in the East Orange area:

- Monitoring groundwater levels and production;

- Monitoring water quality;
- Reviewing any proposed IRWD and City of Orange well sites;
- Developing mitigation measures for IRWD and City of Orange wells;
- Allocating cost of groundwater mitigation measures; and
- Developing programs to augment groundwater production

The Committee provides a framework for IRWD to work with the City of Orange and OCWD to address specific issues caused by projects that affect regional and local groundwater supplies on a case-by-case basis. Section IX, Hydrology and Water Quality, of Chapter 3 includes additional discussion and analysis of potential impacts that may occur to nearby City of Orange or EOCWD groundwater wells.



SOURCE: ESRI 2008; Digital Globe Imagery (2008)

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Figure 2-6
Santiago Hills Zone 5 Reservoir

Regulatory Setting

The proposed project falls within the jurisdictions of several agencies. Each of these entities is described below.

California Department of Public Health

The California Department of Public Health regulates drinking water supplies in the state of California. Drinking water-related statutes are from the Education Code, Food and Agricultural Code, the Government Code, the Health and Safety Code, the Public Resources Code, and the Water Code. Regulations are from Title 17 and Title 22 of the CCR. The California Department of Public Health permits all water purveyors in the state with water supply permits.

Santa Ana Regional Water Quality Control Board

There are nine regional water quality control boards statewide. The Santa Ana Regional Water Quality Control Board manages Region 8 and sets water quality standards, issues waste discharge requirements, determines compliance with those requirements, and takes appropriate enforcement action when necessary within Orange County and other parts of Region 8.

Orange County Water District Act

OCWD manages the Basin under the Orange County Water District Act. Producers, such as IRWD, may install and operate production facilities (such as wells) within the Basin and are required to notify OCWD of their intent to do so. In accordance with the Orange County Water District Act, OCWD manages annual production and recharge and replenishment of the Basin. The production in the Basin is managed through financial incentives, which incentivizes groundwater producers to control groundwater pumping through the implementation of the Basin Production Percentage (BPP) each year. The BPP is the ratio of groundwater production to total water demands. A Replenishment Assessment (RA) is paid for all water pumped out of the Basin by each producer on a biannual basis. Groundwater production above the BPP is charged a Basin Equity Assessment (BEA), which is set so that the cost of groundwater pumping above the BPP is similar to the cost of imported water. Each year, OCWD sets a BPP and assesses a BEA on all water pumped above the limit.

Orange County Flood Control District

The Orange County Flood Control District (OCFCD), also known as the Orange County Flood Section, is tasked with protecting Orange County from the threat of floods. OCFCD designs and constructs channels, storm drains, dams, pump stations and other drainage related facilities. The OCFCD issues permits to discharges that utilize their drainage facilities.

Discretionary Actions and Approvals

Under CEQA, the IRWD has primary discretionary authority over the approval of the proposed project. The anticipated discretionary approvals required for IRWD to implement the proposed project include the following:

- Adoption of the MND;
- Adoption of a mitigation monitoring and reporting program; and
- Design, construction, and operation of the project.

Other public agencies may also have discretionary authority over the project, or aspects of the project, and are considered responsible agencies. Specifically, a well permit will be required from the City of Orange as discussed below. The IS/MND can be used by the responsible agencies to comply with CEQA in connection with permitting or approval authority over the project. OCWD is not a responsible agency because they do not have discretionary approval over the proposed project. Furthermore, OCWD does not have a need to use this CEQA document to issue any approvals or permits.

Proposed Permits and Coordination

California Department of Public Health

IRWD would obtain approvals from the California Department of Public Health (CDPH) for the well plans and specifications. The California Department of Public Health will require an amendment to IRWD's existing Water Supply Permit dated April 24, 1980 to add IRWD OPA Well-1.

OCWD

IRWD would notify OCWD of its intent to drill the well so that OCWD can add the well to its database of existing producer wells and assess IRWD the requisite semi-annual replenishment assessment and annual basin equity assessment, if applicable.

Santa Ana Regional Water Quality Control Board

Dewatering may be required during proposed project construction. A region-specific permit is available from the SARWQCB allowing IRWD and its contractors to discharge groundwater resulting from construction projects (Order No.R8-2009-0003, NPDES No. CAG998001).

Orange County Flood Control District

IRWD will obtain an encroachment permit for well construction discharge flows from OCFCD if required.

City of Orange

IRWD would obtain a permit from the City of Orange to abandon and destroy OPA Well-3 and to construct IRWD OPA Well-1, in accordance with City of Orange OMC Section 13.40. This section prohibits any person, firm, or private or public corporation or agency to construct or reconstruct any well within the corporate limits of the City unless such construction or reconstruction is carried

out pursuant to and in conformance with a written permit issued by the City. In addition, City encroachment permits for any work within City right-of-way may be obtained. Transportation and/or haul permits associated with construction may also be required. As part of constructing the proposed project, IRWD will seek a variance from the noise ordinance to allow drilling, construction, well development and pump testing of the well between 8:00 p.m. and 7:00 a.m.

Coordination with the City of Orange Fire Department for storage of hazardous materials on site (associated with the disinfection system) is also required during proposed project operations. Also, as part of the proposed IRWD OPA Well-1 improvements, IRWD will work closely with City staff to accommodate as necessary the City's requirements and to resolve as necessary any design, construction, or operations related issues.

East Orange County Water District

IRWD will make records pertaining to the operation of OPA Well-1 available to EOCWD to confirm that the annual water extraction from Well-1 does not exceed 900 acre-feet per year. In the future, IRWD and EOCWD may enter into an agreement for the development of joint groundwater production facilities. IRWD would coordinate with EOCWD in accordance with any such agreement in the environmental review, construction and operation of any such facilities. The environmental review of potential joint project, including the determination of the type of environmental document to be prepared, would be conducted in accordance with the California Environmental Quality Act statute and guidelines.

Chapter 3
Environmental Checklist

1.	**Project Title:**	Irvine Ranch Water District Orange Park Acres Well Replacement Project
2.	**Lead Agency Name and Address:**	Irvine Ranch Water District (IRWD) 15600 Sand Canyon Avenue Irvine, CA 92618
3.	**Contact Person and Phone Number:**	Christian Kessler 949-453-5441
4.	**Project Location:**	678 North Gravier Street, Orange, CA 92869
5.	**Project Sponsor's Name and Address:**	Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618
6.	**General Plan Designation:**	Low Density Residential
7.	**Zoning:**	Single Family Residential
8.	**Description of Project:**	The proposed project includes the destruction and abandonment of the existing OPA Well-3, and the construction and operation of a replacement well, IRWD OPA Well-1. See Chapter 2, Project Description.
9.	**Surrounding Land Uses and Setting:**	Land uses in the general vicinity of the project site are primarily residential single-family homes. Three schools are located within 0.5 mile of the project site: Prospect Elementary School (within 0.25 mile), Eldorado School, and a private elementary school (Esplanade Elementary School). Additionally, Grijalva Community Park is located approximately 0.5 mile south–southwest of the project site. Santiago Creek is within 0.25 mile of the project site to the west, and the Santiago Creek Recharge Basin (operated by the Orange County Water District) is approximately 300 feet to the north–northeast. See Chapter 2, Project Description.
10.	**Other Public Agencies Whose Approval is Required:**	

Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by this project (i.e., the project would involve at least one impact that is a "Potentially Significant Impact"), as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Christian Kessler — Signature

6/6/2012 — Date

Christian Kessler — Printed Name

For

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained if it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: "Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "Potentially Significant Impact" to a "Less-than-Significant Impact". The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. (Mitigation measures from Section XVII, "Earlier Analyses", may be cross-referenced.)
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following:

   Earlier Analysis Used. Identify and state where earlier analyses are available for review.

   Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   the significance criteria or threshold, if any, used to evaluate each question; and
   the mitigation measure identified, if any, to reduce the impact to a less-than-significant level.

I. Aesthetics	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Discussion

Would the project:

a. Have a substantial adverse effect on a scenic vista?

No Impact. According to Figure 5.1-1 of the City of Orange General Plan Program EIR, there are no designated scenic vistas at or near the project site (City of Orange 2009). The project site is flat and is surrounded by 2-story residential homes and mature landscaping. These homes and landscaping effectively block views from the surrounding areas to the project site except those views by adjacent neighbors, pedestrians, and motorists on Gravier Street. The visual characteristic of the project site is predominantly infrastructure (the existing OPA Well-3).

During construction, the project site would be surrounded by a 7- to 8-foot-high temporary chain link fence for security purposes. The fence would have green mesh screens, or other acceptable paneling, to reduce visibility during construction. Furthermore, construction activities during well drilling would take place behind a 24-foot-tall noise wall, which would screen the majority of views of the project site from the surrounding neighborhood during well drilling.

Once construction is complete, the project site would be surrounded by a 6- to 8-foot concrete masonry unit wall that would be a neutral color. This wall would be consistent with other masonry and concrete walls within the surrounding residential neighborhood and would screen views of the well. The final conditions of the site would be very similar to the existing conditions, with similar well head and treatment equipment to be replaced at the site. Some additional equipment would be added to the site, including a surge tank, a replacement chloramination disinfection system, a wet well, and other ancillary facilities such as electrical panels, radio mast, Supervisory Control and Data Acquisition (SCADA)/Programmable Logic Controller (PLC), meters, valves, sand separator, and enclosures for various facilities. A below ground wet well would be constructed on site to receive water from IRWD OPA Well-1. The wet well would be equipped to pump the water to Santiago Zone 5 Reservoir. The top of the antenna (approximately 21 feet tall) could be visible over the top of the

wall at some locations in the surrounding neighborhood. The sole function of the antenna would be to transmit data to IRWD regarding well operations. The antenna would be relatively unobtrusive when compared to other tall features of the neighborhoods such as street lights and telephone poles, because it would only be several inches in diameter. Furthermore, the antenna location on the project site would be selected in a manner that would be unobtrusive to the surrounding residential neighborhood. The surge tank is expected to be less than 15 feet high, but depending on the final site design, it may be visible over the top of the concrete masonry wall. It is currently proposed to be located behind the treatment structure which may be approximately 20 to 30 feet tall. Surge tanks are typically metal structures painted neutral colors. Since there are no scenic vistas at or near the project site, construction and operation of the proposed project would not have an adverse impact on scenic vistas and no impact would occur.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?

No Impact. There are no officially designated state scenic highways in the vicinity of the proposed project (Caltrans 2009). Furthermore, the County of Orange General Plan Figure IV-11, Scenic Highway Plan (County of Orange 2004), and Figure 5.1-1 of the City of Orange General Plan Program EIR (City of Orange 2009) do not identify any landscape or viewscape corridors in the vicinity of the project site. Therefore, construction and operation of the proposed project would not substantially damage scenic resources along a scenic highway, and no impact would occur.

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Less-than-Significant Impact. The existing visual character of the project site is comprised of infrastructure elements of varying heights. These elements include the OPA Well-3 and aboveground infrastructure. The immediate area surrounding OPA Well-3 is made up of concrete and gravel, and a lawn and concrete driveway surrounding the adjacent single-family residence. Concrete and masonry walls surround the site on the north, south, and west. These walls are approximately 6- to 7- feet high. A chain link fence separates the well and well infrastructure from the single-family home and the home's backyard. A chain link fence with green mesh screens, which is approximately 7- to 8- feet high, secures the site to the east of OPA Well-3. The existing well and well infrastructure (e.g., piping) are visible through the spaces in the chain link fence along the single-family home property. The visual character and quality of the surrounding neighborhood is that of a typical suburban southern California residential neighborhood with varying heights of buildings, front and back yards, mature landscaping, and infrastructure elements (telephone poles, light poles, etc.). To the north of the project site is the Santiago Creek Recharge Basin, which is operated by the Orange County Water District.

The proposed project would involve construction and operation activities within the boundaries of the existing IRWD property. Construction activities would take place behind a 7- to 8-foot-high temporary chain link fence with green mesh screens, or other acceptable paneling, to reduce visibility, as described above. Furthermore, during well drilling, construction activities would likely take place behind a 24-foot-tall temporary noise wall, which would screen the majority of the views of the project site from the surrounding neighborhood. The drill rig would be visible over the top of the noise wall; however, the rig would only be located on the project site for a duration of 6 to 8 weeks and would be removed from the project site once drilling of the well is complete. Operation of the proposed project would not represent a substantial change from the existing visual character and quality of the project site and surrounding area. The scale and height of the proposed well

facilities would be similar to the existing OPA Well-3 facilities. Upon completion of construction activities, IRWD OPA Well-1 would be located within an enclosure, the wet well would be located below the ground surface, a disinfection system would be located within an enclosure, and some above ground infrastructure similar to the existing well would be located on the project site. There would also be an antenna (approximately 21 feet tall) and surge tank located on site. The existing masonry walls located on three sides of the project site would remain. Fencing along the front of the project site, where the existing iron gate is currently located, would be located along the street and would be consistent with the theme of the neighborhood. The proposed enclosures, surge tank, and top of the antenna would extend past the top of the existing walls and would likely be seen by adjacent residences and motorists on Gravier. However, the communication antenna would not be significantly obtrusive. It would have a similar aesthetic impact as existing street lamps, telephone poles, or traffic signals in the area. Furthermore, the height of the surge tank may be visible, although it would likely be shielded by the treatment structure from some vantage points.

Detailed architectural plans for the enclosures have not yet been designed. However, IRWD would work with the City to design them to be compatible with the surrounding neighborhood. The enclosures would likely consist of an enclosed stucco structure with a pitched roof similar to the residential roofs in the area to be consistent with the surrounding residential neighborhood. The existing walls and the proposed 6- to 8-foot concrete masonry wall would screen views into the site from the neighborhood. Additionally, IRWD would work with the City on a landscaping design that takes into consideration the design and condition of landscaping within the existing neighborhood. Typical setbacks within the neighborhood will be considered by IRWD in finalizing designs for the project.

Therefore, the construction and operation of the proposed project would not substantially degrade the existing visual character or quality of the project site or surrounding area. Impacts would be less than significant.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Less-than-Significant Impact. The project site currently has lighting on the chlorine disinfection system near the OPA Well-3. A design feature of the proposed project requires all nighttime lighting during construction to be shielded and directed downward so that traffic and adjacent property owners would not experience substantial light or glare. Furthermore, during well drilling the 24-foot noise wall would reduce the spill effects of any nighttime construction lighting. Therefore, impacts to nighttime views during project construction would be less than significant. Project operations would not introduce a new substantial source of light or glare to the project area. Currently, the existing OPA Well-3 chemical building has outdoor lighting, and the proposed project would include comparable security lighting as the existing conditions. Nighttime lighting during project operations could include some lighting located along the buildings for security purposes similar to the nighttime lighting currently on the property. Furthermore, nighttime lighting would be shielded so traffic and adjacent property owners would not experience substantial impacts due to light and glare. Impacts would be less than significant.

II. Agriculture and Forest Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

Would the project:

a. Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency, to non-agricultural use?

No Impact. According to the California Department of Conservation *Orange County Important Farmland 2008* report, the proposed project site is classified as "urban and built-up land" and "other land," which does not contain any agricultural uses (DLRP 2009). The proposed project does not have the potential to convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. No impact would occur.

b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

No Impact. The proposed project is located on a developed urban site within a developed urban area. No agricultural land uses and no property under Williamson Act contract exist on the project site or within in the vicinity of the proposed project. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur.

c. Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. No land zoned as forest land or timberland exists on the project site or within the vicinity of the proposed project (CDFFP 2003). Therefore, the proposed project would not conflict with existing zoning for forest land or timberland. No impact would occur.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed in Response II(c), no land zoned as forest land or timberland exists within the project site (CDFFP 2003). Therefore, proposed project would not conflict with existing zoning for forest land or timberland. No impact would occur.

e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. No agricultural land uses, forest land, or timberland exist on the project site or in the vicinity of the proposed project. Therefore, the proposed project would not involve changes to the existing environment that would result in conversion of farmland to non-agricultural use or forest land to non-forest use. No impact would occur.

III. Air Quality	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion

Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The proposed project is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) is required, pursuant to the Federal Clean Air Act, to reduce emissions of criteria pollutants for which the Basin is in nonattainment (i.e., O_3, PM10, PM2.5, and lead). As such, the proposed project would be subject to the SCAQMD's Air Quality Management Plan (AQMP). The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, using regional population, housing, and employment projections prepared by the Southern California Association of Governments (SCAG).

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and it addresses regional issues relating to transportation, economy, community development, and environment. With regard to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG), which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RCPG and AQMP are based, in part, on projections originating with County and City general plans.

Detailed in the Project Description, the proposed project includes the destruction and abandonment of the existing OPA Well-3 and the construction and operation of a replacement well (IRWD OPA Well 1) on the same property as OPA Well-3. The proposed well would serve the existing OPA service area, accommodating the need for a reliable source of groundwater for the OPA service area. The proposed project would not result in either an increase in population or the number of new permanent employees in the area that would affect growth (see Section XIII, Population and Housing, for additional information regarding population). Furthermore, the proposed project would be largely maintenance free and similar to existing conditions, thereby resulting in non–net-increase employment in the region. The proposed project is consistent with both the County of Orange General Plan and City of Orange General Plan designation and zoning.

Because the proposed project is consistent with the local general plan and the regional growth management plan, pursuant to SCAQMD guidelines, the proposed project is considered consistent with the region's AQMP. No impact would occur.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less-than-Significant Impact. As discussed in Response III(a), the proposed project site is located within the Basin. State and federal air quality standards are often exceeded in many parts of the Basin. A discussion of the proposed project's potential short-term construction-period and long-term operational-period air quality impacts is provided here.

Regional Construction Impacts

The SCAQMD has established methodologies to quantify air emissions associated with construction activities such as air pollutant emissions generated by operation of onsite construction equipment; fugitive dust emissions related to trenching and earthwork activities; and mobile (tailpipe) emissions from construction worker vehicles and haul/delivery truck trips. Emissions would vary from day to day, depending on the level of activity, the specific type of construction activity occurring, and, for fugitive dust, prevailing weather conditions.

Construction activities for the proposed project include the destruction of OPA Well-3, and construction and operation of IRWD OPA Well-1. A construction-period mass emissions inventory was compiled based on an estimate of construction equipment as well as scheduling and phasing assumptions. More specifically, the mass emissions analysis takes into account the following:

- Combustion emissions from operating onsite construction equipment.
- Fugitive dust emissions from ground disturbance activities.
- Mobile-source combustion emissions from worker commute travel.

For the purpose of estimating emissions associated with construction activities, it was assumed construction activities would begin in the Spring of 2012 and last approximately 14 months. Emissions were calculated using the URBEMIS 2007 emissions inventory model. The quantity, duration, and the intensity of construction activity have an effect on the amount of construction emissions and related pollutant concentrations occurring at any one time. As such, the emission forecasts reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction would occur in a relatively intensive

manner.[1] Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). Therefore, the analysis of air quality impacts is a conservative estimate of the proposed project's regional mass emissions during construction. Table 3-1 shows that based on a conservative estimate of the proposed project's regional mass emissions during construction, all criteria pollutant emissions would be below their respective thresholds (detailed calculations and URBEMIS worksheets are provided in Appendix C). Impacts from construction would therefore be less than significant.

Table 3-1. Forecast of Regional Construction Emissions

	Criteria Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum Regional Project Emissions	4	36	18	<1	3	2
SCAQMD Regional Emissions Threshold (pounds/day)	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No

URBEMIS 2007 outputs are provided in Appendix C.

Localized Construction Impacts

When quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Consistent with SCAQMD Localized Significance Threshold (LST) methodology guidelines, emissions related to offsite delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. As shown in Table 3-2, localized emissions for all criteria pollutants would remain below their respective SCAQMD LST significance threshold (detailed calculations and URBEMIS worksheets are provided in Appendix C). Localized impacts that might result from construction-period air pollutant emissions would therefore be less than significant.

[1] Detailed assumptions regarding the construction equipment mix and the duration can be found in the URBEMIS output in Appendix C.

Table 3-2. Forecast of Localized Construction Emissions

	Criteria Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum On-Site Total Emissions	4	36	17	<1	3	2
SCAQMD Localized Significance Threshold (pounds/day)[a]	--	81	485	--	4	3
Exceed Threshold?	No	No	No	No	No	No

[a] These localized thresholds were taken from tables provided in the SCAQMD Localized Significance Thresholds Methodology guidance document based on the following: (1) The proposed project site is located in SCAQMD Source Receptor Area No. 17, (2) sensitive receptors are located within 25 meters of construction activity, and (3) the maximum site area disturbed is less than 1 acre.

URBEMIS 2007 outputs are provided in Appendix C.

Regional and Localized Operations Impacts

Operations associated with the proposed project generally include facility inspection and maintenance activities and are expected to be similar to or less than existing conditions. Because the proposed project would require very little maintenance once construction is completed and only on an as-needed basis, emissions generated once operational would be minimal and the impact would be less than significant.

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Less-than-Significant Impact. The SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts. As discussed in Response III(a), the proposed project is consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants.[2] In addition, the mass regional emissions calculated for the proposed project (Table 3-1) are lower than the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards. Cumulative impacts would be less than significant.

d. Expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact. As described in III-b, construction of the proposed project would not result in any substantial localized or regional air pollution impacts and therefore would not expose

[2] CEQA Guidelines Section 15064(h)(3) states "A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project shall comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g. water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency."

any nearby sensitive receptors to substantial pollutant concentrations.[3] Impacts related to substantial pollutant concentrations would be less than significant.

e. Create objectionable odors affecting a substantial number of people?

Less-than-Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook* (SCAQMD 1993), land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors and therefore would not produce objectionable odors. Currently IRWD has disinfection facilities with similar sodium hypochlorite solution that would be used during operation of the proposed project and has not experienced any odor complaints. Similar precautionary measures, such as containment areas and spill plans, would continue to be employed to guarantee that operations continue to be free of odor violations (See Section VIII, Hazards and Hazardous Materials, for additional details regarding the disinfection system). Impacts related to objectionable odors would be less than significant.

Potential sources that might emit odors during proposed project construction activities include diesel exhaust/fumes from well drilling equipment and on-site emergency generators for construction work, asphalt paving, etc. SCAQMD Rule 1108 limits the amount of volatile organic compounds from cutback asphalt. Through mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed that would create a significant level of objectionable odors. Existing regulations that are relevant to the proposed project include:

- Rule 1108 limits the amount of VOC/ROG contained in any cutback asphalt for sale to no more than 0.5%.
- Rule 402 restricts the release of emissions which cause injury, nuisance, or annoyance.
- Rule 403 reduces the amount of anthropogenic fugitive dust by requiring actions to prevent, reduce or mitigate dust emissions.

Construction impacts related to objectionable odors would be less than significant.

[3] SCAQMD has a published set of localized significance thresholds which include the criteria pollutants CO, NOx, PM10 and PM2.5 related to Threshold (d). Since the sodium hypochlorite and ammonia would not contribute to any of these designated criteria pollutant emissions they are not analyzed under air quality thresholds. For additional information regarding the disinfection system please see Section VIII Hazards and Hazardous Materials.

IV. Biological Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

Would the project:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less-than-Significant Impact with Mitigation Incorporated. The project site is located within a developed, urban area. The project site is a developed site with an existing well and aboveground infrastructure. The project site is devoid of vegetation except for the ornamental landscaping. Since

construction is proposed to start in the spring of 2012, construction of the proposed project would likely occur during the nesting season for birds and therefore has a moderate probability of construction affecting nesting birds in the ornamental landscaping. However, mitigation measure BIO-1 would be implemented to comply with the Migratory Bird Treaty Act and to reduce impacts to nesting birds to less than significant. No candidate, sensitive, or special-status species are known to exist on the project site based on the existing developed characteristics of the project site, the lack of habitat, and the immediate urban developed surroundings. Furthermore, according to Figure 5.4-2 of the City of Orange General Plan Program EIR, the project site is not located within the Natural Community Conservation Plan and Habitat Conservation (NCCP/HCP) Habitat Reserve area (City of Orange 2009). Since the project site lacks appropriate habitat for candidate, sensitive, or special-status species, the proposed project would not modify habitat. Therefore, impacts would be less than significant.

Mitigation Measure

BIO-1: If the removal of ornamental trees on site is scheduled during the avian nesting season (approximately February 1 through August 31), a preconstruction survey for nesting birds shall be conducted by a qualified biologist no more than 7 days prior to the start of construction. If nesting birds are detected within the disturbance limits, a buffer around the nest shall be determined by a qualified biologist. If the biologist determines that the construction activity within the buffer has the potential to disturb an active nest, construction activities may be limited or halted until the biologist has determined that the nesting activity is complete.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less-than-Significant Impact. According to Figure 5.4-2 of the City of Orange General Plan Program EIR, the project site is not located within the NCCP/HCP Habitat Reserve area (City of Orange 2009). The project site is devoid of vegetation except for ornamental landscaping. Therefore, the project site does not contain riparian habitat or other sensitive natural communities, such as coastal sage scrub, identified by the Orange County NCCP/HCP. Immediately surrounding the project site are developed residential uses with ornamental landscaping. Therefore, construction and operation of the project would not have a substantial adverse effect on any riparian or other sensitive natural community located on the project site because these types of communities do not exist on the project site.

Currently, drainage at the project site flows into an existing catch basin located in the northwest corner of the project site, near the existing OPA Well-3. The catch basin is connected to an 18-inch storm drain that flows to the Orange County Flood Control District (OCFCD) E08P06 Santiago Creek Channel (Irvine Ranch Water District 2010, OCFCD 2010). The project site is located in the Santa Ana River Watershed where the Santa Ana River is the major drainage course. As shown in Figure 5.8-1 of the City of Orange General Plan Program EIR, most of the City's drainage runoff is conveyed to the Santa Ana River through City storm water drainage systems either directly or via the Santiago Creek (City of Orange 2009).

All discharge water generated during the construction period would comply with the Orange County Drainage Area Management Plan (DAMP) and would be disposed of in accordance with OCFCD and NPDES discharge permits. Per the requirements of the NPDES de minimus discharge permit, the proposed project would provide advanced notice to the SARWQCB and County of Orange prior to

any discharge to the storm drain system or OCFCD channel, including an estimate of the amount of discharge anticipated for each discharge event. Also under the requirements of the NPDES permit, IRWD would collect samples and submit monthly reports to the SARWQCB for discharge compliance. Furthermore, construction and operation would not significantly change the existing drainage pattern of the site. See Section XI, Hydrology and Water Quality, for additional details regarding hydrology, water quality, and discharge and the regulatory requirements governing discharge. The water from any source related to construction or storm runoff generally would not be allowed to leave the project site. All flow from the well during construction would be initially conveyed to a series of temporary storage tanks (i.e., Baker tanks) located on the project site. The purpose of the Baker tanks is to allow suspended sediment to separate from fluids prior to discharge (Irvine Ranch Water District 2010). If de-chlorination is necessary, it would occur on site at the existing catch basin prior to release into the existing 18-inch storm drain. In addition, Best Management Practices (BMPs) would be developed for the proposed project and implemented to limit the introduction of pollutants to the environment, ground surface or offsite drainages during construction. These include preparation of a spill prevention plan and an erosion control plan (Irvine Ranch Water District 2010). Therefore, no substantial adverse effects to riparian or any other sensitive natural communities in the Santa Ana River or Santiago Creek would result from construction of the proposed project.

The project site is within 300 feet of the southern border of the Santiago Creek Recharge Basin. The project site is separated from the basin by Bond Avenue, a row of residential homes, and a steep slope down into the basin, which is approximately 10 to 20 feet below the grade of Bond Avenue. While there may be habitat within the basin that is considered riparian, construction of the proposed project would not affect this habitat because construction generated water would not be discharged into the basin. Furthermore, Bond Avenue, residential homes, and the slope into the basin would buffer any other construction related impacts to the basin.

As discussed in Response IX(b), construction and operation of the proposed project would not significantly change groundwater levels in the Orange County Groundwater Basin; therefore, operation of the proposed project would not indirectly affect riparian or any other sensitive natural communities in the Santa Ana River or Santiago Creek. Therefore, construction and operation of the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. Impacts would be less than significant.

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-than-Significant Impact. The project site is devoid of vegetation except for ornamental landscaping and is devoid of any water resources. Therefore, the project site does not contain wetlands, marshes, vernal pools, or coastal wetlands. Immediately surrounding the project site are developed residential uses. Therefore, construction and operation of the project would not have a substantial adverse effect on any wetlands located on the project site because these types of communities do not exist on the project site.

As discussed above, the Santiago Creek Recharge Basin is located north of the project site. While there may be habitat within this basin that is considered wetland habitat, construction activities at the project site would not result in direct removal, filling, or hydrological interruption of this basin. Construction of the replacement well would be confined to the project site. Furthermore, as

discussed above, any construction water generated during construction activities would be properly treated on the project site and then discharged into the storm drain system, which does not discharge into the recharge basin.

The project site drains into a catch basin in the northwest corner near the existing OPA Well-3, which then drains into the Santiago Creek Channel. As discussed in Response IX(a), construction and operation of the proposed project would not violate any water quality standards or waste discharge requirements. Therefore, the proposed project would not indirectly affect any federally protected wetlands that may be located in the Santa Ana River or Santiago Creek.

As discussed in Response IX(b), construction and operation of the proposed project would not significantly change groundwater levels in the Orange County Groundwater Basin. Therefore, the proposed project would not indirectly affect any federally protected wetlands that may be located in the Santa Ana River or Santiago Creek. Therefore, construction and operation of the proposed project would not have a substantial adverse effect on any federally protected wetland. Impacts would be less than significant.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less-than-Significant Impact. The proposed project would not result in direct impacts to any portion of the Santiago Creek Recharge Basin or Orange County NCCP/HCP. No fish or wildlife nursery sites occur on the existing project site, and construction activities would not impact Santiago Creek where these biological resources could occur as discussed above in Response IV(b) and (c). As a result, implementation of the proposed project would not impact either the movement of native resident or migratory fish species and would not impede the use of established native wildlife nursery sites.

Furthermore, the proposed project would not interfere with established native resident or migratory wildlife corridors. The proposed project is not located within a reserve area identified by the Orange County NCCP/HCP (County of Orange 2005). The project site is located over 1 mile west of the nearest Orange County NCCP/HCP designated reserve and special linkage areas. Construction and operational activities on the existing IRWD property would not preclude wildlife movement through the habitats associated with the Santiago Creek Recharge Basin or the Orange County NCCP/HCP. The scale and height of the proposed well facilities would be the same as or similar to the existing OPA Well-3 facilities. Thus, the proposed project is not expected to interfere with avian flight patterns. Vegetation associated with the recharge basin, which may include riparian and marsh habitats, would remain unaffected and available for use by migratory birds and small mammal species moving through the region. Although project construction would require periodic 24-hour drilling, it would not interfere with the movement of nocturnal species because construction crews would restrict their activities to the project site where these species are not known to occur. Therefore, construction and operation of the proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Impacts would be less than significant.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less-Than-Significant Impact. As stated previously in Response IV(a), the proposed project would be located within the boundaries of an existing IRWD property. With the exception of ornamental landscaping, the project site supports no vegetation; therefore, development of this area would not conflict with any local policies or ordinances protecting biological resources. Chapter 12.32 of the City of Orange Municipal Code is the Tree Preservation Ordinance and identifies the purpose of tree preservation as: the regulation of large scale tree removal from undeveloped property in that large parcels of undeveloped acreage are more likely to have vast numbers of trees, the removal of which is more likely to have an adverse effect upon the surrounding environment. This ordinance makes it unlawful to destroy or remove any tree as defined in Section 12.32.020 from an undeveloped or public interest property as defined in Section 12.32.040 and 12.32.050. The project site is not public interest property, but may meet the definition of undeveloped property (more than six trees, as defined in Section 12.32.020 exist on real property either before or after any proposed division of such real property). If the project meets this definition, IRWD would comply with the Tree Preservation Ordinance by obtaining a permit for tree removal from the City prior to removing trees and by identifying on any grading plans the location of each tree proposed to be removed. The Director of Community Services may attach reasonable conditions to the permit obtained ensure compliance with the intent and purpose of the ordinance such as the planting of replacement trees. Therefore, impacts would be less than significant.

f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The City of Orange is a signatory to a Natural Resource Community Conservation Plan agreement. However, according to Figure 5.4-2 of the City of Orange General Plan Program EIR, the project site is not located within the NCCP/HCP Habitat Reserve area (City of Orange 2009). Therefore, the proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.

V. Cultural Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion

Would the project:

a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

No Impact. The proposed project would not directly impact known historical resources within the proposed project area. The OPA Well-3 was constructed in 1980. It does not possess any quality of significance in history or architecture that would raise it to level of exceptional importance required of properties under the age of 50 to qualify for the National Register of Historic Places.

A record search was conducted on February 22, 2010, at the South Central Coast Information Center at Fullerton. According to available records and data for the area, within 0.25-mile radius of the project site there are no National Register properties, no California Register of Historical Places properties, no California Historical Landmarks, and no California Points of Historical Interest. The closest historic resource to the project site that is listed on the National Register is Old Town Historic District, located in the City of Orange, approximately 2 miles away from the proposed project site (National Register Information System 2011). The proposed project would not affect this historic resource. Therefore, construction and operation of the proposed project would not result in a substantial adverse change to a historical resource as defined in Section 15064.5 and impacts would not occur.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less-than-Significant Impact. The proposed project is not anticipated to affect archaeological resources within the project site. The proposed project would occur within the boundaries of an existing IRWD property where the ground surface has been previously graded and disturbed. For this reason, no archaeological resources survey was performed for the proposed project.

A record search conducted for the entire OPA service area on February 22, 2010, indicated that approximately 420 acres of the 646-acre OPA service area have been previously surveyed for archaeological resources, primarily in the 1970s. Two prehistoric archaeological sites were located within the OPA service area during those surveys, CA-Ora-702 and CA-Ora-774; neither is located in or adjacent to the proposed project. Additional prehistoric archaeological sites recorded within a 0.5-mile radius of the OPA service area are primarily located along Santiago Creek, the major nearby water source. Furthermore, no Native American cultural resources were identified in a Native American Heritage Commission Sacred Land File search. However, the absence of archaeological items at the surface level does not preclude their existence at the subsurface level once ground-breaking activity is underway (pers. comm. Singleton 2011). Given that the proposed project would take place within an existing IRWD property and would be constructed adjacent to the existing OPA Well-3, the probability for discovering Native American cultural resources is low.

According to the City of Orange General Plan Program EIR, numerous studies have been conducted in or near the City of Orange, resulting in the recordation of some 28 prehistoric archaeological sites. Most of the sites are located to the east of Orange and occupy upland, hill, and valley locations with a few exceptions. The known site distribution, however, is strongly biased by the presence of open land at the time of the survey or site record. The distribution of prehistoric remains within the developed lowland area in Orange is poorly understood, as episodes of early flooding and the subsequent development of the existing urban area may have buried or destroyed sites that once existed in the valley areas (City of Orange 2009). The project site is not located in an area identified as having a high sensitivity for archaeological resources based on Figure 5.5-2 of the City of Orange General Plan Program EIR. This and the record search information suggest that the potential for discovery of prehistoric cultural materials during construction of the proposed project is low.

The proposed project area is located near areas identified on Figure 5.5-2 of the City of Orange General Plan Program EIR to have Spanish/Mexican and Early Town Development, which has some historical sensitivity (City of Orange 2009). There is a limited possibility that historic-period archaeological materials could be unearthed during ground-disturbing activities. However, the project site has been previously disturbed and there would be no significant grading for the proposed project; in addition, depth of sediment disturbance would be less than 3 feet, with the exception of the exact location of the replacement well, which would be located at depths of approximately 800 feet. Archaeological resources are typically found within the first 15 feet of the surface and since the potential for archeological resources to exist on the project site is low, it would be highly unlikely for the exact location of the replacement well to result in a substantial adverse change to a significant archaeological resource. However, should any potential undocumented buried archaeological resources be uncovered during construction, IRWD's standard operating procedures for contractors involve ceasing construction immediately within 50 feet of the discovery, contacting a qualified archaeologist to assess the significance of the find and, if necessary, develop appropriate treatment measures before proceeding with construction. Therefore, because the record search information suggests that the potential for discovery of historical cultural materials during construction of the proposed project is low and the other resources (City of Orange, County of Orange) indicate the potential is low; impacts would be less than significant.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact. The proposed project area is situated on Quaternary alluvium (Morton 1981). Quaternary Holocene-age alluvium has a low potential for vertebrate fossils, but

older Quaternary deposits have a higher potential for vertebrate fossils, primarily of mammals of the Pleistocene epoch. Surface grading or very shallow excavation in the project site is unlikely to uncover significant fossil vertebrates. Deeper excavations that extend into older Quaternary deposits may encounter significant fossil vertebrate remains.

According to the Orange County General Plan, Orange County has a history and prehistory that, despite the rapid change of the recent past, has left a rich heritage of valuable cultural resources. The ancient geological formations have yielded and still contain paleontological resources of major significance (County of Orange 2004). Although the project site is not located in any of the sensitivity areas identified in Figure VI-9 of the Orange County General Plan, it is located near the Northern Santa Ana Mountains sensitivity area (County of Orange 2004). This suggests that the potential for discovery of prehistoric paleontological cultural materials during construction of the proposed project is low. However, should any potential undocumented buried paleontological fossil resources be uncovered during construction activities, IRWD's standard operating procedures for contractors involve ceasing construction immediately within 50 feet of the discovery, contacting a qualified paleontologist to assess the significance of the find and, if necessary, develop appropriate treatment measures before proceeding with construction. Therefore, based on the potential for discovery of prehistoric paleontological resources and the location of the project site, impacts would be less than significant.

d. Disturb any human remains, including those interred outside of formal cemeteries?

No Impact. The proposed project site is not a formal cemetery and is not adjacent to a formal cemetery. The project parcel is not known to contain human remains interred outside formal cemeteries, nor is it known to be located on a burial ground. As discussed in Response V(b), numerous studies have been conducted in or near the City of Orange for archaeological resources. Prehistoric archaeological sites were located during those studies, none of which contained any prehistoric human remains. This suggests that the potential for discovery of human remains during construction of the proposed project is low.

The project site has been previously disturbed and there would be no significant grading for the proposed project; in addition, depth of sediment disturbance located in most of the project site would be less than 3 feet, with the exception of the exact location of the replacement well, which would disturb sediment up to depths of approximately 800 feet. Therefore, it is highly unlikely the proposed project would disturb any human remains during construction of the proposed project, and no impacts would occur. If, in the highly unlikely event human remains are uncovered during construction, IRWD's standard operating procedures involve implementing actions as specified by State Health and Safety Code Section 7050.5. This section states that no further disturbance would occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, excavation or construction would halt in the area of the discovery, the area would be protected, and consultation and treatment will occur as prescribed by law. If the Coroner recognizes the remains to be Native American, he or she would contact the Native American Heritage Commission, who would appoint the Most Likely Descendent. Additionally, if the bones are determined to be Native American, a plan would be developed regarding the treatment of human remains and associated burial objects, and the plan would be implemented under the direction of the Most Likely Descendent.

VI. Geology and Soils	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
2. Strong seismic ground shaking?	☐	☐	☒	☐
3. Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
4. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion

Would the project:

Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

a1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Less-than-Significant Impact. Under the Alquist-Priolo Act, the California State Geologist identifies areas in the state that are at risk from surface fault rupture. These areas are known as Earthquake Fault Zones (EFZs). The proposed project site is not located within an EFZ (California Geological Survey 2010). However, the proposed project site is located within a seismically active region that has been subject to major earthquakes in the past. The San Andreas Fault, Whittier-Elsinore Fault, Newport-Inglewood Fault, and San Jacinto Fault are large, active faults located within 30 miles of the proposed project. Smaller fault traces are located in the vicinity of the project site, including the El Modena and Peralta Hills Faults, which are located within 2 miles and run northeast of the project site. These faults are not considered capable of producing major earthquakes (City of Orange 2005). Impacts from fault rupture generally occur within the immediate area surrounding the fault due to the variations on the ground surface. Therefore, impacts associated with construction and operation of the proposed project would be less than significant.

a2. Strong seismic ground shaking?

Less-than-Significant Impact. As discussed in Response VI(a1), the proposed project is not located within an EFZ. However, the proposed project area is known to contain multiple fault traces, and all communities in Southern California are subject to seismic ground shaking. The proposed project would be constructed in accordance with all applicable building codes to minimize seismic ground shaking impacts on the proposed groundwater well and support infrastructure from seismic activity. Furthermore, construction and operation of the proposed project would not create any new habitable structures and therefore would not expose people or structures to potentially substantial adverse effects involving strong seismic ground shaking. Impacts would be less than significant.

a3. Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact with Mitigation. As discussed in Response VI(a1), the proposed project site is located in a seismically active region subject to strong ground shaking. Furthermore, according to Figure 5.6-2, Environmental and Natural Hazard Policy Map, of the City of Orange General Plan Program EIR, the project site is located in an area identified as a Liquefaction Hazards Area (City of Orange 2009). However, a geotechnical report prepared for IRWD in the project site vicinity along Bond Street evaluated depths of up to 16 feet and determined the area to have a low potential for liquefaction (Converse Consultants 2009). Furthermore, the proposed project would be constructed in accordance with all applicable building codes to minimize impacts on the proposed groundwater well and support infrastructure from seismic activity. In addition, the proposed project would not create any new habitable structures and therefore would not expose people or structures to potentially substantial adverse effects involving seismic-related ground failure. Per the Project Technical Specifications in Section 1044 and **Mitigation Measure GEO-1**, the IRWD would commission the preparation of a geotechnical report by a qualified geologist or geotechnical

engineer. Implementation of **Mitigation Measure GEO-1** would require preconstruction geotechnical assessments to characterize the soils to be encountered in and around each project component and to determine the site-specific design criteria to reduce potential risks of project construction and operation due to lateral spreading, liquefaction, and subsidence. In addition, all project components would be designed and constructed in compliance with the California Building Code Title 24 to minimize impacts due to seismic-related ground failure, including liquefaction. Impacts would be less than significant with mitigation.

Mitigation Measure

GEO-1: A design-level geotechnical investigation, including collection of site-specific subsurface data, will be completed by IRWD. The geotechnical investigation will be conducted by a certified engineering geologist or registered geotechnical engineer. The geotechnical investigation will identify appropriate engineering considerations for the planned project area, including density profiles, depth of groundwater based on borings and historical and regional groundwater data, vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction, and potential presence of expansive soils. The geotechnical investigation will recommend site-specific design criteria to reduce potential risks due to liquefaction, lateral spreading, subsidence, and expansive soils. The project shall be designed and constructed in accordance with the recommendations of the geotechnical report.

a4. Landslides?

No Impact. The project site has a flat topography with no relief to support landslides. Furthermore, Figure 5.6-2, Environmental and Natural Hazard Policy Map, of the City of Orange General Plan Program EIR do not identify the project site as a Landslide Hazard Area (City of Orange 2009). Therefore, construction and operation of the proposed project would not expose people or structures to landslides. No impact would occur.

b. Result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact. The project site is generally flat and includes the existing OPA Well-3 and above ground infrastructure. There is gravel and concrete in the immediate area surrounding OPA Well-3.

Construction of the proposed project would involve earthwork activities such as site preparation, grading, stockpiling of soils, and excavation. Construction activities would disturb surface soils that are currently covered by concrete, gravel, or vegetation and could potentially expose them to erosive forces such as wind and water. As discussed in Section IX, Hydrology and Water Quality, since project construction would encompass an area less than 1 acre, project construction would not require the preparation or implementation of a formal stormwater pollution prevention plan (SWPPP). However, per the Project Technical Specifications, construction plans and activities would include the preparation and implementation of an erosion control plan to minimize runoff during construction. All discharge water generated during project construction would be disposed of in accordance with NPDES and OCFCD discharge permits. The disposal of fluids would be performed under existing NPDES de minimum permits. Furthermore, prior to discharge to the storm drain, all construction flows from the replacement well would be initially conveyed to a series of Baker tanks located on the project site. The purpose of the Baker tanks is to allow suspended sediment to separate from fluids prior to discharge. If de-chlorination is necessary, it would occur at the existing catch basin prior to release. Discharge water would meet OCFCD requirements for discharge and

would then be discharged into the existing 18-inch storm drain. Sand bags, earthen berms, and other devices would be used to form barriers to prevent runoff and would be included in the erosion control plan as Best Management Practices.

Once operational, there would be a negligible change in impermeable surface area. Approximately 1/3 of the project site would remain as impervious surfaces due to concrete around the replacement well, the treatment structure, the surge tank, the wet well, and other ancillary infrastructure. Furthermore, since the project site is currently flat with very little relief, the site under operating conditions would be the same. Therefore, operation of the proposed project would not substantially alter the existing drainage pattern of the site and would not substantially change the impervious area on the project site. As discussed in Section IX, Hydrology and Water Quality, operation of the proposed project would comply with City of Orange Municipal Code Chapter 7.01 (Water Quality and Stormwater Discharges), the provisions set forth in the NPDES permit, and the Orange County Drainage Area Management Plan (DAMP). The proposed project would not result in substantial erosion or the loss of topsoil during construction or operational activities. Therefore, impacts would be less than significant

c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-than-Significant Impact with Mitigation. The project site has been developed and is located in an area identified by the City of Orange General Plan Program EIR in Figure 5.6-2 as having a potential for soil liquefaction (City of Orange 2009). Construction of the proposed project would involve earthwork activities such as site preparation, grading, stockpiling of soils, and excavation. The approximate depth of the replacement well would be 850 feet bgs. However, the proposed project would not involve the construction of any habitable structures and would be developed in accordance with City and state building and safety standards. Furthermore, as discussed in Response VI (a4), no impacts on people or structures would occur as a result of landslide. Per the Project Technical Specifications in Section 1044, Noise Control Measures, and **Mitigation Measure GEO-1**, IRWD would prepare a geotechnical report by a qualified geologist or geotechnical engineer. In addition, all project components would be designed and constructed in compliance with the California Building Code Title 24 to control for any potential effects associated with landslides, liquefaction, and subsidence. Impacts on people or structures as a result of seismic-related ground failure, including liquefaction, lateral spreading, subsidence, or collapse would be less than significant with mitigation.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less-than-Significant Impact with Mitigation. Expansive soils are fine-grained soils (generally high plasticity clays) that can undergo a significant increase in volume with an increase in water content and a significant decrease in volume with a decrease in water content. Changes in the water content of an expansive soil can result in severe distress to structures constructed upon the soil. Expansive soils are found associated with soils, alluvium, and bedrock formations that contain clay minerals susceptible to expansion under wetting conditions and contraction under drying conditions. The County of Orange General Plan Safety Element indicates that much of Orange County contains soil with expansive characteristics (City of Orange 2009, County of Orange 2004). As discussed in Response VI (c), construction of the proposed project would involve earthwork

activities such as site preparation, grading, stockpiling of soils, and excavation. The approximate depth of the replacement well would be 850 feet bgs. However, the proposed project would not involve the construction of any habitable structures and would be developed in accordance with city and state building and safety standards. Per the Project Technical Specifications in Section 1044, Noise Control Measures, and **Mitigation Measure GEO-1**, IRWD would prepare a geotechnical report by a qualified geologist or geotechnical engineer. In addition, all project components would be designed and constructed in compliance with the California Building Code Title 24 to reduce potential effects associated with expansive soils. Impacts on people or structures as a result of expansive soils would be less than significant with mitigation.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

No Impact. The proposed project would not include any habitable structures, septic tanks, or alternative wastewater disposal systems. The proposed project would include a restroom and potential impacts associated with wastewater generation are discussed in Section XVII, Utilities and Service Systems. No impact would occur.

VII. Greenhouse Gas Emissions	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

Would the project:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-than-Significant Impact. Table 3-3 presents an estimate of proposed project construction- and operation-related greenhouse gas (GHG) emissions of CO_2, CH_4, and N_2O in terms of CO_2e (carbon dioxide equivalent). As shown therein, total CO_2e emissions would be below the SCAQMD threshold for industrial projects (detailed calculations and URBEMIS worksheets are provided in Appendix C). Impacts would therefore be less than significant.

Table 3-3. Estimate of Proposed Project Greenhouse Gas Emissions

	Annual CO_2e (metric tons)
Proposed Project Emissions	
Construction-Period Emissions	
2012	322.1
2013	300.6
Total Construction-Period Emissions[a]	21
Operation-Period Emissions	1,698
Total Annual Emissions	1,719
SCAQMD Significance Threshold	10,000
Exceed Threshold?	No
Proposed Project Emissions	

[a] Total Construction-Period Emissions are amortized over 30 years per SCAQMD methodology.
Source: ICF 2011. URBEMIS 2007 outputs are provided in Appendix C.

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact. Assembly Bill 32 (AB 32), passed by the California State Legislature in 2006, aims to reduce GHG emissions in California to 1990 levels by the year 2020. AB 32 identified the acceptable level of GHG emissions in California in 2020 as 427 million metric tons of CO_2e, which is the same as the 1990 GHG emissions level, is approximately 12% less than the current level (480 million metric tons CO_2e in 2004), and is approximately 28.5% less than 2020 Business As Usual (BAU) conditions (596 million metric tons CO_2e). To achieve these GHG reductions, widespread reductions of GHG emissions must be made across California. Some reductions will need to come in the form of changes in vehicle emissions and mileage, changes in electricity sources, and increases in energy efficiency by existing facilities, as well as other measures. The remainder of the necessary GHG reductions will need to come from requiring new facility development to have lower carbon intensity than BAU conditions. Therefore, this analysis uses a threshold of significance that is in conformance with the state's goals.

On December 12, 2008, the California Air Resources Board (CARB) approved the AB 32 Scoping Plan, which contains emission reduction measures targeting sources of GHG emissions called for in AB 32. The scoping plan has a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program.

Proposed project operational GHG emissions would result from onsite electricity consumption. In their AB 32 Scoping Plan, CARB has set in place aggressive energy efficiency measures requiring that 33% of all energy consumed in California come from renewable sources by 2020. Assuming conformity with CARB standards, GHG emissions in 2020 associated with operation of the proposed project are expected to be 33% less than under BAU conditions. Impacts would be less than significant.

VIII. Hazards and Hazardous Materials	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion

Would the project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less-than-Significant Impact. The existing project site is comprised of the OPA Well-3 and above ground infrastructure. Currently, there are hazardous materials stored on site in a locked enclosed

structure as part of the existing well's disinfection system. A hazardous materials disclosure, emergency response plan, site map, and business identification form has been submitted to the Orange County Fire Authority for the materials stored on site. This system is located adjacent to the well and holds two 55-gallon drums of 12.5% sodium hypochlorite solution, which are refilled by IRWD personnel as needed. The solution is stored offsite at the Michelson Water Recycling Plant and transported to the site as needed (typically once per month). Sodium hypochlorite is used to disinfect the pumped groundwater prior to the discharge into the distribution system.

Construction of the proposed project would require the abandonment of the existing OPA Well-3, construction of IRWD OPA Well-1 and associated infrastructure including the disinfection system. Site preparations would include removal of the existing well pump and delivery of all components to the IRWD's Michelson Water Reclamation Plant. The existing disinfection system and building would be removed; however, electrical improvements would remain intact for development of the new IRWD OPA Well-1. Prior to removing the hypochlorite tanks from the building, the sodium hypochlorite solution would be removed from the tanks and reused at other IRWD facilities. The tanks could then be cleaned at the Michelson Water Recycling Plant and either reused elsewhere in the IRWD or disposed following all appropriate protocols, procedures, and regulations.

Construction activities would be short term in nature and may involve the limited transport, storage, use, and disposal of hazardous materials such as fuel and lubricating grease for motorized heavy equipment. Some examples of typical hazardous materials handling include fueling and servicing construction equipment on the site and transporting fuels, lubricating fluids, solvents, and bonding adhesives. These types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by local, county, and state laws.

Operation of the proposed project would involve the use of a disinfection system, which would require routine transport, storage, use, and disposal of hazardous materials. The disinfection system would utilize chloramination. There would be two tanks to contain the disinfection mixture—one tank would contain the 12.5% sodium hypochlorite and the other tank would contain the 29% ammonia. It is estimated that the sodium hypochlorite and ammonia tanks would be approximately 2,500 gallons and 200 gallons in size, respectively. The proposed project would result in the addition of the use of ammonia at the project site. It would also result in an increase in the volume of disinfection mixture over the existing 110 gallons currently located at the project site. Sodium hypochlorite (12.5%) is a nonflammable and noncombustible liquid and therefore has no potential for explosion (HASA MSDS 2011). Its primary potential routes of entry to humans is dermal (skin contact) and it can cause skin and eye irritation or burns (HASA MSDS 2011). It is unlikely to be inhaled and it is not typically anticipated to be ingested; however, vapor may cause irritation to the upper respiratory tract if inhaled (HASA MSDS. 2011). It is not listed by the Occupational Safety and Health Administration (OSHA) as a carcinogen (HASA MSDS 2011). Ammonia (29%) is a noncombustible, nonflammable liquid and therefore has no potential for explosion (MSDS 2011). However, ammonia vapors are released if the chemical is heated (MSDS 2011). Primary potential routes of entry to humans are dermal (skin) contact and respiratory (breathing). Ammonia vapors are known to be strong irritant to the eyes, skin, and respiratory tract (MSDS 2011).

Both tanks would have double containment or would be located in a spill containment area. The tanks would be located in a locked building with an intrusion alarm. IRWD would conduct regularly scheduled inspection and maintenance on the replacement well and disinfection system as they do for the existing OPA Well-3. The maintenance would be scheduled as needed and would include checking the disinfection system and operation of the pumps, as well as testing water quality. It is

estimated that the disinfection tanks would be refilled once a month. Because of these precautionary design features, it is highly unlikely a spill of the sodium hypochlorite or ammonia would occur. However, in the unlikely event a spill did occur, the primary hazard to humans would be direct contact with skin and respiratory irritation, as it currently is with the existing disinfection system. Eye wash and shower stations would be installed in the chemical area that could be used if chemicals come into direct contact with a person.

The transport, handling, and use of hazardous materials are regulated by several different state and local agencies. The transport of hazardous materials is regulated by Caltrans. Transporters of hazardous materials are required to be certified by Caltrans. Therefore, all hazardous material deliveries would be tracked and vehicles would be required to use roadways approved for the transportation of hazardous materials. IRWD would be subject to the Hazardous Materials Release Response Plans and Inventory Act (also known as the Business Plan Act), which requires an entity or business using hazardous materials to prepare a business plan describing the facility, inventory, emergency response plans, and training programs and submit it to the City of Orange Fire Department. Furthermore, IRWD will comply with the California Accidental Release Prevention (CalARP) program and prepare a Risk Management Plan (RMP) if required per CalARP. The RMP is a detailed analysis of the potential accident factors and mitigation measures that can be implemented to reduce accident potential. The RMP may include items such as safety information, hazard review, operating procedures, emergency response plan, training requirements, and compliance audits.

To comply with the Hazardous Materials Release Response Plans and Inventory Act (also known as the Business Plan Act), IRWD would prepare or update its business plan and/or hazardous materials and inventory disclosure form to describe the proposed facility, hazardous materials inventory, emergency response plans/risk management plans, and training programs. The plan would demonstrate that adequate controls, containment, and clean-up protocols are in place to minimize risks to the population and environment. The plan would be submitted to and approved by the City of Orange Fire Department prior to operating the disinfection facility. To facilitate approval, prior to putting project plans out to bid, IRWD would submit drawings to the City of Orange Fire Department for their review, approval, and stamp as required by the Business Plan Act. IRWD is responsible for implementing the approved plan.

Construction and operation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Furthermore, regularly scheduled maintenance during project operations would occur as they currently do for the existing OPA Well-3. Refilling the disinfection tanks would take place as often as the current conditions and would be managed by the existing standards and regulations as the current refilling is. Refilling the disinfection tanks would not create a significant hazard to the public. Therefore, impacts would be less than significant.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less-than-Significant Impact. The City of Orange Fire Department provides a wide array of services to the City, including hazardous materials first response (City of Orange 2011). Furthermore, according to City of Orange General Plan Safety Element, the Orange County Fire Authority (OCFA) has coordinated preparation of the Orange County Hazardous Waste Management Plan. The plan establishes countywide policy for waste treatment, transportation, and disposal (City

of Orange 2005). Furthermore, city regulations include Chapter 15.33, Hazardous Materials, of the City of Orange Municipal Code and implementation of the California Accidental Release Prevention Program.

Construction activities would be short term in nature and may involve the limited transport, storage, use, and disposal of hazardous materials such as fuel and lubricating grease for motorized heavy equipment. Some examples of typical hazardous materials handling include fueling and servicing construction equipment on the site and transporting fuels, lubricating fluids, solvents, and bonding adhesives. These types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by local, county, and state laws. Furthermore, the Project Technical Specifications state the proposed project would prepare and implement a spill prevention plan prior to the start of construction. BMPs required in the plan include all construction workers be educated in the proper handling and storage of construction materials; all spills be soaked up using absorbent materials and disposed of properly; and outdoor storage of all oils, solvents, cleaners, and other liquid materials be stored within secondary containment (Irvine Ranch Water District 2010).

Construction activities would also involve drilling to a depth of approximately 900 feet bgs for the proposed IRWD OPA Well-1. As discussed below under Section VIII(d), no existing sources of contamination have been identified in soil or groundwater onsite and the proposed project is not expected to discover or result in soil and/or groundwater contamination. As discussed in Chapter 2, Project Description, all drill cutting, rotary fluid, and other by-products would be retained on site to be transported and disposed of per applicable regulations. All soil cuttings and fluids generated during the drilling process would be contained and tested prior to disposal at an offsite facility. The excavated soil would be stored at the project site while awaiting analytical results. Using a State of California certified hazardous waste testing laboratory, the samples would be submitted for Toxicity Characteristic Leaching Procedure (TCLP), Soluble Threshold Limit Concentration (STLC), or Total Threshold Limit Concentration (TTLC) metals analysis or any combination of the three analyses in order to accurately classify the cuttings as hazardous or non-hazardous material. If analytical reports show that the cuttings are hazardous, they would be placed on plastic sheeting and IRWD would arrange for appropriate disposal per applicable regulations. Should any unknown contamination be discovered during construction, construction activities would cease if IRWD deems it necessary, and investigation and remedial activities would be implemented in accordance with state laws, regulations, and policies. Non-hazardous drill cuttings would be disposed of at an offsite facility. The proposed project does not include the importation of soil to backfill excavated areas. Therefore, construction activities would not create a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of soil and/or groundwater contamination into the environment.

Operation of the proposed project would involve the use of a disinfection system, which would require routine transport, storage, use, and disposal of hazardous materials as described above in Response VIII(a). The proposed project would result in the addition of the use of ammonia at the project site. It would also result in an increase in the volume of disinfection mixture over the existing 110 gallons currently located at the project site.

Although operation of the proposed project would use and store hazardous substances, it would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions. With implementation of the spill prevention plan during construction and adherence to city, county, and state agency requirements, construction and operation of the proposed project would not create a significant hazard to the public or the environment through

reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, impacts would be less than significant.

c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-than-Significant Impact. Only one school, Prospect Elementary School, is within 0.25 mile of the project site. The proposed project would not emit hazardous emissions; therefore, it would not do so within 0.25 mile of a school. The proposed project would handle hazardous materials associated with disinfection for potable drinking water purposes; however, these materials would be stored with double containment or within a spill containment area, in a locked and alarmed building and handled in accordance with IRWD's RMP. Furthermore, compliance with city, county, and state requirements would further minimize the potential for the accidental release or upset of hazardous materials, helping to ensure public safety. Therefore, impacts would be less than significant.

d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less-than-Significant Impact. The project site is located at 678 North Gravier Street, and although it is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, project operation does require handling and storing hazardous materials. A search of 678 North Gravier Street in the California Environmental Protection Agency (CalEPA) Cortese List as a Department of Toxic Substances and Control Hazardous Waste site did not yield any results, and the proposed project site address is not in the EnviroStor data base of hazardous substances release sites (CalEPA 2011a, 2011b). Geotracker, the California database of leaking underground storage tanks, lists two incidents within approximately 0.6 mile of the project site at 454 North Prospect Street and 3920 East Spring Street that have been remediated. However, the database does not report any current leaking underground storage tanks at the project site or in the vicinity of the project site (Geotracker 2011). Finally, there are no active Cease and Desist Orders or Clean Up and Abatement Orders for hazardous materials/facilities in the project vicinity or at the project site (CalEPA 2011c). Therefore, the proposed project would not create a significant hazard to the public or the environment, and impacts would be less than significant.

e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?

No Impact. The closest airport is John Wayne (Orange County) Airport, approximately 8 miles south of the project site. The project site is not located within the boundaries of the Airport Environs Land Use Plan (AELUP) for John Wayne Airport. Therefore, construction and operation the proposed project would not result in a safety hazard for people residing or working in the project area. No impact would occur.

f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?

No Impact. The proposed project is not located within the vicinity of a private airstrip. Therefore, construction and operation proposed project would not result in a safety hazard for people residing or working in the project area, and there would be no impact.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project would not involve expansion beyond the existing IRWD property boundaries; therefore, conflicts with any emergency evacuation plan would not occur. Furthermore, the project site is not located along any of the major arterials that could serve as major evacuation routes. Finally, the hazardous materials associated with disinfection would be stored with double containment and would be located in a locked building with an intrusion alarm, and the City of Orange Fire Department would have the RMP and would be made aware of the chemicals through the Hazardous Materials Disclosure. Therefore, construction and operation of the proposed project would not impair or physically interfere with any emergency plan, and there would be no impact.

h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. According to the City of Orange General Plan Safety Element, the project site is not located near any areas identified as Wildland Fire Hazard Areas (City of Orange 2005). Furthermore, construction and operation of the proposed project would not involve housing units. Therefore, construction and operation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no impact would occur.

IX. Hydrology and Water Quality	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	☐	☐	☒	☐
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☒	☐
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j. Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

City of Orange CEQA Hydrology Thresholds		Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
k.	Potentially impact stormwater runoff from construction activities?	☐	☐	☒	☐
l.	Potentially impact stormwater runoff from post-construction activities?	☐	☐	☒	☐
m.	Result in a potential for discharge of stormwater pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?	☐	☐	☒	☐
n.	Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?	☐	☐	☒	☐
o.	Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?	☐	☐	☒	☐
p.	Create significant increases in erosion of the project site or surrounding areas?	☐	☐	☒	☐

Discussion

Would the project:

a. Violate any water quality standards or waste discharge requirements?

Less-than-Significant Impact. Land within the City of Orange is included in four watersheds: Santa Ana River, San Diego Creek, Carbon Creek, and Westminster. Each of these watersheds is under the jurisdiction of the Santa Ana Regional Water Quality Control Board (SARWQCB) and subject to the objectives, water quality standards, and BMP requirements established in the Santa Ana River Basin Plan and Orange County Drainage Area Management Plan (DAMP). The County of Orange and the City of Orange are signatories of the Orange County DAMP (SARWQCB 2010). The DAMP is a management structure for compliance efforts; a formal agreement to underpin cooperation; and a detailed municipal effort to develop, implement, and evaluate various BMPs or control programs in the areas of public agencies activities, public information, new development and construction, public works construction, industrial discharger identification, and illicit discharger/connection identification and elimination (SARWQCB 2010).

The project site is located in the Santa Ana River watershed. The Santa Ana River Watershed encompasses approximately 2,800 square miles extending from the Big Bear region in San Bernardino County and from east Hemet in Riverside County, and includes most of the City of Orange and Orange County. Approximately 4.8 million people live within this watershed. The Lower

Santa Ana River basin underlies the entire western portion of the City of Orange. The Santa Ana River is the major drainage course for the Santa Ana River basin (City of Orange 2009).

Under the provisions of the City of Orange Municipal Code Chapter 7.01 (Water Quality and Stormwater Discharges), any discharge to or from the stormwater drainage system or to a receiving water that is not composed entirely of stormwater is prohibited. Non-stormwater discharges authorized by a separate NPDES Permit are allowed provided compliance with all permit conditions is maintained. New development and significant redevelopment are required to ensure pollutant discharges from development are reduced to the maximum extent practicable and in accordance with the NPDES permit, the DAMP, and the City's Local Implementation Plan, a planning document detailing the City's implementation of the DAMP (City of Orange 2004).

Per the requirements of the NPDES de minimus discharge permit, the proposed project would provide advanced notice to the SARWQCB and County of Orange prior to any discharge to the storm drain system or OCFCD channel, including an estimate of the amount of discharge anticipated for each discharge event. Also under the requirements of the NPDES permit, IRWD would collect samples and submit monthly reports to the SARWQCB for discharge compliance.

The proposed project would include earthwork activities such as site preparation, grading, stockpiling of soils, and excavation. Construction activities would disturb surface soils that are currently covered by concrete, gravel, or vegetation. Once disturbed, soils could be exposed to the effects of wind and water erosion, causing sedimentation in stormwater runoff. Project construction would also involve the use of chemicals and solvents such as fuel and lubricating grease for motorized heavy equipment. Inadvertent spills or releases of such chemicals could cause an adverse water quality impact. Refer to Section VIII, Hazards and Hazardous Materials, for additional information.

Project construction would encompass an area less than 1 acre; therefore, project construction would not require the preparation or implementation of a formal SWPPP. However, per the Project Technical Specifications, construction plans and activities would include the preparation and implementation of an erosion control plan to minimize runoff during construction. All discharge water generated during project construction would be disposed of in accordance with NPDES and OCFCD discharge permits. The disposal of drill cuttings, rotary fluids and other well construction by-products would be performed under existing NPDES de minimus permits. Furthermore, prior to discharge to the storm drain, all construction flows ~~from each well~~ would be initially conveyed to a series of Baker tanks located on the project site. The purpose of the Baker tanks is to allow suspended sediment to separate from fluids prior to discharge. If de-chlorination is necessary, it would occur at the existing catch basin prior to release. Discharge water would meet OCFCD requirements for discharge and would then be discharged into the 18-inch storm drain. Water from the Baker tanks that meets OCFCD requirements for discharge would be conveyed to the storm drain in the northwest corner of the project site near the existing OPA Well-3. Sand bags, earthen berms, and other devices would be used to form barriers to prevent runoff as implementation of Best Management Practices incorporated into the erosion control plan.

Once the replacement well is operating, it would provide an estimated annual average demand of approximately 900 AFY of potable water, which is less than the design capacity of the existing well, but a nominal increase over the existing 700 to 900 AFY at which the well is currently operating. The groundwater produced by IRWD OPA Well-1 would be pumped to the wet well where it will be temporarily stored and then conveyed to customers through the distribution system in the OPA

service area. Since the amount of impervious surface would generally remain the same under operating conditions when compared to existing conditions, the project site would not generate any substantial increase in stormwater runoff and therefore would not violate any discharge requirements. Operation of the proposed project would comply with City of Orange Municipal Code Chapter 7.01 (Water Quality and Stormwater Discharges), the provisions set forth in the NPDES permit, and the Orange County DAMP (all described at the beginning of this response). Therefore, the proposed project would not violate any water quality standards or waste discharge requirements during construction or operational activities, and impacts would be less than significant.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Less-than-Significant Impact. Water supply in the IRWD service area, which includes small portions of the City of Orange, other cities in Orange County, and parts of unincorporated Orange County, comes from several sources including water from northern California via the State Water Project, the Colorado River, local groundwater basins, local watersheds, reclamation, and water reuse projects. The Orange County Water District (OCWD) manages the Orange County Groundwater Basin (Basin), which is one of the City's and IRWD's primary sources of water supply. Groundwater conditions in the Basin are naturally influenced by the following natural conditions: natural hydrologic conditions of rainfall, groundwater seepage, and stream flow. Groundwater extraction and injection through wells, the use of imported water for groundwater replenishment, and water use efficiency practices also influence the groundwater conditions in the Basin (City of Orange 2009). OCWD manages annual production, recharge, and replenishment in the Basin through financial incentives (discussed in Chapter 2 and Section XVII, Utilities and Service Systems) and implementation of a Groundwater Management Plan. Furthermore, OCWD maintains and uses a Basin groundwater model to plan for the future effects of groundwater extraction by the various purveyors, including IRWD, within the Basin.

The Basin covers an area of approximately 350 square miles beneath the broad lowlands known as the Tustin and Downey Plains. The aquifers comprising the Basin extend over 2,000 feet deep and form a complex series of interconnected sand and gravel deposits. (Orange County Water District 2009.)

OCWD operates recharge facilities to maximize groundwater recharge. Recharging water into the Basin through natural and artificial means is essential to support pumping from the Basin. The Basin's primary source of water for groundwater recharge is flow from the Santa Ana River (Orange County Water District 2009). Groundwater recharge facilities within or adjacent to the City of Orange include the Santa Ana River, which performs groundwater recharge in areas along its entire route, and Santiago Creek. The upper portions of Santiago Creek are characterized by large, abandoned sand and gravel mining pits. In particular, the pits located approximately north-northeast of Bond Street serve groundwater recharge purposes (City of Orange 2009).

The proposed project would not interfere with groundwater recharge as it introduces a negligible change in impervious surfaces (see Response IX (c), (d), and (e) for more discussion regarding impervious vs. pervious surfaces). Furthermore, the proposed project would not introduce a new long-term source of withdrawal of groundwater because it is intended to replace the existing OPA

Well-3 and would not significantly increase production over the current conditions. The existing OPA Well-3 located in the northwest corner of the project site is in very poor condition and is currently producing approximately 900 gpm, far below its original rate of approximately 1,900 gpm. As part of the proposed project, the existing OPA Well-3 would be abandoned and construction and operation of IRWD OPA Well-1 would occur on the same IRWD property as the abandoned well. The proposed project would allow a slightly greater proportion of the OPA service area demand to be served by groundwater, rather than imported water, as historically has been the case. Normal production capacity from the proposed IRWD OPA Well-1 would provide an estimated annual average of approximately 900 AFY of potable water to the OPA service area, 100 to 200 AFY more than the existing deteriorated operation conditions of OPA Well-3.

There are numerous inactive and abandoned/destroyed wells within the vicinity of the project site. There are also several active production wells within close proximity to the project site. These include two production wells owned and operated by the City of Orange, identified as O-23 and O-24, and two production wells owned and operated by the EOCWD, which are identified as EOCWD-W and EOCWD-E. Since the proposed project would pump at a rate similar to historic conditions, it is not anticipated that these wells would experience significant lowering of the groundwater table (drawdown) as a result of the proposed project.

OCWD conducted modeling runs of the Basin for the previous project when two wells were being considered (Appendix D). The model was calibrated based on 9 years of monthly production data of the existing wells in the Basin and indicated potential effects in groundwater levels of the shallow, principal, and deep aquifers as a result of pumping from the two wells. Interpolation of the data found in the model revealed there is a linear relationship between capacity and drawdown. At historic conditions (approximately 700 AFY) the draw down is 0 feet. Through extrapolation for the proposed project (approximately 900 AFY), it was determined the drawdown at the nearest City of Orange well (O-24) would be approximately 0.44 feet and approximately 0.26 feet of drawdown at EOCWD nearest well (EOCWD-W). Pumping associated with the proposed project would produce no significant water level change in the shallow or deep aquifer. Since the proposed project would pump at an annual capacity similar to historic conditions, groundwater levels within the principal aquifer in the immediate vicinity of the replacement well would be essentially unchanged. Overall, there would be no significant changes across the Basin. Implementation of the proposed project would not result in a significant lowering of groundwater levels.

As described in Chapter 2 under Well Operations, IRWD and the City of Orange established a Joint Groundwater Engineering and Management Committee to coordinate groundwater production, monitoring and the mitigation of possible impacts to existing wells in accordance with the existing 2006 Annexation Agreement. This agreement is attached as Appendix B. This agreement and committee is the existing framework for IRWD and the City of Orange to address well and groundwater issues on a case-by-case basis.

Even though no significant lowering of groundwater level is expected, pursuant to the 2006 Annexation Agreement, the Joint Groundwater Engineering and Management Committee could be convened as necessary to evaluate physical conditions, actual drawdowns, and production rates experienced at the existing O-23 and O-24 wells and any actual significant changes that are observed and verified during the operation of the IRWD OPA Well-1. EOCWD would be invited by IRWD to participate in the Joint Groundwater Engineering and Management Committee meetings. Any actual significant changes that are observed and verified at EOCWD-W and EOCWD-E could be addressed

between IRWD and EOCWD outside of the committee meeting framework. However, no significant changes are anticipated.

Operation of the proposed project would result in a minor increase in the amount of pumping as compared to historic conditions. The maximum drawdown would be essentially unchanged and the nearby City of Orange and EOCWD production wells would not be affected as a result of implementation of the proposed project. Therefore, impacts associated with the drawdown of the local groundwater level would be less than significant.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?

Less-than-Significant Impact. The existing project area is located in the Santa Ana River Watershed. The project site drains into a catch basin in the northwest corner of the site, which drains to the Santiago Creek Channel. No streams or rivers are currently located on or around the project site and therefore the proposed project would not directly affect the flow of a river or stream.

Construction of the proposed project would involve minimal earthwork activities, such as site preparation. Construction activities would disturb surface soils that are currently covered by concrete, gravel, or vegetation. These activities would temporarily alter the existing drainage pattern of the project site during construction; however, as described above in Response IX(a), construction of the proposed project would comply with the requirements of the NPDES and OCFCD permits. Furthermore, the proposed project would implement an erosion control plan and BMPs consistent with the DAMP in order to limit erosion and sedimentation and subsequent damage to the Santiago Creek and Santa Ana River.

The volume of stormwater runoff generated by a project site is related to the amount of impervious (e.g., concrete) and pervious surfaces (e.g., lawn). The more impervious the project site, the more stormwater runoff generated. High volumes of stormwater runoff from a project site can result in erosion or siltation on or off site depending on the errodability nature of the surrounding soil. The project site includes the existing OPA Well-3 and aboveground infrastructure. There is gravel and concrete in the immediate area surrounding OPA Well-3. Approximately 1/3 of the project site is impervious surfaces. Once operational, there would be no substantial change in impervious surface area. The disinfection treatment system would be located in an enclosed structure in impervious spill containment areas. The surge tank and the area around the well would also be considered impervious surfaces. Therefore, there would not be a substantial alteration of the project site impervious to pervious surfaces, and the volume of stormwater runoff would generally remain the same and not result in erosion or siltation on or off site. Impacts would be less than significant.

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?

Less-than-Significant Impact. There are no streams or rivers located on the project site. The project site does drain to the Santiago Creek Channel; however, construction and operation of the proposed project would not directly affect the flow of a river or stream. During construction, runoff quantities and velocities from the project site would be minimized through implementation of an erosion control plan and BMPs consistent with the DAMP in order to limit stormwater discharge. As

discussed above in Responses IX(a) and (c), operation of the proposed project would not substantially alter the existing drainage pattern nor would it substantially change the impervious area on the project site. Therefore, construction and operation of the proposed project would not substantially alter the existing drainage pattern of the project site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site. Impacts would be less than significant.

e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less-than-Significant Impact. The project site is located in an urban area and is composed of the OPA Well-3 and aboveground infrastructure. There is gravel and concrete in the immediate area surrounding the existing OPA Well-3. Currently, drainage at the project site flows into a catch basin located in the northwest corner of the project site, near the existing OPA Well-3. The catch basin is connected to an 18-inch storm drain that flows to the OCFCD E08P06 Santiago Creek Channel (Irvine Ranch Water District 2010, OCFCD 2010).

During construction of the proposed project, pumping and testing of the well would be required. This would generate water that would initially be conveyed to a series of Baker tanks located on the project site as previously discussed. The purpose of the Baker tanks is to allow suspended sediment to separate from fluids prior to discharge (Irvine Ranch Water District 2010). If de-chlorination is necessary, it would occur at the existing catch basin prior to release. Discharge water would meet OCFCD requirements for discharge and would then be discharged into the existing 18-inch storm drain. Testing the well could generate volumes of water of up to approximately 3,700 gpm. The existing storm facility would be sufficient to convey the expected flows from well construction. The slope of the 18-inch line would allow up to 3,700 gpm at 75% full (Irvine Ranch Water District 2010). Furthermore, a flood control encroachment permit would be required to discharge into this existing stormwater drain and would stipulate any relevant discharge conditions.

As discussed above in Responses IX(a), (c), and (d), operation of the proposed project would not substantially alter the existing drainage pattern of the site nor would it substantially change the impervious area on the project site. Therefore, the proposed project would not substantially increase the volume or velocities of stormwater flow, contribute to the exceedance of stormwater drainage capacities, or provide additional sources of pollutants. Impacts would be less than significant.

f. Otherwise substantially degrade water quality?

Less-than-Significant Impact. The proposed project would not substantially degrade water quality. As outlined under Responses IX(a) and (e), construction and operation of the proposed project would not substantially increase surface runoff, would not substantially alter the drainage of the existing project site, and would comply with all requirements of the NPDES and OCFCD permits. Furthermore, the proposed project would not drain into the Santiago Recharge Basin. Impacts on water quality would be less than significant.

g. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed project does not include the construction of housing units. Therefore, the proposed project would not locate housing within a 100-year flood hazard area. There would be no impact.

h. Place within a 100-year flood hazard area structures that would impede or redirect floodflows?

Less-than-Significant Impact. The project site is located within 500 feet of the Santiago Creek Recharge Basin and approximately 0.25 mile east of the lower Santiago Creek. According to Figure IX-7 of the Orange County General Plan, the Santiago Creek Recharge Basin is located in the Santiago Creek Overflow Area and is susceptible to a 500-year flood (County of Orange 2004 and FEMA Map Panel FM06059C0162 2011). Furthermore, according to the City of Orange General Plan, the Santiago Creek is identified as a 100-Year Flood Area (City of Orange 2005). However, the project site is located approximately 0.25 mile east of the Santiago Creek and is not identified as a 100-year flood area (City of Orange 2005). The proposed project involves constructing small structures to house the disinfection system and aboveground pipes associated with the replacement well. The scale and height of these types of structures are not large enough to impede or redirect flows in the Santiago Creek or Santiago Recharge Basin. Therefore, the proposed project would not impede or redirect 100-year floodflow, and impacts would be less than significant.

i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less-than-Significant Impact. As discussed in Response IX(g), the proposed project is not located in a flood zone area (County of Orange 2004, City of Orange 2005). However, according to the County of Orange General Plan Figure IX-9, Prado Dam and Santiago Reservoir Inundation Areas, the proposed project is located in the Santiago Reservoir Inundation Area (County of Orange 2004). Although the proposed project is located within 500 feet of the Santiago Creek Recharge Basin and approximately 0.25 mile east of the lower Santiago Creek, the proposed project does not involve the construction of habitable structures that would impede or redirect flows in the event of a dam failure at the Santiago Reservoir. Therefore, the proposed project would not expose people to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. As discussed in Response IX(g), the scale and height of the proposed project structures would not redirect flows associated with a levee or dam failure, and the loss of these structures would not be significant as IRWD would replace them in the event of a failure. Impacts would be less than significant.

j. Contribute to inundation by seiche, tsunami, or mudflow?

Less-than-Significant Impact. A seiche is a tidal change in an enclosed or semi-enclosed water body caused by sustained high winds or earthquake. A tsunami is a large tidal wave generated by an earthquake, landslide, or volcanic eruption. Mudflows (or debris flows) are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as during heavy rainfall or rapid snowmelt, change the earth into a flowing river of mud (City of Orange 2009).

The proposed project site is relatively flat and located over 14 miles away from the Pacific Ocean. The project site is also within 500 feet of the Santiago Creek Recharge Basin and approximately 0.25 mile east of the lower Santiago Creek.

Implementation of the proposed project would not increase exposure to inundation by seiche, tsunami, or mudflow. According the Safety Elements of the Orange County and City of Orange General Plans, the project site is not located in a 100- or 500-year flood zone area (County of Orange 2004, City of Orange 2005). Although seiches have not historically occurred within the City of Orange, it is possible that a seiche could occur within the Santiago Creek Recharge Basin. Due to the

absence of historical data, no local mapping is available for adjacent areas that might be affected (City of Orange 2009). However, the proposed project does not involve the construction of any habitable buildings or structures that would contribute to inundation by seiche and the site is at a higher elevation.

The proposed project site is located over 14 miles away from the Pacific Ocean and is generally considered too far away to be subject to a tsunami. Furthermore, according to the City of Orange Safety Element, the potential for mudflow at the project is low since this type of event is associated with erosion during land development activities in and adjacent to hillsides mainly in the eastern portion of the City or Orange due to removal of natural vegetation and creation of steep graded slopes (City of Orange 2009).

As stated above, the proposed project does not involve the construction of any habitable buildings or structures that would contribute to inundation by seiche or mudflow. Furthermore, the proposed project is not located in a tsunami inundation zone. Therefore, impacts would be less than significant.

k. Potentially impact stormwater runoff from construction activities?

Less-than-Significant Impact. As discussed in Response IX(a), the proposed project would comply with all requirements of the NPDES and OCFCD permits. Per the Project Technical Specifications, construction plans and activities would include the preparation and implementation of an erosion control plan to minimize runoff during construction. All discharge water generated during project construction would be disposed of in accordance with NPDES and OCFCD discharge permits. Furthermore, prior to discharge to the storm drain, all construction flows would be initially conveyed to a series Baker tanks located on the project site. As discussed in Response IX(e), construction of the proposed project would not result in an exceedance of the existing stormwater capacity. The proposed project would not substantially impact stormwater runoff from construction activities, and impacts would be less than significant.

l. Potentially impact stormwater runoff from post-construction activities?

Less-than-Significant Impact. Responses IX(a), (c), and (d) identify the location of the project site. Once operational, there would be no substantial change in impermeable surface area. Operation of the proposed project would not substantially alter the existing drainage pattern of the site nor would it substantially change the impervious area on the project site. Post-construction activities of the proposed project would not result in substantial impacts on stormwater runoff. Impacts would be less than significant.

m. Result in a potential for discharge of stormwater pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?

Less-than-Significant Impact. As discussed in Response VIII(a), construction activities would involve limited use of hazardous materials, and operation would involve the routine transport, use, and storage of hazardous materials for maintenance of the disinfection system. Also, as discussed in Response VIII(b), construction equipment has the potential to release oils, greases, solvents, and other finishing materials through accidental release or upset and could have the potential to affect stormwater runoff. Construction-related spills of hazardous materials are not uncommon. However, the enforcement of the spill protection plan and demolition standards, including BMPs by

appropriate local and state agencies including the development of a spill prevention and control plan, would reduce the potential for an accidental release of petroleum products and/or hazardous materials to result in stormwater pollutants. Operation of the proposed project includes a disinfection system, which would be located within a spill containment area to prevent hazardous materials from being released and generating an increase in stormwater pollution. The proposed project would not involve vehicle or equipment fueling, vehicle or equipment maintenance, loading docks, or other outdoor areas. Therefore, the proposed project would result in a low potential for discharge of stormwater pollutants from construction and operational activities, and impacts would be less than significant.

n. Result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters?

Less-than-Significant Impact. During construction, as discussed in Responses IX(a), (e), and (f), the proposed project would discharge into a catch basin, 18-inch storm drain, and ultimately into the Santiago Creek Channel. All discharge water generated during construction would be disposed of in accordance with NPDES and OCFCD discharge permits. Per project design specifications for the proposed project, water from any source related to the work or storm runoff would not be allowed to leave the project site. All flow generated ~~by each well~~ during construction would be initially conveyed to a series of Baker tanks located on the project site. In addition, BMPs would be developed for the proposed project and implemented to limit the introduction of pollutants to the environment, ground surface, or offsite drainages during construction. These include preparation and implementation of a Spill Prevention Plan and an erosion control plan (Irvine Ranch Water District 2010). As discussed above, operation of the proposed project would not substantially alter the existing drainage pattern of the site nor would it substantially change the impervious area on the project site. Therefore, the proposed project would not result in the potential for discharge of stormwater to affect the beneficial uses of the receiving waters (Santiago Creek Channel) and impacts would be less than significant.

o. Create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm?

Less-than-Significant Impact. As discussed in Responses IX(c), (d), and (e), construction of the proposed project would not result in significant changes to the flow velocity or volume of stormwater runoff. The existing 18-inch drain is appropriately sized to handle the volume of water that would be discharged during construction activities . As discussed in Responses IX(c), (d), and (e), operation of the proposed project would not substantially change the impervious and pervious surfaces on the project site and therefore would not result in an increased stormwater volume. Therefore, construction and operation of the proposed project would not create the potential for significant changes in the flow velocity or volume of stormwater runoff to cause environmental harm. Impacts would be less than significant.

p. Create significant increases in erosion of the project site or surrounding areas?

Less-than-Significant Impact. As discussed in Response IX(c), the proposed project would involve minimal earthwork activities such as site preparation. Construction activities would minimally disturb surface soils that are currently covered by concrete, gravel, or vegetation. However, these activities would not substantially alter the existing drainage pattern of the project site. Once operational, there would not be a substantial change in impermeable surface area. Construction and operation of the proposed project would comply with the requirements of the NPDES and OCFCD

permits. Furthermore, the proposed project would implement an erosion control plan and BMPs consistent with the DAMP in order to limit erosion and sedimentation and subsequent damage to the Santiago Creek and Santa Ana River. Therefore, the proposed project would not create significant increases in erosion of the project site or surrounding areas, and impacts would be less than significant.

X. Land Use and Planning		Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion

Would the project:

a. Physically divide an established community?

No Impact. The proposed project involves improvements that would occur on the project site and within an existing IRWD property. The current residential community has grown around the project site; therefore, the project site is located within the established community. The proposed project would not involve the addition of large aboveground structures, and no element of the proposed project would have the ability to physically divide an established community. No impact would occur.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less-than-Significant Impact. The proposed project is generally consistent with the City of Orange General Plan. The project site is designated as Low Density Residential (LDR) per the General Plan Land Use Element and is intended to support single family residential land uses (up to 6 dwelling units per acre). The properties in the surrounding project area have the land use designations of Low Density Residential, Low Medium Residential, Public Facilities, and Open Space (City of Orange 2005). Although the proposed project would eliminate the residential use and expand the infrastructure use on a site that is General Planned (and therefore primarily intended) for residential land use, infrastructure projects are generally accommodated within most non-infrastructure land use designations. Therefore, though the project does not necessarily further the intent of the LDR land use designation, it also does not conflict with it.

The following City of Orange General Plan goal is applicable to the proposed project:

- Land Use Element Goal 11.0: the City's infrastructure system must be adequate to meet the needs of existing and future residents.

Because the proposed project would include abandonment of one existing well and construction and operation of IRWD OPA Well-1 within the boundaries of an existing IRWD property, it would not conflict with any of the above goals, policies, or objectives or any other applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project is consistent with the above goals, policies, and objectives in that the proposed facilities would provide upgrades to existing water infrastructure to provide adequate service to residents.

The City of Orange Zoning Code is intended to carry out the policies of the City of Orange General Plan. It is the intent of the zoning code to protect, promote, and enhance the public health, safety, and general welfare; ensure consistency between the zoning district and the general plan land use diagram; and promote compatibility between the natural and built environment. The project site is zoned R1-7 (Single Family Residential District). This zoning allows the development of single-family homes with a minimum lot area of 7,000 square feet. Section 17.14.030 of the zoning code identifies permitted uses in residential districts and conditionally permits public utilities or structures, such as water wells, to locate in any type of residential zone. The water facilities to be constructed in the proposed project are exempt from both building and zoning ordinances under Government Code 53091 (d) and (e), which states that building ordinances and zoning ordinances of counties and cities do not apply to the location or construction of facilities for the production of water. Therefore, impacts would be less than significant.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. See Response IV(f). The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan. There would be no impact.

XI. Mineral Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☒	☐

Discussion

Would the project:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less-than-Significant Impact. According to the Open Space and Conservation Element of the City of Orange General Plan, the project site overlays a regionally significant aggregated resource area (City of Orange 2005). However, the project site is currently developed with residential and infrastructure uses and is located in a residential neighborhood. As discussed in Section X, Land Use and Planning, the project site is designated as Low Density Residential per the City of Orange General Plan and zoned Single Family Residential per the City's zoning code. Furthermore, the properties in the surrounding project area have the land use designations of Low Density Residential, Low Medium Residential, Public Facilities, and Open Space (City of Orange 2005, City of Orange 2006). Although the proposed project is located in a regionally significant aggregate resource area, the land use designation is not Resource Area nor is it zoned for sand and gravel extraction, which would allow for mining of aggregate resources. Currently, there are no extraction activities on or near the project site, and the proposed project would not interrupt or preclude future sand and gravel extraction activities. Therefore, construction and operation of the proposed project would not contribute to the loss of availability of a known mineral resource, and impacts would be less than significant.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Less-than-Significant Impact. As discussed in Response XI(a), the proposed project area overlays a regionally significant aggregate resource area according to the Open Space and Conservation Element of the City of Orange General Plan. However, the project site is currently developed with residential and infrastructure uses and is located in a residential neighborhood. As discussed in Section X, Land Use and Planning, the project site is designated as Low Density Residential per the City of Orange General Plan and zoned Single Family Residential per the City's zoning code. Furthermore, the properties in the surrounding project area have the land use designations of Low Density Residential, Low Medium Residential, Public Facilities, and Open Space (City of Orange 2005, City of Orange 2006). Although the proposed project is located in a regionally significant

aggregate resource area, the land use designation is not a Resource Area nor is it zoned for sand and gravel extraction which would allow for important mineral resource recovery. Currently, neither the project site or surrounding neighborhood are delineated on a local general plan, specific plan, or other land use plan as an important mineral resource recovery site. Therefore, construction and operation of the proposed project would not contribute to the loss of availability locally important mineral resource recovery site and impacts would be less than significant.

XII. Noise	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☒	☐	☐
b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

Would the project:

a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?

Less-than-Significant Impact with Mitigation Incorporated. The proposed domestic water supply improvements would occur within the City of Orange, and is therefore subject to city noise regulations.

The City of Orange Noise Ordinance identifies construction noise standards that would apply to the proposed project. The City of Orange Noise Ordinance designates an exterior noise standard of 55 dBA between the hours of 7:00 a.m. and 10:00 p.m. and 50 dBA between the hours of 10:00 p.m. and 7:00 a.m. at all residential property lines. This ordinance exempts construction activities from quantitative limits associated with residential land uses in the City's noise ordinance, provided that construction occurs between 7 a.m. and 8 p.m. Monday through Saturday. Construction activities outside of these hours or on Sundays and federal holidays are not exempt and are subject to the quantitative noise limits established in the ordinance unless a temporary variance is granted by the

Health Officer and the Noise Variance Board (City of Orange 2009). If construction activities are to occur outside the time frames provided by the noise ordinance, the Noise Variance Board (Board) can evaluate an application for a variance from the requirements of the noise ordinance. The Board can grant variances with respect to time for compliance and can set terms, conditions, and requirements on the variance, which may include limitations on noise levels and operating hours. Each variance granted sets forth in detail the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations, the Board considers the magnitude of nuisance caused by the offensive noise; the uses of property within the area of impingement by the noise; the time factors related to study, design, financing, and construction of remedial work; the economic factors related to age and useful life of equipment; and the general public interest and welfare. Any variance granted by the Board is done by resolution and is transmitted to the Health Officer for enforcement. Any violation of the terms of the variance is unlawful.

It is unlawful for any person at any location within the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on any other residential property to exceed:

- The noise standard for a cumulative period of more than thirty minutes in any hour; or
- The noise standard plus five dB(A) for a cumulative period of more than fifteen minutes in any hour; or
- The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour; or
- The noise standard plus fifteen dB(A) for a cumulative period of more than one minute in any hour; or
- The noise standard plus twenty dB(A) for any period of time.

In the event the ambient noise level exceeds any of the categories above, the cumulative period applicable to said category would be increased to reflect the ambient noise level. Furthermore, the maximum permissible noise level would never exceed the maximum ambient noise level.

Construction

The proposed project would include destruction and abandonment of OPA Well-3 and construction of IRWD OPA Well-1. These activities would begin in the spring of 2012 and last approximately 14 months. The destruction and abandonment of OPA Well-3 would take place during normal working hours, per the City of Orange's noise ordinance (City of Orange 2009). Construction of IRWD OPA Well-1 would require 24-hour drilling and testing that would take place over approximately 6 to 8 weeks.[4]

Construction activities would cause elevated noise levels within the residential area surrounding the proposed project site. Onsite noise generated during construction would occur primarily from the use of construction equipment used in the demolition of OPA Well-3 as well as a drill rig, small hand-held electric equipment, or combustion engine–driven heavy construction equipment for

[4] The drill rig must run 24 hours a day to prevent the borehole walls from collapsing and compromising the integrity of well construction.

construction of IRWD OPA Well-1. Noise is also generated by pumping activities, well testing and during construction of proposed buildings and structures.

Noise from construction equipment would likely dominate noise levels in the area surrounding the project site. Residents adjacent to the property may be affected by noise from construction as the closest sensitive receiver would likely be less than 20 feet from the drill rig and other equipment used in the process of drilling the IRWD OPA Well-1.

The proposed project would include development of a 24-foot-high temporary sound wall surrounding the construction site and drill rig on all sides during well drilling. Generally, noise levels during well drilling range from 58 dBA to 69 dBA at distances of 100 to 160 feet even with erected sound barriers. Therefore, noise levels associated with well drilling would be audible at the closest sensitive receiver adjacent to the project site. Construction would comply with the City's municipal code time frames for demolition of OPA Well-3 and all other construction activities (with the exception of well drilling) and therefore meet City noise standards. However, for well drilling, noise levels are likely to exceed established noise levels in the City's Noise Ordinance. As part of the project, and prior to construction, IRWD will secure, as determined to be necessary, a variance from the City of Orange's Noise Variance Board that would exempt construction of IRWD OPA Well-1 from the City's 8:00 p.m. to 7:00 a.m. noise and construction hours limitations to accommodate continuous drilling and well testing over a 24-hour period when necessary (City of Orange 2009).

While the variance may address exceedance of the noise standards, noise from well drilling and construction would continue to be elevated for surrounding receptors during limited periods of time. The following mitigation measure would be incorporated into the project contract specifications to reduce construction noise effects. With the inclusion of the sound walls during well drilling as project design features and compliance with Mitigation Measure NOI-1, impacts would be less than significant.

Mitigation Measure

NOI-1: To reduce noise generated by the proposed project, IRWD and the contractor will implement the following measures:

- All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by a local, state, or federal agency will comply with such regulation while in the course of project activity.
- The Contractor shall install noise attenuating panels including a 24 foot tall noise wall and additional sound blankets to fully enclose the drill rig during drilling operations.
- The Contractor shall use a drilling rig that is equipped with a muffler system such that the drilling rig generates reduced noise levels.
- Noise levels shall be monitored periodically during 24-hour well drilling or testing. If noise levels at surrounding residential property lines exceeds nighttime noise standards (between the hours of 8:00pm to 7:00am), IRWD shall provide on a case-by-case basis, affected residents options to reduce or avoid elevated noise levels. Options may include, but are not be limited to, temporarily relocating affected residents to reasonably priced local hotels during periods of nighttime work.
- Electrically powered equipment instead of pneumatic or internal combustion powered equipment will be used, where feasible.

- Material stockpiles and mobile equipment staging, parking, and maintenance areas will be located as far as practicable from noise-sensitive receptors.
- Construction site speed limits will be established and enforced during the construction period.
- For all construction other than well drilling, well development and pump testing associated with IRWD OPA Well-1, including noisy maintenance activities and all spoils and material transport, will be performed during daytime hours specified in the noise ordinance unless otherwise approved by the City of Orange.
- The use of noise-producing signals, including horns, whistles, alarms, and bells will be for safety warning purposes only.
- No project-related public address or music system will be used during nighttime hours.
- The onsite construction supervisor will have the responsibility and authority to receive and resolve noise complaints. A clear appeal process will be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor.
- Construction signs will be posted at the project site identifying a contact name and phone number to register noise complaints. In addition, at least ten days prior to starting nighttime activities, the Contractor/IRWD shall notify adjacent residents (in writing) of the start of nighttime work. The Notice shall identify estimated nighttime work hours, nighttime work duration, and a contact name and phone number for complaints.

Operation

Under current operating conditions, the pump at existing OPA Well-3 site is not contained within an enclosed structure and produces noise. As described below, the proposed project will be designed and constructed in a manner that will likely improve noise levels.

Under operating conditions of the proposed project, pumps used for potable water extraction and transference to the wet well and Santiago Reservoir 5 will generate noise, but would be located within fully enclosed structures designed to attenuate noise. These structures would be constructed with grout filled concrete masonry unit (CMU) walls with sound blankets on the inside (or some other equally effective design) to attenuate noise. **Mitigation Measure NOI-2** and **NOI-3** would be implemented to further reduce potential operational noise impacts to less-than-significant levels.

Mitigation Measures

NOI-2: Once the proposed project is operational, IRWD shall conduct a post-construction noise survey to ensure that operation of the well equipment is within the City of Orange's Noise Ordinance at the project boundary and will be available to the City of Orange upon request.

NOI-3: Noise generating well maintenance activities shall be restricted to daytime hours (exempt from the City of Orange Noise Ordinance), unless otherwise approved by the City of Orange.

b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. Proposed project construction would generate varying degrees of groundborne vibration, depending on the construction equipment being used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the construction site's

vicinity often varies depending on soil type, ground strata, and construction characteristics of the receiver buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The types of potential impacts from construction vibration include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would usually not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond in the same way to vibration generated by construction equipment.

While the City of Orange has not adopted their own quantitative thresholds for vibration, the Federal Transit Administration (FTA) has compiled typical vibration levels generated by construction equipment, which are commonly used as a reference for construction vibration level analysis. The vibration produced by construction equipment is outlined in Table 3-4.

Table 3-4. Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 25 feet (inches/second)	Approximate peak particle velocity at 75 feet (inches/second)
Caisson Drilling	0.089	0.03
Loaded trucks	0.076	0.03
Small bulldozer	0.003	0.001

Notes:
Peak particle velocity measured at 25 feet unless noted otherwise.
Root mean square amplitude ground velocity in decibels (VdB) referenced to 1 micro-inch/second.
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.

Groundborne vibration decreases rapidly with distance. Based on the FTA data in Table 3-4, vibration velocities from typical heavy construction equipment operation that would be used during project construction range from 0.003 to 0.089 inch per second peak particle velocity (PPV) at 25 feet from the source of activity. At 50 feet from the source activity, PPV ranges from 0.001 to 0.03 inch per second.

Because neither the state nor the local municipalities maintain regulatory standards for vibration sources, potential structural damage and human annoyance associated with vibration from construction activities were evaluated based on California Department of Transportation (Caltrans) vibration limits (Table 3-5). A vibration level of 0.10 inches per second PPV was used to determine impacts on nearby receivers because this level represents the boundary between barely perceptible and distinctly perceptible vibration as recognized by Caltrans.

Table 3-5. Reaction of People and Damage to Buildings at Various Continuous Vibration Levels

Vibration Level - Peak Particle Velocity (PPV) (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibration)	Threshold at which there is a risk of "architectural" damage to normal dwelling-houses with plastered walls and ceilings; special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation, Transportation- and Construction-Induced Vibration Guidance Manual, 2004.

Groundborne vibration from the proposed project would be generated primarily during drilling activities. The closest noise-sensitive receiver would likely be located less than 20 feet of the drill rig and potential heavy construction activity. Because each construction vibration value is well below the 0.10 inch-per-second PPV significance threshold, vibration impacts associated with construction would be less than significant, and no mitigation measures are required. Impacts from groundborne vibration or groundborne noise would be less than significant.

c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant Impact with Mitigation Incorporated. As discussed in Response XII(a), construction of the proposed project would primarily generate temporary increases in ambient noise levels in the vicinity of the construction activity. However, these impacts would be temporary, lasting only for the duration of construction activities. Long-term operation of the proposed project would include the use of pumps, disinfection system, various maintenance activities, periodic deliveries of disinfection chemicals and related equipment associated with IRWD OPA Well-1. These pumps and other activities would generate noise, which could potentially increase noise levels at sensitive receivers. **Mitigation Measures NOI-2 and NOI-3** would be implemented to reduce noise levels. Impacts would be less than significant with mitigation incorporated.

d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant Impact with Mitigation Incorporated. As described in Response XII(a), construction-related activities and equipment used during construction of the proposed project would result in a temporary or periodic increase in ambient noise levels above existing levels. The proposed project would adhere to Title 8, Section 8.24.070, of the City of Orange Municipal Code's for destruction and abandonment of OPA Well-3. With the implementation of **Mitigation Measure NOI-1**, impacts would be less than significant.

e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?

Less-than-Significant Impact. The nearest airport is John Wayne Airport, located approximately 8 miles south of the proposed project site. The proposed project site is not within the vicinity of any airport or within any airport land use plan. Therefore, no impact would occur.

f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project is not located in the vicinity of a private airstrip. No impact would occur.

XIII. Population and Housing	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

Would the project:

a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

Less-than-Significant Impact. The proposed project would not include new homes or businesses. The proposed project would include the construction and operation of one replacement groundwater well, and is intended to improve the domestic water service provided to existing residents within the OPA service area. The proposed project would not directly induce population growth because it would serve as a replacement to the deteriorating OPA Well-3 which is proposed to be abandoned and demolish as part of this project. The proposed project would increase production between 100 to 200 AFY, however, this increased production would only make up for the deteriorated OPA Well-3 pumping conditions and therefore would still pump at a maximum operational capacity of approximately 900 AFY. Therefore, since the proposed project is intended to service the existing OPA residents and would not result in substantial population growth in the area, impacts would be less than significant.

b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would not displace any existing housing units. Construction and operation activities would take place within the boundaries of an existing IRWD property and would include destruction and abandonment of the existing OPA Well-3 and construction and operation of IRWD OPA Well-1 on the same property as the abandoned well. Therefore, construction and operation of the proposed project would not displace a substantial number of existing housing units, and there would be no impact.

c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?

No Impact. As stated in Response XIII(b), the proposed project would not displace any housing. Therefore, the proposed project would not displace a substantial number of people, and there would be no impact.

XIV. Public Services	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Discussion

Would the project:

Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

a1. Fire protection?

Less-than-Significant Impact. The abandonment of one existing well and construction and operation of a replacement well within the boundaries of an existing IRWD property would not change City of Orange Fire Department response times or substantially affect demand for fire protection services at the facility. Under the proposed project, fire services may be needed in the unlikely event of a chemical spill related to the disinfection system. However, the low risk of a chemical spill from the proposed system is similar to the existing low risk from the existing disinfection system on site for the current well. Therefore, there would be a negligible change in the demand for fire or emergency services between the proposed project and existing conditions. As discussed in Section VIII, Hazards and Hazardous Materials, the proposed project would implement a spill prevention plan, and all hazardous materials would be located in a spill containment area within an enclosed structure and maintained on a regular basis. Therefore, construction and operation of the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, and impacts would be less than significant.

a2. Police protection?

No Impact. The proposed project would not involve the introduction of structures outside of the existing IRWD property boundary. Further, the proposed project would not include the addition of housing, schools, or other community facilities that might require additional police protection. The proposed project is an infrastructure project and inherently would not require the services of police. Furthermore, the proposed project would be surrounded by a locked gate and 6- to 8-foot-high concrete masonry wall under operating conditions. Only IRWD personnel would have access. The proposed project would have lighting on the buildings for security purposes. Therefore, construction and operation of the proposed project would not affect local police response times or demand for police protection services, and there would be no impact.

a3. Schools?

No Impact. School services in the City are provided by the Orange Unified School District. The demand for new schools is generally associated with population increases or impacts on existing schools. As discussed in the Response XIII(a), the proposed project would not induce population growth. Therefore, construction and operation of the proposed project would place no new demands on schools, and there would be no impact.

a4. Parks?

No Impact. The demand for parks is generally associated with the increase of housing or population in an area. As discussed in Response XIII(a), the proposed project would not induce population growth. Therefore, construction and operation of the proposed project would place no new demands on parks, and there would be no impact.

a5. Other public facilities?

No Impact. As discussed in Response XIII(a), the proposed project would not induce population growth. Therefore, construction and operation of the proposed project would place no new demands on other public facilities, and there would be no impact.

XV. Recreation	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

Would the project:

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project is inherently an infrastructure project and would not affect neighborhood or regional parks or other recreational facilities. An increase in the use of parks is generally associated with an increase of housing or population in an area. As discussed in Response XIII(a), the proposed project would not induce population growth. Therefore, construction and operation of the proposed project would place no new demands on recreational facilities, and there would be no impact.

b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. As discussed in Response XIII(a), the proposed project would not induce population growth. The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse effect on the environment. There would be no impact as a result of construction and operation of the proposed project.

XVI. Transportation/Traffic	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e. Result in inadequate emergency access?	☐	☐	☒	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Discussion

Would the project:

a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less-than-Significant Impact. Although the proposed project is located entirely within an existing IRWD property, there is a potential for project-related traffic to affect adjacent roadways providing access to the project site during construction and operation.

Construction Period

No road or lane closures are expected to result from construction of the proposed project. Access to the project site during construction would be provided via North Gravier Street. Approximately three to six construction workers would be required at the project site. This equates to approximately 12 one-way trips per day to and from the project site during construction. Additional trips would be required throughout the construction period to bring construction equipment (e.g., drill rig) to the project site. As identified by the City of Orange General Plan EIR, currently the intersections within proximity of the project site are operating at the following levels of services:

- North Prospect from Spring to Walnut: LOS B
- North Prospect from Walnut to Bond: LOS B
- North Hewes from Chapman to Walnut: LOS A
- North Hewes from Bond to Santiago Canyon: LOS A

The proposed project would implement project technical specifications section 1040(H) pertaining to construction traffic control (Irvine Ranch Water District 2010). These specifications include construction signing, vehicular traffic control, pedestrian traffic control and safety, access to adjacent properties, and permanent traffic control devices and are identified in **Mitigation Measure TR-1**. Furthermore, traffic control associated with the proposed project would conform to the ordinances and regulations of the City of Orange including Title 10, Vehicles and Traffic; Title 17.34, which regulates off-street parking and loading requirements; and the City's traffic control guidelines for encroachment permits. The trips generated during construction would not result in a substantial decline in the existing levels of service at the intersections within proximity of the project site. Finally, construction would be temporary, and the slight increase in localized traffic associated with construction would be reduced once construction was complete.

IRWD would obtain a City encroachment permit for any work within City right of way. Furthermore, a transportation/ haul permit would be obtained for haul vehicles or construction vehicles traveling on City streets. A traffic control plan would be prepared as part of the permit process, which would typically specify that haul routes (avoiding residential streets to the greatest extent possible) and "off-peak" hours for delivery and hauling activities.

Therefore, the impact of construction generated traffic on area traffic volumes would be less than significant prior to the implementation of **Mitigation Measure TR-1**. They would be further reduced with the implementation of the measure.

Operation Period

During operation, substantial increases in traffic volumes are not expected to result from the operation of IRWD OPA Well-1. IRWD would continue their regular maintenance of the well and the disinfection system as they currently do for OPA Well-3 at the project site. One additional trip per month would be required to maintain the disinfection system. Thus, operational traffic volume impacts would be less than significant.

Mitigation Measure

TR-1: The construction contractors will prepare and implement a traffic control/traffic management plan subject to approval by the City of Orange prior to construction. The plan will:

- Identify the hours of construction for deliveries.
- Include discussion of haul routes, work area delineation, traffic control, and flagging.
- Identify all access and parking restrictions, pavement markings, and signage requirements (e.g., speed limit, temporary loading zone).
- Maintain access to residences driveways and public facilities at all times.
- Minimize access disruptions to residences.
- Layout a plan for notifications and process for communication with affected residences and transit agencies prior to the start of construction. Advanced public notification will include providing written notification to adjacent residences at least 10 days prior to construction start and providing appropriate signage of construction activities. The written notification will include the construction schedule, exact location and duration of activities, and a toll-free telephone number for receiving questions and complaints.

b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?

Less-than-Significant Impact. The Orange County Transportation Authority (OCTA) is the designated Congestion Management Agency for Orange County. The OCTA prepares the Orange County Congestion Management Program (CMP), which is meant to reduce traffic congestion and provide a mechanism to coordinate land use and development decisions that support the regional economy. The CMP is a network of state highways and major arterials, LOS standards, and related procedures. Within the defined Orange County CMP highway network, intersections and freeway segments are not allowed to deteriorate to a condition worse than LOS E, or the base year LOS if worse than E. The LOS Standards for roadways that are part of the CMP network are intended to regulate long-term traffic increases resulting from the operation of new development. According to Figure 2 of the OCTA CMP, there are no CMP designated intersections within proximity of the project site. (Orange County Transportation Authority 2009.)

As discussed in Response XVI(a), although the proposed project would result in minor temporary increases in traffic on local area roadways, this short-term construction-related traffic would not create a substantial impact on traffic volumes nor change traffic patterns in such a way as to conflict with any congestion management programs. Furthermore, operation of the proposed project would not result in any long-term increases over existing traffic conditions as discussed in Response XVI(a). Since the proposed project would not introduce any new facilities that would generate long-term changes in traffic, the proposed project would not conflict with the applicable congestion management plan. Impacts would be less than significant.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. Neither construction nor operation of the proposed project is expected to have any effect on air traffic patterns. There would be no impact.

d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. No obstacles to sight distance are expected to result from construction of the proposed project. No sharp roadway curves currently exist in the project area, nor would such curves be created as a result of the proposed project. There would be no impact.

e. Result in inadequate emergency access?

Less-than-Significant Impact. No lane closures would occur, and emergency access would be maintained to the project site and on surrounding roadways. The impact of construction-generated traffic on emergency vehicle access would be minimized with implementation of IRWD project technical specifications Section 1040(H) and the general requirements Section 01300 pertaining to construction traffic control. Prior to the start of construction operations, notification would be given to the local police and fire departments, giving the expected starting date, completion date, and the name and telephone number of the responsible person who would be contacted at any hour in the event of a condition requiring immediate correction (Irvine Ranch Water District 2010a and 2010b). Finally, **Mitigation Measure TR-1** would be implemented during construction, reducing the already less than significant impacts even further. Therefore, impacts during construction would be less than significant.

Once operational, the proposed project would not result in inadequate emergency access. Operational impacts would be less than significant.

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less-than-Significant Impact. The proposed project would not conflict with any alternative transportation policies, plans, or programs within the City of Orange. Because public transit service does not run on the project site access road (Gravier Street) or any of the roads nearby (Bond Avenue), construction- and operations-related traffic is not expected to interfere with transit operations. Therefore, impacts to alternative transportation would be less than significant.

XVII. Utilities and Service Systems	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☐	☒
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion

Would the project:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less-than-Significant Impact. As described in Response XIII(a), the proposed project would not include new homes or businesses and would not induce population growth. The proposed project would serve the existing OPA service area. The proposed project would not induce population growth and would not cause any existing wastewater source to exceed treatment requirements of the SARWQCB.

Wastewater service in the project vicinity is provided by the City's Public Works Department. The City's Public Works Department is responsible for installation and maintenance of local wastewater collection facilities, which convey wastewater to Orange County Sanitation District (OCSD) trunk

sewers. OCSD operates two wastewater treatment facilities, which include Reclamation Plant No. 1 in Fountain Valley and Treatment Plant No. 2 in Huntington Beach, and numerous pump stations and sewer lines that cross its service area. Average flows for Reclamation Plant No. 1 and Treatment Plant No. 2 are 92 million gallons per day (mgd) and 129 mgd, respectively. Reclamation Plant No. 1 has a design capacity of 108 mgd with average daily flow of 92 mgd. Treatment Plant No. 2 has an average daily flow of 129 mgd with a design capacity of 168 mgd (City of Orange 2009). Therefore, Reclamation Plant No. 1 and Treatment Plant No. 2 are operating at approximately 85% and 77% of their respective capacities.

The proposed project would include a chemical building with a restroom, which would be used intermittently by IRWD crews because the building would not be permanently staffed. The restroom would connect to the existing sewer facility, and could generate a maximum of 36 gallon per day of wastewater.[5] However, since the building would not be permanently staffed and the restroom would be used on an irregular basis, the projected wastewater generation is conservative and the proposed project is not expected to consume this much wastewater. Nonetheless, this would result in a slight increase in wastewater generation over the existing conditions.

Given that both the Reclamation Plant No. 1 and Treatment Plant No. 2 are operating well below their capacity, it is expected that the proposed project would not exceed the wastewater treatment requirements of the SARWQCB. Furthermore, OCSD is proposing to update the level of wastewater treatment at both of its treatment plants to meet secondary treatment standards for the projected 2020 effluent flow of 240 to 320 (mgd) (City of Orange 2009). Therefore, the proposed project would not cause any violation of standards set forth by OCSD, and impacts would be less than significant.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less –Than-Significant with Mitigation Incorporated. The subject project consists of the replacement of existing groundwater infrastructure. As described in Response XVII(a), the proposed project would serve the existing OPA service area. A disinfection system would be part of the proposed project. However, as disclosed in the resource sections of this environmental document, the construction of the proposed replacement well and disinfection system would not result in impacts that cannot be mitigated to less than significant. Therefore, significant impacts would not occur with the incorporation of mitigation measures.

Mitigation Measures:

BIO-1 identified in Section IV, Biological Resources.

GEO-1 identified in Section VI, Geology and Soils.

NOI-1, 2, and 3 identified in Section XII, Noise.

TR-1 identified in Section XVI, Transportation/Traffic.

[5] The Los Angeles CEQA Thresholds Guide (City of Los Angeles 2006) was used to approximate the wastewater generation for the proposed project. The "Storage: Building/Warehouse" generation factor has an average daily flow of 20 gallons per day per 1,000 gross square feet. Given that the chemical building would be approximately 1,800 square feet, the proposed project would generate approximately 36 gallons per day.

c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-than-Significant Impact. As described in Section IX, Hydrology and Water Quality, the proposed project would not affect existing stormwater drainage facilities requiring the need to construct new facilities. As discussed in Responses IX(a), (e), and (f), construction of the proposed project would result in discharges into a catch basin, 18-inch storm drain, and ultimately into the Santiago Creek Channel. Testing the well could generate volumes of water of up to approximately 3,700 gpm. The slope of the 18-inch line would allow up to 3,700 gpm at 75% full (Irvine Ranch Water District 2010); thus, the existing 18-inch storm drain is appropriately sized to handle the volume of water that would be discharged during construction of the well. A flood control encroachment permit would be required to discharge into this existing stormwater drain and would stipulate any relevant discharge conditions. All discharge water generated during construction would be disposed of in accordance with NPDES and OCFCD discharge permits. The water from any source related to the work or storm runoff would generally not be allowed to leave the project site. All flow generated during construction would be initially conveyed to a series of Baker tanks located on the project site. In addition, BMPs would be developed for the proposed project and implemented to limit the introduction of pollutants to the environment, ground surface, or offsite drainages during construction. These include preparation and implementation of a Spill Prevention Plan and an erosion control plan (Irvine Ranch Water District 2010). As discussed above, operation of the proposed project would not substantially alter the existing drainage pattern of the site nor would it substantially change the impervious area on the project site. Impacts would be less than significant.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

No Impact. The proposed project would serve the existing OPA service area. The Orange County Groundwater Basin is managed by OCWD and encompasses over 299,000 acres in 20 cities as well as unincorporated areas on the coastal plain in central and north Orange County. Groundwater pumping rights within the Basin are not adjudicated; however, groundwater production by all purveyors, including IRWD, is managed by OCWD through financial incentives as discussed in Chapter 2. As discussed in Section IX, Hydrology and Water Quality, the proposed project would not modify the capacity of the Basin, which is determined by the amount of water that is recharged and OCWD management actions to maintain the Basin's sustainable yield. The yield of the basin is subject to operational constraints, such as the need to maintain the seawater intrusion barrier along the coast. OCWD has the ability to increase or decrease groundwater levels as desired to meet certain management goals through the implementation of the financial incentives discussed above.

Since the proposed project involves drilling and constructing a replacement well for the deteriorating OPA Well-3, no element of the proposed project would result in an increase in the demand for water supplies. The proposed project would pump at a rate of approximately 900 AFY, resulting in pumping an additional 100 to 200 AFY above baseline conditions. Therefore, the proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources. The proposed project would not require new or expanded entitlements, and no impact would occur.

e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The proposed project would not generate wastewater or the need to treat additional wastewater. No impact would occur.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less-than-Significant Impact. Construction activities would generate solid waste in the form of demolition debris from the destruction of OPA Well-3 and demolition of the disinfection system and building. The existing OPA Well-3 pump and associated components would be delivered to IRWD's Michelson Water Reclamation Plant. The existing disinfection system and building would be removed; however, electrical improvements would remain intact for development of the new IRWD OPA Well-1. Prior to removing the hypochlorite tanks from the building, the sodium hypochlorite solution would be removed from the tanks and reused at other IRWD facilities. The tanks could then be cleaned at the Michelson Water Recycling Plant and either reused elsewhere in the IRWD or disposed following all appropriate protocols, procedures, and regulations.

Three landfills exist in the vicinity of the proposed project: the Frank R. Bowerman Landfill in Irvine, the Olinda Alpha Landfill in Brea, and the Prima Deshecha Landfill in San Juan Capistrano. In total these facilities are permitted to accept 23,500 tons of solid waste per day and are scheduled to continue accepting waste throughout the entire length of project construction activities. The total solid waste disposal needs of the proposed project could be accommodated by any combination of the three landfills in the vicinity of the proposed project.

As described in Response XIII(a), the proposed project would not include new homes or businesses and would not induce population growth that would increase the need for solid waste disposal. Impacts would be less than significant.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The proposed project would comply with all regulations related to solid waste, including the California Integrated Waste Management Act and City recycling programs. No impact would occur.

XVIII. Mandatory Findings of Significance	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

Would the project:

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less-than-Significant Impact with Mitigation Incorporated. The proposed project involves the destruction and abandonment of one existing well, and construction and operation of IRWD OPA Well-1 and associated appurtenances. The project site is already developed with the existing OPA Well-3 and is located in a primarily residential area in the City of Orange. As discussed in Section IV, Biological Resources, the project site contains no vegetation that would be considered valuable wildlife habitat. The proposed project would not have a substantial adverse effect on any sensitive habitat or adversely affect populations or communities of fish or wildlife. Furthermore, the proposed project would not reduce the number or restrict the range of rare or endangered plants or animals. **Mitigation Measure BIO-1** is incorporated to comply with the Migratory Bird Treaty Act and to reduce impacts to nesting birds to less than significant. No historical cultural resources would be affected by the construction or operation of the proposed project. Therefore, impacts would be less than significant with mitigation incorporated.

b. Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less-than-Significant Impact. Due to its limited size and magnitude, the proposed project, in conjunction with other area projects, would not result in cumulative impacts on the physical environment. The proposed project would create a minimal increase in water supply within the OPA service area . In addition, OCWD's basin management programs would ensure that the less-than-significant effects on groundwater elevations and gradients from the proposed project and other projects would not be cumulatively considerable. Therefore, the proposed project would not have impacts that are individually limited but cumulatively considerable, and impacts would be less than significant.

c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less-than-Significant Impact with Mitigation Incorporated. Based on the analysis of the above-listed topics, the proposed project would have potentially significant environmental effects on geology and soils that could cause substantial adverse effects on human beings, either directly or indirectly. However, implementation of **Mitigation Measure GEO-1** would reduce these impacts to a less-than-significant level. Furthermore, construction and operation of the proposed project would generate noise and produce air emissions. However, air emissions generated by construction and operation of the proposed project would not be significant and would not adversely affect human beings. With incorporation of **Mitigation Measures NOI-1 through NOI-3**, temporary and permanent impacts associated with operational noise impacts to neighboring sensitive receptors at the proposed well would be less than significant. Construction and operation of the proposed project requires the use, handling, and transport of hazardous materials. As discussed in Section XIII, Hazards and Hazardous Materials, compliance with the spill prevention plan and local, county, and state regulations pertaining to use, handling, and transport of hazardous materials would ensure that substantial adverse effects to human beings would not occur due to accidental upset of materials. Finally, incorporation of **Mitigation Measure TR-1** would include specifications regarding construction signing, vehicular traffic control, pedestrian traffic control and safety, access to adjacent properties, and permanent traffic control devices to reduce transportation impacts associated with construction. Therefore, the proposed project would not cause substantial direct or indirect adverse effects to human beings and impacts would be less than significant with mitigation.

Chapter 4
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Chapter 5
List of Preparers

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Chapter 6
Comments and Responses to Comments

Introduction

The Irvine Ranch Water District has evaluated the comments received on the Orange Park Acres Well Replacement Project Draft Initial Study/Mitigated Negative Declaration (IS/MND). This document contains copies of the comments received during the public review process and provides written responses for each of the comments. In accordance with Section 15074 of the State CEQA Guidelines, the lead agency will consider the IS/MND together with any comments received during the public review process. While written responses are not required for an IS/MND, the Irvine Ranch Water District has elected to provide written responses to all comments received during the public review process for the record.

Comments Received

Prior to the close of the public review period for the project, the Irvine Ranch Water District received six comment letters. The commenting parties are listed below. Each of the commenting parties is labeled with a letter, which corresponds to the comment letters and the responses to comments provided herein.

Comment #	Agency/Organization/Individual	Date Transmitted
A	City of Orange	May 24, 2012
B	East Orange County Water District	May 24, 2012
C	Native American Heritage Commission	April 26, 2012
D	California Governor's Office of Planning and Research	April 30, 2012
E	Department of Toxic Substances Control	May 9, 2012
F	Department of Toxic Substances Control	May 11, 2012

A

CITY OF ORANGE

DEPARTMENT OF COMMUNITY DEVELOPMENT www.cityoforange.org

ADMINISTRATION	PLANNING DIVISION	BUILDING DIVISION	CODE ENFORCEMENT DIVISION
(714) 744-7240	(714) 744-7220	(714) 744-7200	(714) 744-7244
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May 24, 2012

#13-12

Mr. Christian Kessler
Irvine Ranch Water District (IRWD)
15600 Sand Canyon Avenue
Irvine, CA 92618

via email: Kessler@irwd.com

Subject: Initial Study/ Mitigated Negative Declaration (MND) for IRWD's Orange Park Acres (OPA) Well Replacement Project

Mr. Kessler:

The City has received the public review draft MND for IRWD's OPA Well Replacement Project. In summary, the project consists of removal of an existing onsite water well (OPA Well 3) and disinfection system; and construction and operation of a new well (OPA Well 1) within a noise attenuating enclosure; a wet well and pump station within an enclosure; a disinfection system and enclosure; a surge tank; a 25-foot tall antenna; and other supporting equipment. The project site is located at 678 N. Gravier Street in the City of Orange.

The project is located within City jurisdiction; therefore, the City has an interest in ensuring that impacts to City infrastructure and City residents are adequately analyzed and mitigated. In addition, the City has approval authority over certain aspects of the project (e.g. issuance of a well permit), making the City a "responsible agency" under the California Environmental Quality Act (CEQA). As a responsible agency, if the City determines that the MND is adequate, the City may use the MND for CEQA compliance purposes when making discretionary decisions related to the project. A-1

The City's comments are as follows:

1. **Page 2-4, Project Background:** This section explains that in June 2011 IRWD circulated an MND for construction of two new wells on the project site (referred to as OPA Well 1 and OPA Well 2). The City commented on this previous version of the MND in a letter dated July 14, 2011. The City's primary concern was with impacts to nearby City wells associated with localized drawdown caused by groundwater pumping from the two proposed wells. A-2

   IRWD has since determined that it will not undertake environmental review for OPA Well 2 at this time. To clarify that the subject MND constitutes CEQA compliance only for OPA

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Well 1 operations as described in the MND, the City requests the following language be added to the MND: "Further environmental review will be required for the installation of an additional well (IRWD OPA Well-2) (or for any increases in OPA Well 1 pumping beyond the 2,000 gpm and/or the 900 acre feet per year average annual groundwater production analyzed in this MND) to serve the future developments associated with Santiago Hills II and East Orange as well as a sanitary sewer system to serve the OPA area in the future". A-2 Cont.

2. **Page 3-5, Aesthetics:** The Aesthetics analysis concludes that the project's impact (related to substantial degradation of the existing visual character and quality of the site and its surroundings) is less than significant. The analysis references several project design features including a proposed 6- to 8-foot concrete masonry unit wall surrounding the property, stucco-exterior enclosures with a pitched roof designed to match the surrounding residences, and locating the proposed 25 foot antenna behind the proposed treatment facilities structure (to partially obscure views from the street). A-3

   However, the MND does not include information regarding proposed setbacks or landscaping. Residences in the area are typically set back from the public right of way by 20 feet and the front yard setbacks are heavily landscaped (typical of a suburban residential area). For visual consistency with the neighborhood and for screening onsite improvements from the street, the City requests that the project include landscaping (such as trees, shrubs and vines) within a 20-foot front yard setback.

3. **Page 3-38, Hydrology & Water Quality:** Page 2-6 states that the existing OPA Well 3 (although originally constructed with a 1,900 gpm capacity) has degraded over time and is currently producing 900 gpm. In addition, historically, this well has had an annual groundwater production of between 700 and 800 acre feet per year.

   Page 2-13 and Page 3-38 state that proposed OPA Well 1 would be capable of extracting groundwater at a rate of 2,000 gallons per minute, and would have an annual groundwater production of 900 acre feet per year to serve the OPA service area. A-4

   The analysis on page 3-38 concludes that since the proposed well would pump at a rate similar to historic conditions (700 compared to 900 acre feet per year), it is not anticipated that nearby wells (including City of Orange wells O-23 and O-24) would experience significant lowering of the groundwater table as a result of the project. Based on groundwater modeling performed by OCWD, it further states that at historic conditions (approximately 700 acre feet per year) drawdown would be zero, and for the proposed project (900 acre feet per year) drawdown would be approximately 0.44 feet.

   This analysis appears to be basing estimates of drawdown on the *average annual* groundwater produced from OPA Well 1, which does not give an accurate representation of drawdown impacts caused by the steady operation of a 2,000 gpm well. The analysis also does not give mention to the method of operation of the well. As no defined method of operation of the proposed well was noted and further OCWD groundwater modeling analysis noted that steady operation of the well at 2,000 gpm would cause increased drawdown, the

City requests the analysis be revised to reflect the estimated drawdown from a 2,000 gpm well. Based on the analysis performed by OCWD, the City believes that drawdown at the nearest City of Orange well could be up to 3.5 feet. The City requests this correction be made in the MND.

The City's primary concern with the estimated 3.5 feet of drawdown is whether such drawdown could affect the production rates of nearby City drinking water wells which currently serve Orange residents. To address this issue, the City reviewed actual data from the past 10 years and determined that a localized drawdown of 3.5 feet could result in a reduction of groundwater production from nearby City wells up to 1,000 acre-feet over a similar future 10-year period. As such, should actual drawdown reach 3.5 feet, the City's wells would need to be monitored closely for operational issues, and may need to be turned off for short periods of time. The City requests that this information regarding the effects of a 3.5 foot drawdown be included in the MND.

A-4 Cont.

The City will look to IRWD's participation in the Groundwater Engineering and Management Committee referenced in the MND to monitor operational issues and to mitigate pursuant to CEQA for any production losses that result from the project.

4. **Page 3-40, Hydrology & Water Quality:** This section states that during testing of the proposed well, approximately 3,700 gpm would be discharged to an existing 18" storm drain and ultimately to the Santiago Creek channel. The analysis concludes that the existing storm facility would be sufficient to convey the expected flows and concludes a less than significant impact related to flooding.

   The Orange County Water District releases water from the Bond Pits (northeast of the project site) to Santiago Creek and uses the creek itself for recharge activities. Therefore, there are year-round flows in Santiago Creek. The City has worked with OCWD in the past to ensure that OCWD releases are managed in a way that prevents recharge water from reaching the City's Hart Park parking lot downstream of the project site. The Hart Park parking lot (constructed in the 1930's) is located within the channel itself and is well used by park patrons. The City has an interest in ensuring that IRWD discharges (when coupled with OCWD recharge releases) do not cause flooding of the Hart Park parking lot. As such, the City requests that IRWD notify the City Engineer 7 days prior to any well discharges, and coordinate with OCWD to manage releases into the creek in a manner that prevents and/or minimizes water reaching the Hart Park parking lot.

A-5

5. **Page 3-46, Land Use and Planning:** The City notes that IRWD has opted to preempt local zoning and building codes, per the authority granted under Government Code Section 53091 (d) and (e). Notwithstanding, the City encourages IRWD to comply with the development standards of the zoning district as identified in Title 17 of the Orange Municipal Code. Local zoning and development standards serve to ensure that new development is compatible with existing neighborhoods and maintains "quality of life" in the community. Considering the location of the project within an established single-family residential neighborhood, the City encourages IRWD to comply with local standards, including but not limited to setbacks,

A-6

landscaping, building height, fence height, and screening of mechanical equipment from public view.

In addition, the City encourages IRWD take the project through the City's Design Review Committee (as is typically required for new development). The DRC is a committee of design professionals appointed by the City Council to ensure proposed developments in the City reflect high quality aesthetics and are visually compatible with the surrounding area. A-6 Cont.

6. **Page 3-52, Noise:** Regarding operational noise, the analysis states that the proposed well would be constructed within an enclosure designed to attenuate noise and will likely improve noise levels compared to existing conditions. However, the analysis does not identify existing noise levels or projected noise generated by OPA Well 1 nor does it identify the level of attenuation needed or expected from the proposed enclosure. Therefore, the analysis does not provide a basis for concluding that the proposed enclosures will reduce noise to less than significant levels. Performing this analysis as part of the MND and before the design is finalized is particularly important given that the closest residential noise receptor is located 10 to 20 feet away from the proposed well. At such close proximity, if attenuation is not achieved using the proposed enclosures as IRWD expects, IRWD will have few other options to address noise issues *after the fact*. A-7

   Instead of the qualitative discussion provided in the MND, the City requests the MND quantify existing noise levels, quantify the operational noise expected from the proposed project (including wells, pumps, surge tank, etc.), quantify noise attenuation expected from the proposed CMU enclosures, and identify any additional project design features necessary to reduce noise below the CEQA significance thresholds. These design features could include, for example, locating OPA Well 1 further away from sensitive receptors than is currently proposed, identifying a minimum noise attenuation specification for the proposed noise blankets, and/or locating all structure openings (including vents and doorways) away from sensitive receptors. Completing this analysis up-front and including it in the MND is necessary to provide the public with the opportunity to comment on the noise analysis and mitigation approach. It is also necessary to demonstrate that the proposed mitigation is feasible and will in fact reduce operational project noise to the extent needed to comply with the City's noise ordinance. Without this information, the conclusion that operational noise impacts would be less than significant is largely unsubstantiated.

7. **Page 3-67, Utilities:** This section states that during testing of the proposed well, approximately 3,700 gpm would be discharged to an existing 18" storm drain and ultimately to the Santiago Creek channel. The MND states that based on the slope, the storm drain would allow up to 3,700 gpm at 75% full. The analysis concludes that the storm drain is appropriately sized to handle the discharge volumes, and also notes that a County Flood Control encroachment permit would be needed to discharge to this into this storm drain and would stipulate any relevant conditions. A-8

   The City believes that the 18" storm drain referred to in the MND is a City-owned and operated storm drain. As such, the City (not County Flood Control) oversees discharges to

the system. Our primary concern with a concentrated discharge such as is proposed by IRWD is that the storm drain has adequate capacity to convey the discharge and will not cause flooding of the local system.

The City submits that the MND's conclusion that the storm drain is adequate to accommodate the proposed discharges is true only if testing and discharges occur *when there are no other discharges to the storm drain* and *only if the design capacity of the line is the same as its actual capacity*. Therefore, the City requests that a mitigation measure be added to the MND prohibiting discharges to the storm drain during and within 72 hours of rain events. In addition, we request that the mitigation include a commitment for IRWD to video inspect the line to confirm there is no build-up in the line and that adequate capacity exists to accommodate the proposed flows. If there is build-up that limits the capacity of the line, the City requests IRWD clean the line prior to any discharges.

A-8 Cont.

Thank you for the opportunity to provide comments on the MND. The City looks forward to resolving the above-described issues prior to IRWD's approval of the MND and the project. We also request notification of any public meetings at which the MND will be discussed or adopted. If you have any questions, please contact Jennifer Le, Senior Planner/Environmental Review Coordinator, at jle@cityoforange.org or at (714) 744-7238.

Sincerely,

Alice Angus
Community Development Director

cc: John Sibley, City Manager
Joe DeFrancesco, Public Works Director
Michael Wolfe, Deputy Public Works Director
Frank Sun, City Engineer
Jose Diaz, Water Manager
Bob Baehner, Principal Civil Engineer

A. City of Orange – Alice Angus, Community Development Director.

Response to Comment A-1

The Irvine Ranch Water District acknowledges that the City of Orange is a "responsible agency" under CEQA over certain aspects of the project. The IRWD is committed to preparing an adequate IS/MND so that the City may use the document for CEQA compliance purposes when making its own discretionary decisions related to the project.

Response to Comment A-2

The City is correct in that the IS/MND does not constitute environmental review for OPA Well 2, which was withdrawn from the original proposal. IRWD acknowledges the City's request that further environmental review be required for the installation of the additional well and for increases in pumping beyond 2,000 gpm and/or the 900 acre feet per year average annual production. As stated on Page 2-9, the objective of the project is to replace the existing well with a new well that will operate at the same historic pumping levels of OPA Well-3 ranging from 700 to 900 afy. Additionally, Page 2-9 states, "IRWD OPA Well-1 would have a maximum extraction capability of approximately 2,000 gpm, which would be restricted to a maximum production of 900 acre-feet per year. Therefore, any discretionary decision related to construction or operation beyond what is approved pursuant to the IS/MND would require a subsequent CEQA process. Page 2-4 of the Draft IS/MND states:

> "Further environmental review will be required for the installation of an additional well (IRWD OPA Well-2) to serve the future developments associated with Santiago Hills II and East Orange as well as a sanitary sewer system to serve the OPA area in the future. The environmental review of these potential projects and potential cumulative impacts, including the determination of the type of environmental document to be prepared, will be conducted in accordance with the California Environmental Quality Act statute and guidelines. IRWD will coordinate with the City of Orange and EOCWD during the environmental review process."

Response to Comment A-3

IRWD acknowledges the City's concern over the proposed aesthetic design and landscaping. The proposed project is currently undergoing final design. As described on Pages 3-5 and 3-6 of the IS/MND, IRWD would work with the City on a landscaping design that takes into consideration the design and condition of landscaping within the existing neighborhood. Typical setbacks within the neighborhood will be considered by IRWD in finalizing designs for the project.

Response to Comment A-4

IRWD acknowledges the City's concern regarding the rate of groundwater extraction and disagrees with the City in stating that "…no defined method of operation of the proposed well was noted". As

stated on Page 2-13, "Although IRWD OPA Well-1 could be operated at any time of the day, it would generally be operated during off peak hours to take advantage of lower energy costs to fill the Santiago Hills Zone 5 Reservoir." As such, the well will not be operated at 2,000 gpm on a steady basis and generally the well will be offline portions of each day. Average monthly production from the well will be substantially lower than if the well were pumped at a steady 2,000 gpm throughout each day of each month as implied by the City in comment A-4. Therefore, the use of OCWD's basin-wide groundwater flow model that takes into consideration average monthly production is reasonable and makes use of the standard, and best available, methodology applied by the Orange County Water District in assessing the influences of pumping wells. IRWD believes that the 0.44 feet of drawdown predicted by the model is an accurate representation of expected drawdown at the City of Orange well (O-24) due to pumping from IRWD OPA Well-1 and that impacts have been adequately evaluated and would be less than significant as concluded in the IS/MND.

As stated on Page 3-38, the Joint Groundwater Engineering and Management Committee could be convened as necessary to evaluate physical conditions, actual drawdowns, and production rates experienced at the existing O-23 and O-24 wells and any actual significant changes that are observed and verified during the operation of the IRWD OPA Well-1.

Response to Comment A-5

IRWD acknowledges the City's concern over the discharge during testing to the storm drain, which could result in flooding of downstream areas, specifically the Hart Park parking lot. IRWD would notify the City Engineer 7 days prior to any well discharges and would coordinate with OCWD in managing releases to the storm drain. Additionally, IRWD would avoid discharges within 72 hours of rain whenever possible given the accuracy of available weather forecasts. Furthermore, IRWD will inspect, test, and monitor the 18-inch storm drain line leading from the site to ensure adequate capacity to handle the discharges from well testing. Additional text has been added to Chapter 2 to include these environmental commitments in the Project Description.

Response to Comment A-6

IRWD has opted to preempt local zoning and building codes, per the authority granted under Government Code Section 53091 (d) and (e). As stated on page 3-6, detailed architectural plans for the enclosures have not yet been designed. However, IRWD would work with the City to design them to be compatible with the surrounding neighborhood. The enclosures would likely consist of an enclosed stucco structure with a pitched roof similar to the residential roofs in the area to be consistent with the surrounding residential neighborhood. The existing walls and the proposed 6- to 8-foot concrete masonry wall would screen views into the site from the neighborhood. Additionally, see Response to Comment A-3 above.

Response to Comment A-7

IRWD acknowledges the City's concern over the operational noise impacts and the feasibility of attenuating noise from the project. The noise attenuation features of the project are currently under final design along with the other more complicated features of the project. As stated on Page 2-12 of

the IS/MND, "A permanent noise attenuating enclosure or enclosures would be constructed around the IRWD OPA Well-1 and pumps." Page 3-52 of the IS/MND indicates that the well pump would be located in fully enclosed structures that would be constructed with grout filled concrete masonry unit (CMU) walls with sound blankets on the inside (or some other equally effective design) to attenuate noise. Noise attenuating enclosures such as those that under are design for OPA Well- 1 have been proven feasible at other IRWD well projects where concrete-lined and concrete masonry walls with internal acoustical treatments inside the structures are used to attenuate noise generated by the operating well pumps.

Additionally, because the existing pump at OPA Well-3 is not enclosed within a noise attenuating structure, the proposed project is expected to improve noise levels as compared to existing conditions. Furthermore, IRWD has incorporated Mitigation Measure NOI-2, which consists of conducting a post-construction noise survey to ensure that operation of the well equipment is within the City of Orange's Noise Ordinance at the project boundary. Should the post-construction assessment reveal elevated noise levels, IRWD will modify the design and attenuation elements to reduce noise as necessary.

Response to Comment A-8

IRWD acknowledges the City's concern over the storm drain capacity to handle the discharges from well testing. IRWD also acknowledges that the 18-inch storm drain referenced in the MND is a City-owned and operated storm drain, but that a County Flood Control encroachment permit would still be needed to discharge to the storm drain that ultimately flows to Santiago Creek (a County-owned and operated facility). IRWD would notify the City Engineer 7 days prior to well discharges and would coordinate with OCWD in managing releases to the storm drain. Additionally, IRWD would avoid discharges within 72 hours of rain whenever possible given the accuracy of available weather forecasts. Additionally, IRWD will inspect, test, and monitor the 18-inch storm drain line leading from the site. Additional text has been added to Chapter 2 to include these environmental commitments in the Project Description.

B

EAST ORANGE COUNTY WATER DISTRICT

DIRECTORS

Richard E. Barrett
Richard B. Bell
Douglas M. Chapman
John Dulebohn
William Vanderwerff

Lisa Ohlund
General Manager

185 N. McPherson Road
Orange, CA 92869-3720

www.eocwd.com

Phone 714.538.5815
Fax 714.538.0334

May 24, 2012

Via E-mail and Facsimile

Board of Directors
Irvine Ranch Water District
Attention: Christian Kessler
15600 Sand Canyon Avenue
Irvine, California 92618-3102

Re: Comments on the Draft Initial Study/Mitigated Negative Declaration for the Proposed Orange Park Acres Wells Project

Dear Board Members:

As you are aware, EOCWD submitted a detailed comment letter, dated July 15, 2011, on the original (June 2011) draft Initial Study/Mitigated Negative Declaration (IS/MND-6/11) expressing significant concerns about the OPA Well-1 and Well-2 project, particularly the impacts on existing EOCWD wells due to drawdown. As a result of that comment letter, IRWD and EOCWD met to try to resolve these concerns. Based on those meetings, IRWD and EOCWD reached agreement on a revised project that would be limited to replacing the existing Well-3 with a new Well-1 and limiting the annual production to a maximum of 900 afy. Proposed OPA Well-2 was eliminated from the project. IRWD also agreed that IRWD and EOCWD would reach an agreement to investigate the feasibility and development of a joint groundwater production facility. We are appreciative of the extent that IRWD has worked with our agency to address our concerns. B-1 B-2

The April 2012 IS/MND (IS/MND-4/12) reflects IRWD's agreement to limit the project to only OPA Well-1 with a maximum annual production of 900 afy. Based on that maximum level of production, IS/MND-4/12 concludes that the drawdown on existing EOCWD wells due to Well-1 will be very limited (.26 feet maximum). Assuming the estimate in IS/MND-4/12 is correct, we agree that the impact of this minimal drawdown is less than significant. B-3

Comment Letter re: IRWD/OPA IS/MND-4/12 May 24, 2012

By e-mail dated May 22, 2012 (attached to this letter); IRWD reiterated its interest and commitment to entering into an agreement for the development and/or feasibility investigation of a joint groundwater production facility. EOCWD believes the agreement is critical to addressing the concerns we raised about the cumulative impact analysis in IS/MND-6/11, as described in our July 15, 2011 comment letter. Therefore, EOCWD agrees with IS/MND-4/12's cumulative impact analysis based upon the representations made by IRWD in meetings held to discuss a joint well project and as confirmed in the attached e-mail.

B-4

Very truly yours,

Lisa Ohlund
General Manager

c: Greg Heiertz/Lisa Ohlund email string

Lisa Ohlund

From: Greg Heiertz [HEIERTZ@irwd.com]
Sent: Tuesday, May 22, 2012 5:44 PM
To: Lisa Ohlund
Subject: RE: Joint Well - Engineering/Geotech Services Scope of Work

I'll call him. I'll also send you an e-mail on our intent to move forward.
Greg

>>> "Lisa Ohlund" <lohlund@eocwd.com> 5/22/2012 5:40 PM >>>
Thanks Greg – Would you also send me something stating what you told me on the phone about IRWD's intent to proceed with investigating the joint well project? If you send it to me on a separate string it probably would be better; I'm planning on including it with our revised comment letter.

Also, the name of the firm is INTERA Incorporated, and the contact is David Jordan (505) 246-1600 – however, he is leaving on Friday to go to Australia for two weeks, so if you wanted to touch bases with him, you probably would want to do it within the next day or two.

Thanks,
lisa

Lisa Ohlund
General Manager
East Orange County Water District
(714) 538-5815
lohlund@eocwd.com

From: Greg Heiertz [mailto:HEIERTZ@irwd.com]
Sent: Tuesday, May 22, 2012 5:35 PM
To: Lisa Ohlund
Cc: Paul Weghorst
Subject: RE: Joint Well - Engineering/Geotech Services Scope of Work

Hi Lisa,
I'm putting the final touches on the RFP. I should have it to you by tomorrow. Sorry for the delay. So far I show us sending it to AKM, Wildermuth, Richard Slade, and Geoscience. I think you had a firm another firm you were interested in including as well, but I don't remember the name.
Greg

Gregory P. Heiertz
Executive Director of Water Policy
Irvine Ranch Water District
Tel: (949) 453-5560
Fax: (949) 453-0228
>>> "Lisa Ohlund" <lohlund@eocwd.com> 5/8/2012 3:59 PM >>>
Hi Greg – Just checking in about the engineering scope of work for the well – perhaps you sent it to me, but I didn't receive a copy. Would you mind resending? I can turn it around very quickly...Thanks, lisa

Lisa Ohlund
General Manager
East Orange County Water District

1

(714) 538-5815
lohlund@eocwd.com

From: Lisa Ohlund [mailto:lohlund@eocwd.com]
Sent: Thursday, April 19, 2012 11:04 AM
To: 'Greg Heiertz'
Subject: Joint Well - Engineering/Geotech Services Scope of Work

Hi Greg,

Would it be possible to get a Word version of the subject scope? I thought it might be easier to put my comments on that...

Thanks,
lisa

Lisa Ohlund
General Manager
East Orange County Water District
(714) 538-5815
lohlund@eocwd.com

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2171 / Virus Database: 2425/5015 - Release Date: 05/22/12

2

B. East Orange County Water District – Lisa Ohlund, General Manager.

Response to Comment B-1

The IRWD acknowledges the comment letter received from EOCWD on July 15, 2011, and the concerns raised in that letter regarding EOCWD wells due to drawdown. IRWD has revised the project following coordination with the East Orange County Water District and has reached agreement on the project involving elimination of OPA Well-2 and limiting annual production to a maximum of 900 afy.

Response to Comment B-2

The IRWD acknowledges that an agreement is being prepared to investigate the feasibility of and to develop a joint groundwater production facility. The IRWD looks forward to working with the East Orange County Water District in the future.

Response to Comment B-3

IRWD acknowledges that EOCWD agrees with the impact conclusions in the April 2012 IS/MND that the project would result in minimal drawdown that would be less than significant.

Response to Comment B-4

The IRWD acknowledges EOCWD's agreement with the conclusions in the IS/MND regarding the cumulative impact analysis, and is committed to preparing an agreement to investigate the feasibility and development of a joint groundwater production facility. The IRWD looks forward to working with the East Orange County Water District in the future.

C

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

April 26, 2012

Mr. Christian Kessler, Project Planner
Irvine Ranch Water District
156600 Sand Canyon Avenue
Irvine, CA 92618

Re: SCH#2011061038; Notice of Completion; proposed Mitigated Negative Declaration for the **"Orange Park Acres Well Replacement Project;"** located near the City of Orange; Orange County, California.

Dear Mr. Kessler:

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

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

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including …objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC Sacred Lands File (SLF) search resulted as follows: Native American Cultural Resources **were not identified** within the 'area of potential effect (APE). C-1

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

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American C-2

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

C-2 Cont.

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

C-3

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

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

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

C-4

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

2

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

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Native American Contacts
Orange County
April 26, 2012

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

Gabrielino Tongva Nation
Sam Dunlap, Chairperson
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

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

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

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

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

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

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

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

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

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Sch#2011061038; CEQA Notice of Completion; proposed Mitigated Negative Declaration; for Orange Park Acres Well Replacement Project; located near the City of Orange; Orange County, California.

Native American Contacts
Orange County
April 26, 2012

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

Gabrielino-Tongva Tribe
Linda Candelaria, Chairwoman
1875 Century Pk East #1500 Gabrielino
Los Angeles , CA 90067
lcandelaria1@gabrielinoTribe.org
626-676-1184- cell
(310) 587-0170 - FAX
760-904-6533-home

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

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

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

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

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

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

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Sch#2011061038; CEQA Notice of Completion; proposed Mitigated Negative Declaration; for Orange Park Acres Well Replacement Project; located near the City of Orange; Orange County, California.

C. Native American Heritage Commission – Dave Singleton, Program Analyst.

Response to Comment C-1

The IRWD acknowledges that the Sacred Lands File search found that no Native American Cultural Resources were identified within the "area of potential effect."

Response to Comment C-2

IRWD acknowledges the Native American Heritage Commission's (NAHC's) recommendation to make contact with the list of Native American Contacts provided to determine if the project might impact Native American cultural resources. As noted in Response to Comment C-1, the Native American Heritage Commission (NAHC) sacred Land Files search found that no Native American Cultural Resources were identified within the "area of potential effect." Additionally, given that the proposed project would take place within an existing IRWD property and would be constructed adjacent to the existing OPA Well-3, the probability for discovering Native American cultural resources is low. While Section V of Chapter 3, Environmental Checklist, finds that the project site has been previously disturbed and the potential for discovery of cultural resources is low, the IRWD is committed to consulting with appropriate Native American parties should any pertinent information related to Native American cultural resources be identified.

Response to Comment C-3

The proposed project does not involve actions that require NEPA, 4(f), and/or Section 106 consultation. This comment is not applicable to the proposed project.

Response to Comment C-4

As noted in Response to Comment C-1, the NAHC sacred Land Files search found that no Native American Cultural Resources were identified within the "area of potential effect." The project site is not a formal cemetery and is not adjacent to a formal cemetery. The project parcel is not known to contain human remains interred outside formal cemeteries, nor is it known to be located on a burial ground. The project site has been previously disturbed and there would be no significant grading for the proposed project; in addition, depth of sediment disturbance located in most of the project site would be less than 3 feet, with the exception of the exact location of the replacement well, which would disturb sediment up to depths of approximately 800 feet. Therefore, it is highly unlikely the proposed project would disturb any human remains during construction of the proposed project.

While Section V of Chapter 3, Environmental Checklist, finds that the project site has been previously disturbed and the potential for discovery of cultural resources is low, the IRWD is committed to compliance with all local and state regulations. As stated on Page 3-21 of the IS/MND, IRWD's standard operating procedures involve implementing actions as specified by State Health

and Safety Code Section 7050.5. This section states that no further disturbance would occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, excavation or construction would halt in the area of the discovery, the area would be protected, and consultation and treatment will occur as prescribed by law. If the Coroner recognizes the remains to be Native American, he or she would contact the Native American Heritage Commission, who would appoint the Most Likely Descendent. Additionally, if the bones are determined to be Native American, a plan would be developed regarding the treatment of human remains and associated burial objects, and the plan would be implemented under the direction of the Most Likely Descendent.

D

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

WATER RESOURCES
MAY 02 2012
IRVINE RANCH
WATER DISTRICT

April 30, 2012

Christian Kessler
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618-3102

Subject: Orange Park Acres Wells Project
SCH#: 2011061038

Dear Christian Kessler:

The enclosed comment (s) on your Mitigated Negative Declaration was (were) received by the State Clearinghouse after the end of the state review period, which closed on July 14, 2011. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document. D-1

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2011061038) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

7/14/11 Late c

RECEIVED
APR 30 2012
STATE CLEARING

April 26, 2012

Mr. Christian Kessler, Project Planner
Irvine Ranch Water District
156600 Sand Canyon Avenue
Irvine, CA 92618

Re: SCH#2011061038; Notice of Completion; proposed Mitigated Negative Declaration for the **"Orange Park Acres Well Replacement Project;"** located near the City of Orange; Orange County, California.

Dear Mr. Kessler:

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

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

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

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

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

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

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

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

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

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

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

2

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

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

3

D. California Governor's Office of Planning and Research – Scott Morgan, Director.

Response to Comment D-1

The IRWD acknowledges the receipt of comments transmitted by the State Clearinghouse after the end of the state review period, and that CEQA does not require Lead Agencies to respond to late comments. The comments submitted by the NAHC have been included in this Final IS/MND as Comment Letter C, and responses to comments are provided above under Responses to Comments C-1 through C-4.

E

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

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

Edmund G. Brown Jr.
Governor

WATER RESOURCES
MAY 14 2012
IRVINE RANCH
WATER DISTRICT

May 9, 2012

Ms. Christian Kessler
Irvine Ranch Water District (IRWD)
15600 Sand Canyon Avenue
Irvine, California 92618-3102

DRAFT MITIGATED NEGATIVE DECLARATION (ND) FOR ORANGE PARK ACRES (OPA) WELL REPLACEMENT PROJECT

Dear Ms. Kessler:

The Department of Toxic Substances Control (DTSC) has received your submitted document for the above-mentioned project. As stated in your document: "The IRWD proposes the destruction of one existing well (OPA Well-3), and construction and operation of a replacement well (IRWD OPA Well-1), disinfection equipment, and associated appurtenances. The proposed replacement well would serve the existing IRWD OPA service area within the City of Orange. The replacement well would have a maximum operational capacity of approximately 900 acre feet per year. The chlorine disinfection system for OPA Well-3 would be removed and replaced with a new system, and a surge tank system would be placed on site. Other ancillary facilities include, but are not limited to a wet well, electrical panels, radio mast, Supervisory Control and Data Acquisition (SCADA)/Programmable Logic Controller (PLC), meters, valves, sand separator, and enclosures for various facilities. A chemical building would also be constructed to house the new disinfection system, associated pump and motor, and a restroom".

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

1) The document states that the ND would identify any known or potentially contaminated sites within the proposed project area. E-1

2) The ND should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If hazardous materials or wastes were stored at the site, an environmental assessment should be conducted to determine if a release has occurred. E-2

If so, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. It may be necessary to determine if an expedited response action is required to reduce existing or potential threats to public health or the environment. If no immediate threat exists, the final remedy should be implemented in compliance with state laws, regulations and policies. E-2 Cont.

3) The project construction may require soil excavation and soil filling in certain areas. Appropriate sampling is required prior to disposal of the excavated soil. If the soil is contaminated, properly dispose of it rather than placing it in another location. Land Disposal Restrictions (LDRs) may be applicable to these soils. Also, if the project proposes to import soil to backfill the areas excavated, proper sampling should be conducted to make sure that the imported soil is free of contamination. E-3

4) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. A study of the site overseen by the appropriate government agency might have to be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. E-4

5) If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the ND should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight. E-5

6) If weed abatement occurred, onsite soils may contain herbicide residue. If so, proper investigation and remedial actions, if necessary, should be conducted at the site prior to construction of the project. E-6

7) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency E-7

(CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. E-7 Cont.

8) If buildings, other structures, or associated uses; asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should be conducted for the presence of other related hazardous chemicals, lead-based paints or products, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies. E-8

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

If you have any questions regarding this letter, please contact me at ashami@dtsc.ca.gov, or by phone at (714) 484-5472.

Sincerely,

Al Shami
Project Manager
Brownfields and Environmental Restoration Program

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

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
Sacramento, California 95812
nritter@dtsc.ca.gov.

CEQA # 3523

E. Department of Toxic Substances Control – Scott Morgan, Director.

Response to Comment E-1

As discussed in Section VIII of Chapter 3, Environmental Checklist, searches were performed for hazardous waste sites; hazardous substances release sites; leaking underground storage tanks; and cease and desist orders in the vicinity of the proposed project. Two incidents of leaking underground storage tanks were identified within approximately 0.6 mile of the project site and both incidents were reported to have been remediated. All known and potentially contaminated sites within the proposed project area have been identified.

Response to Comment E-2

As discussed in Response to Comment E-1, no contaminated sites have been identified within the vicinity of the proposed project. However, there are currently hazardous materials stored on site in a locked enclosed structure as part of the existing well's disinfection system. Construction of the proposed project would require the abandonment of the existing OPA Well-3 and existing disinfection system, construction of IRWD OPA Well-1, and associated infrastructure including a new disinfection system. Operation of the proposed project would involve the use of a disinfection system, which would require routine transport, storage, use, and disposal of hazardous materials.

IRWD would comply with the Hazardous Materials Release Response Plans and Inventory Act (also known as the Business Plan Act), which requires an entity or business using hazardous materials to prepare a business plan describing the facility, inventory, emergency response plans, and training programs and submit it to the City of Orange Fire Department. The plan would demonstrate that adequate controls, containment, and clean-up protocols are in place to minimize risks to the population and environment. The plan would be submitted to and approved by the City of Orange Fire Department prior to operating the disinfection facility. To facilitate approval, prior to putting project plans out to bid, IRWD would submit drawings to the City of Orange Fire Department for their review, approval, and stamp as required by the Business Plan Act. IRWD is responsible for implementing the approved plan. Furthermore, IRWD will comply with the California Accidental Release Prevention (CalARP) program and prepare a Risk Management Plan (RMP) if required per CalARP.

While no immediate threats have been identified, should unknown hazardous materials be discovered during construction, IRWD would halt construction to investigate the nature and extent of contamination, and would implement cleanup and disposal procedures in compliance with state laws, regulations, and policies.

Response to Comment E-3

As discussed in Chapter 2, Project Description, all drill cutting, rotary fluid, and other by-products would be retained on site to be transported and disposed of per applicable regulations. All soil

cuttings and fluids generated during the drilling process would be contained and tested prior to disposal at an offsite facility. The excavated soil would be stored at the project site while awaiting analytical results. Using a State of California certified hazardous waste testing laboratory, the samples would be submitted for Toxicity Characteristic Leaching Procedure (TCLP), Soluble Threshold Limit Concentration (STLC), or Total Threshold Limit Concentration (TTLC) metals analysis or any combination of the three analyses in order to accurately classify the cuttings as hazardous or non-hazardous material. If analytical reports show that the cuttings are hazardous, they would be placed on plastic sheeting and IRWD would arrange for appropriate disposal per applicable regulations. Non-hazardous drill cuttings would be disposed of at an offsite facility. The proposed project does not include the importation of soil to backfill excavated areas. Additional text has been added to Chapters 2 and 3 of the Final IS/MND.

Response to Comment E-4

As discussed in Section VIII of Chapter 3, Environmental Checklist, construction of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Site preparations would include removal of the existing well pump and delivery of all components to the IRWD's Michelson Water Reclamation Plant. Construction activities would be short term in nature and may involve the limited transport, storage, use, and disposal of hazardous materials such as fuel and lubricating grease for motorized heavy equipment. Some examples of typical hazardous materials handling include fueling and servicing construction equipment on the site and transporting fuels, lubricating fluids, solvents, and bonding adhesives. These types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by local, county, and state laws.

Response to Comment E-5

As discussed above under Response to Comment E-1, no existing sources of contamination are present in soil or groundwater onsite. As discussed above for Response to Comment E-3, during construction all soil cuttings would be contained and tested prior to disposal. If analytical reports show that the cuttings are hazardous, they would be placed on plastic sheeting and IRWD would arrange for appropriate disposal per applicable regulations. Should any unknown contamination be discovered during construction, construction activities would cease if IRWD deems it necessary, and investigation and remedial activities would be implemented in accordance with state laws, regulations, and policies.

Response to Comment E-6

As discussed in Chapter 2, Project Description, the existing site is comprised of an aboveground well pump, support infrastructure for the well, the former OPAMWC headquarters building pad, an enclosure for a chlorine disinfection system, and other associated appurtenances. Weed abatement has not occurred on site. This comment is not applicable to the proposed project.

Response to Comment E-7

Hazardous wastes would not be a product of operation of the proposed project. The proposed project involves the destruction of an existing water production well and the construction, installation and operation of a replacement well and ancillary equipment within the same project site. Although operation of the proposed project involves the routine use and transport of hazardous materials for the maintenance of the proposed disinfection system, the proposed project does not include the production or generation of hazardous wastes. The mechanisms and regulations with which IRWD must comply for proper use, handling, transport and disposal of hazardous materials associated with maintenance of the disinfection system are discussed in Response to Comment E-2. This comment is not applicable to the proposed project.

Response to Comment E-8

As discussed in Chapter 2, Project Description, construction activities would disturb surface soils that are currently covered by concrete, gravel, or vegetation. Concrete surfaces include the former OPAMWC headquarters building pad and area surrounding the existing OPA Well-3. It is not expected that hazardous chemicals, lead-based paints, mercury or asbestos containing materials would be encountered during construction activities. Destruction of OPA Well-3 would follow the State of California Department of Water Resources, City of Orange, and Orange County Health Care Agency (OCHCA) requirements for properly abandoning wells in accordance with the California Well Standards Bulletins 74-81 and 74-90. Generally, destruction of water wells includes filling with either cement grout, or bentonite grout and cutting and capping the upper several feet of well casing. Destruction of the well would require a well demolition and abandonment permit from the City of Orange and would be observed and monitored by City Water Division staff in the field.

Response to Comment E-9

The IRWD acknowledges that DTSC is available to provide guidance for cleanup.

F

Department of Toxic Substances Control

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

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

May 11, 2012

WATER RESOURCES
MAY 15 2012
IRVINE RANCH
WATER DISTRICT

Mr. Christian Kessler
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618-3102

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE ORANGE PARK ACRES WELL REPLACEMENT PROJECT (SCH#2011061038), ORANGE COUNTY

Dear Mr. Kessler:

The Department of Toxic Substances Control (DTSC) has received your submitted draft Initial Study (IS) and a draft Mitigated Negative Declaration (MND) for the above-mentioned project. The following project description is stated in your document: "The Irvine Ranch water District (IRWD) proposes the abandonment of one existing well (OPA Well 3) and construction and operation of a replacement well (IRWD OPA Well-1), disinfection equipment, and associated appurtenances. The project area is located in north-central Orange County, within the City of Orange, south of Villa Park. The proposed project would be located within the boundaries of the former Orange Park Acres (OPA) Mutual Water Company Headquarters located at 678 North Gravier Street in the City of Orange. Santiago Creek is within 0.25 mile of the project site to the west, and the Santiago Creek Recharge Basin is about 300 feet to the north-northeast. Land uses in the general vicinity of the project site are primarily residential single-family homes. The existing project site is comprised of the OPA Well-3 and above ground infrastructure. Currently, there are hazardous materials stored on site in a locked enclosed structure as part of the existing well's disinfection system. According to the City of Orange General Plan, the land use designation of the site is Low Density Residential (LDR). Per the City of Orange Zoning Ordinance, the project site is zoned Single Family Residential with a 7,000 square foot minimum lot size (R-1-7)."

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

1) The MND should evaluate whether conditions within the Project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:

   - National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).

F-1

- EnviroStor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

F-1 Cont.

2) The MND should identify the mechanism to initiate any required investigation and/or remediation for any site within the proposed Project area that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents.

F-2

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the MND.

F-3

4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the

F-4

presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies. F-4 Cont.

5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination. F-5

6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. F-6

7) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project. F-7

8) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. F-8

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

Mr. Christian Kessler
May 14, 2012
Page 4

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

Sincerely,

Manny Alonzo
Unit Chief
Brownfields and Environmental Restoration Program

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

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

CEQA # 3540

F. Department of Toxic Substances Control – Manny Alonzo, Unit Chief.

Response to Comment F-1

As discussed in Section VIII of Chapter 3, Environmental Checklist, searches were performed for hazardous waste sites; hazardous substances release sites; leaking underground storage tanks; and cease and desist orders in the vicinity of the proposed project. Two incidents of leaking underground storage tanks were identified within approximately 0.6 mile of the project site and both incidents were reported to have been remediated. All known and potentially contaminated sites within the proposed project area have been identified.

Response to Comment F-2

Comment addressed above. See Response to Comment E-2.

Response to Comment F-3

As discussed above under Response to Comment E-1, no existing sources of contamination are present in soil or groundwater onsite. Therefore, sampling and/or remediation is not anticipated to be necessary. Should any unknown contamination be discovered during construction, construction activities would cease if IRWD deems it necessary, and investigation and remedial activities would be implemented in accordance with state laws, regulations, and policies.

Response to Comment F-4

Comment addressed above. See Response to Comment E-8.

Response to Comment F-5

Comment addressed above. See Response to Comment E-3.

Response to Comment F-6

Comment addressed above. See Response to Comment E-4.

Response to Comment F-7

The existing site is comprised of an aboveground well pump, support infrastructure for the well, the former OPAMWC headquarters building pad, an enclosure for a chlorine disinfection system, and other associated appurtenances. Previous uses did not include agricultural or livestock related activities. This comment is not applicable to the proposed project.

Response to Comment F-8

Comment addressed above. See Response to Comment E-7.

Response to Comment F-9

The IRWD acknowledges that DTSC is available to provide guidance for cleanup.

Chapter 7

Mitigation Monitoring and Reporting Program

Introduction

The California Public Resources Code, Section 21081.6, requires that a lead or responsible agency adopt a mitigation monitoring and reporting program (MMRP) when approving or carrying out a project when a mitigated negative declaration identifies measures to reduce potential adverse environmental impacts to less-than-significant levels. As lead agency for the proposed project, Irvine Ranch Water District (IRWD) is responsible for adoption and implementation of the MMRP.

An Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared for the proposed project that addresses the potential environmental impacts, and, where appropriate, recommends measures to mitigate these impacts. As such, an MMRP is required to ensure that the adopted mitigation measures are implemented successfully. This document plan lists each mitigation measure, describes the methods for implementation and verification, and identifies the responsible party or parties.

Project Overview

The Irvine Ranch Water District proposes to replace an underperforming groundwater well (OPA Well-3) that is approaching the end of its useful life. The proposed project would include the destruction of OPA Well-3 and the construction, installation, and operation of a new well (IRWD OPA Well-1) and ancillary equipment and facilities on the same site located at 678 N. Gravier Street in the City of Orange. The project area is located in north-central Orange County, within the City of Orange, south of Villa Park. The proposed project would serve areas of OPA that are serviced by IRWD.

Monitoring and Reporting Procedures

The MMRP for the proposed project will be in place through all phases of the project, including design, construction, and operation. IRWD will be responsible for administering the MMRP and ensuring that all parties comply with its provisions. IRWD may delegate monitoring activities to staff, consultants, or contractors. IRWD also will ensure that monitoring is documented through periodic reports and that deficiencies are corrected promptly. The designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to rectify problems.

Mitigation Monitoring and Reporting Program Implementation

Table 1 lists each mitigation measure included in the IS/MND by resource area. Certain inspections and reports may require preparation by qualified individuals, and these are specified as needed. The timing and method of verification for each measure also are specified.

Project Contact Information

LEAD AGENCY:

Irvine Ranch Water District

15600 Sand Canyon Avenue

Irvine, California 92618-3102

CONTACT PERSON/ TELEPHONE NO.:

Christian Kessler, Assistant Engineer, (949) 453-5441

Table 1. Mitigation Monitoring Program Compliance Checklist

Mitigation Measures	Applicable construction phase	Monitoring and Compliance Responsibility	Verification of Compliance		
			Initials	Date	Remarks
Mitigation Measure BIO-1: Conduct pre-construction surveys. If the removal of ornamental trees on site is scheduled during the avian nesting season (approximately February 1 through August 31), a preconstruction survey for nesting birds shall be conducted by a qualified biologist no more than 7 days prior to the start of construction. If nesting birds are detected within the disturbance limits, a buffer around the nest shall be determined by a qualified biologist. If the biologist determines that the construction activity within the buffer has the potential to disturb an active nest, construction activities may be limited or halted until the biologist has determined that the nesting activity is complete.	This measure is applicable to construction activities that occur starting February 1 through August 31.	The construction contractor is responsible for scheduling pre-construction surveys if construction takes place during the bird nesting season. A qualified biologist selected by Irvine Ranch Water District is responsible for conducting pre-construction surveys.			
Mitigation Measure GEO-1: Preparation of a geotechnical investigation. A design-level geotechnical investigation, including collection of site-specific subsurface data, will be completed by IRWD. The geotechnical investigation will be conducted by a certified engineering geologist or registered geotechnical engineer. The geotechnical investigation will	This measure is applicable prior to any construction-related activities.	Irvine Ranch Water District Engineering and Planning Department will be responsible for preparing a Geotechnical Investigation and implementation of the recommendations will be incorporated into the final well design. The lead construction			

Mitigation Measures	Applicable construction phase	Monitoring and Compliance Responsibility	Verification of Compliance		
			Initials	Date	Remarks
identify appropriate engineering considerations for the planned project area, including density profiles, depth of groundwater based on borings and historical and regional groundwater data, vertical and lateral extent of the saturated sand/silt layers that could undergo liquefaction, and potential presence of expansive soils. The geotechnical investigation will recommend site-specific design criteria to reduce potential risks due to liquefaction, lateral spreading, subsidence, and expansive soils. The project shall be designed and constructed in accordance with the recommendations of the geotechnical report.		contractor is responsible for day-to-day compliance with findings and recommendations proposed in the investigation.			
Mitigation Measure NOI-1: Implement noise reduction techniques. To reduce noise generated by the proposed project, IRWD and the contractor will implement the following measures: ▪ All mobile or fixed noise-producing equipment used on the project that is regulated for noise output by a local, state, or federal agency will comply with such regulation while in the course of project activity. ▪ The Contractor shall install noise attenuating panels including a 24 foot tall noise wall and additional sound blankets to fully enclose the drill rig during drilling operations. ▪ The Contractor shall use a drilling	The noise reduction techniques would be implemented throughout all stages of construction.	The lead construction contractor is responsible for compliance with this measure.			

Mitigation Measures	Applicable construction phase	Monitoring and Compliance Responsibility	Verification of Compliance		
			Initials	Date	Remarks
rig that is equipped with a muffler system such that the drilling rig generates reduced noise levels. ▪ Noise levels shall be monitored periodically during 24-hour well drilling or testing. If noise levels at surrounding residential property lines exceeds nighttime noise standards (between the hours of 8:00pm to 7:00am), IRWD shall provide on a case-by-case basis, affected residents options to reduce or avoid elevated noise levels. Options may include, but are not be limited to, temporarily relocating affected residents to reasonably priced local hotels during periods of nighttime work. ▪ Electrically powered equipment instead of pneumatic or internal combustion powered equipment will be used, where feasible. ▪ Material stockpiles and mobile equipment staging, parking, and maintenance areas will be located as far as practicable from noise-sensitive receptors. ▪ Construction site speed limits will be established and enforced during the construction period. ▪ For all construction other than well drilling, well development and pump testing associated with IRWD OPA Well-1, including noisy maintenance activities and all spoils and material transport, will be performed during daytime hours specified in the noise ordinance unless otherwise approved by the City of Orange. ▪ The use of noise-producing signals,					

Mitigation Measures	Applicable construction phase	Monitoring and Compliance Responsibility	Verification of Compliance		
			Initials	Date	Remarks
including horns, whistles, alarms, and bells will be for safety warning purposes only. ▪ No project-related public address or music system will be used during nighttime hours. ▪ The onsite construction supervisor will have the responsibility and authority to receive and resolve noise complaints. A clear appeal process will be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor. ▪ Construction signs will be posted at the project site identifying a contact name and phone number to register noise complaints. In addition, at least ten days prior to starting nighttime activities, the Contractor/IRWD shall notify adjacent residents (in writing) of the start of nighttime work. The Notice shall identify estimated nighttime work hours, nighttime work duration, and a contact name and phone number for complaints.					

Mitigation Measures	Applicable construction phase	Monitoring and Compliance Responsibility	Verification of Compliance		
			Initials	Date	Remarks
Mitigation Measure NOI-2: Conduct a post-construction noise survey. Once the proposed project is operational, IRWD shall conduct a post-construction noise survey to ensure that operation of the well equipment is within the City of Orange's Noise Ordinance at the project boundary and will be available to the City of Orange upon request.	A post-construction survey would be conducted once the proposed project is operational.	The Irvine Ranch Water District is responsible for conducting the post-construction noise survey and ensuring operational noise is within the City of Orange's Noise Ordinance at the project boundary and will be available to the City of Orange upon request.			
Mitigation Measure NOI-3: Restrict timing of noise generating activities. Noise generating well maintenance activities shall be restricted to daytime hours (exempt from the City of Orange Noise Ordinance), unless otherwise approved by the City of Orange.	The noise restriction hours would be implemented throughout operation of the proposed project.	The Irvine Ranch Water District is responsible for ensuring noise generating well maintenance activities shall be restricted to daytime hours.			
Mitigation Measure TR-1: Prepare and implement a traffic control/traffic management plan. The construction contractors will prepare and implement a traffic control/traffic management plan subject to approval by the City of Orange prior to construction. The plan will: ▪ Identify the hours of construction for deliveries. ▪ Include discussion of haul routes, work area delineation, traffic control, and flagging. ▪ Identify all access and parking restrictions, pavement markings,	The traffic control plan would be developed prior to project construction and would be implemented throughout all stages of construction.	The lead construction contractor is responsible for compliance with this measure.			

Mitigation Measures	Applicable construction phase	Monitoring and Compliance Responsibility	Verification of Compliance		
			Initials	Date	Remarks
and signage requirements (e.g., speed limit, temporary loading zone). ▪ Maintain access to residences driveways and public facilities at all times. ▪ Minimize access disruptions to residences. ▪ Layout a plan for notifications and process for communication with affected residences and transit agencies prior to the start of construction. Advanced public notification will include providing written notification to adjacent residences at least 10 days prior to construction start and providing appropriate signage of construction activities. The written notification will include the construction schedule, exact location and duration of activities, and a toll-free telephone number for receiving questions and complaints.					

Appendix A

2006 Agreement Between City of Orange and IRWD

Agr. 0691.2
C. 2

SECOND AMENDED AGREEMENT

WATER SUPPLY AND SERVICE
SEWER AND RECLAIMED WATER
SUPPLY AND SERVICE
NATURAL TREATMENT SYSTEM SERVICE

THIS SECOND AMENDED AGREEMENT is made as of the 28th day of August, 2006, by and between the CITY OF ORANGE, a California municipal corporation ("ORANGE"), and the IRVINE RANCH WATER DISTRICT, a California water district formed and existing pursuant to Section 34000 et seq. of the California water code ("IRWD").

RECITALS

A. ORANGE and IRWD entered into an agreement dated November 5, 1984, entitled "Water Supply and Service Agreement," for the purpose of creating a joint water supply arrangement for that certain real property (the "Property") located in Orange County, California, consisting of approximately 9,300 acres, as depicted on Exhibit "A" attached hereto. The November 5, 1984 agreement was amended and superseded in its entirety by the November 21, 1994 agreement between the parties entitled "First Amended Water Supply and Service Agreement and Sewer and Reclaimed Water Supply and Service Agreement" (the "Existing Agreement"). The Existing Agreement provided for a modified joint water supply arrangement and also incorporated arrangements concerning sewer and nonpotable water service to the Property.

B. It continues to be the parties' intent to provide for separate service and supply arrangements to apply to the areas depicted on Exhibit "B" as "Santiago Hills I" (comprising the portion of the Property referred to in the Existing Agreement as the "Developed Area") and in Exhibit "C" as "Santiago Hills II," "East Orange Area I," and "East Orange Area II."

C. It is acknowledged that Santiago Hills I essentially comprises the portions of the Property which are within ORANGE's 736 foot elevation zone (such 736 Zone is equivalent to IRWD's Zone 5), for water service purposes, and the portions of the Property which are within the Consolidated Revenue Area of the Orange County Sanitation District ("OCSD") (successor to the County Sanitation Districts of Orange County), for sewer service purposes. Similarly, it is acknowledged that Santiago Hills II, East Orange Area I and East Orange Area II are within elevation zones higher than the ORANGE 736 Zone (IRWD's Zone 5) for water service purposes and are within (or subject to IRWD-SCWD consolidation, will be within) Revenue Area 14 of OCSD for sewer service purposes. The definitions of "Property," "Santiago Hills I," "Santiago Hills II," "East Orange Area I," "East Orange Area II," "Future Development

Area" and "SHII/East Orange Area" and Exhibits B and C notwithstanding, it is intended that the Joint Engineering and Management Committee described herein may make minor adjustments between the respective areas where appropriate to achieve efficiency in service arrangements.

D. Existing subarea service master planning for the Future Development Area has proceeded and reflects various changes to development and service plans that have occurred since the date of the Existing Agreement. In response to these changes, as well as the need to modify the Existing Agreement to address areas adjacent to the Future Development Area that have become included in IRWD through consolidation, the parties desire to implement the modified joint water, sewer and nonpotable water supply and service arrangements and natural treatment system service arrangements set forth herein, in order to maintain the most effective use of the parties' sources of supply, facilities, financing and service and payment structure in the provision of services to the ultimate consumer.

E. The parties intend that this Second Amended Agreement (the "Agreement") shall supersede the Existing Agreement in its entirety.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and of the following mutual covenants and conditions, IRWD and ORANGE agree as follows:

1. Design Criteria. The parties acknowledge that design criteria for developing and implementing the provision of water, sewer, nonpotable water and natural treatment system service to the "SHII/East Orange Area" will be as established by IRWD through its subarea master planning. The "SHII/East Orange Area" is depicted on Exhibit "C".

2. Potable Water, Sewer, Nonpotable Water and Natural Treatment System Service for SHII/East Orange Area.

a. Potable Water: IRWD will provide all retail and wholesale potable water service to the SHII/East OrangeArea.

b. Nonpotable Water: IRWD will provide all nonpotable water service to the SHII/East OrangeArea, to the extent the provision of such service to the SHII/East Orange Area is determined to be feasible by IRWD. Portions of the on-site water systems in the SHII/East Orange Area may be designed with dual-system capability so that it will be possible in the future to provide potable or nonpotable water for irrigation of parks, greenbelts, golf courses and such other uses as may be approved from time to time under applicable laws and regulations.

c. Sewage Collection, Treatment, and Disposal: The SHII/East Orange Area is tributary to and will receive service from IRWD by means of IRWD's Harvard Avenue Trunk Sewer ("HATS"). The collection systems within the SHII/East Orange Area shall be designed to deliver sewage to HATS. The SHII/East Orange Area is within Revenue Area 14 of

OCSD, such that the SHII/East Orange Area may be served by the facilities of OCSD in addition to those of IRWD. Agreements among IRWD and OCSD provide that IRWD shall be the local sewering agency within Revenue Area 14.

d. Natural Treatment System (NTS): IRWD will own, operate and maintain six NTS water quality basin facilities on four sites in Santiago Hills II and East Orange Area I. In addition, IRWD will conduct periodic inspections, and may perform maintenance and repairs subject to reimbursement by the homeowners' association in the event the association fails to perform the same, on up to 20 water quality basin facilities to be owned by homeowners' associations in Santiago Hills II and East Orange Area.

e. General: Subject to Section 8(b), IRWD will provide the retail services described in this Section under its rules and regulations applicable to each respective class of customers.

f. Re-Opener: In the event IRWD fails to provide adequate water, sewer, and non-potable water service to the SHII/East Orange Area consistent with applicable regulations, laws and industry standards, ORANGE shall notify IRWD in writing of the inadequacy. IRWD agrees to correct the inadequacy within 180 days of such notice or explain why the service level is consistent with applicable regulations, laws and industry standards. If IRWD fails to make the correction or provide such explanation, ORANGE may initiate negotiations to amend this Agreement such that ORANGE would become the service provider for the SHII/East Orange Area.

3. Potable Water, Sewer, and Nonpotable Water Service to Santiago Hills I.

a. Potable Water, Sewer, and Nonpotable Water Service: ORANGE will provide all retail and wholesale potable water and sewer service and all retail nonpotable water service to Santiago Hills I.

b. Nonpotable Water Supply: IRWD will provide all wholesale nonpotable water service to Santiago Hills I, to the extent the provision of such service to Santiago Hills I is determined to be feasible by IRWD.

c. General: ORANGE will provide the retail services described in this Section under its rules and regulations applicable to each respective class of customers.

4. Services to Other Areas:

a. Irvine Regional Park: The property owned by the County of Orange and known as "Irvine Regional Park" shall not be deemed included in Santiago Hills I or the Property for purposes of this Agreement. Potable water service to Irvine Regional Park shall be provided by ORANGE, and sewer service and nonpotable water service to Irvine Regional Park shall be provided by IRWD.

b. Nonpotable Water Service to Other Areas of ORANGE: IRWD agrees to cooperate with ORANGE to develop a source of nonpotable water (reclaimed or untreated water) for retail distribution within areas of ORANGE not addressed in Sections 2, 3 or 4(a) hereof.

5. Mutual Consent for Service

Each of the parties hereby consents to service by the other within the consenting party's territory in accordance with this agreement.

6. Customer Service

Notwithstanding the above-described service structure or the provisions of Section 7, the parties agree that the service structure is not intended to delay or encumber response to customer matters involving the parties' systems. Accordingly, the party first contacted by a customer concerning, or otherwise learning of, a repair or other facilities situation needing attention will determine as soon as reasonably possible which party is the responsible party for the service requested and, if such contacted party is not the responsible party, will immediately inform the responsible party. If the party contacted deems the service request to be of such an emergency nature that the time taken in determining who is the responsible party and/or informing that party may be detrimental to the public's health, safety or welfare, then the contacted party may perform the necessary work or otherwise respond. If the responding party is not the party responsible under the service structure or Section 7, the responding party will seek reimbursement of the costs incurred in responding, and the responsible party shall promptly reimburse such amount within 30 days of receipt of an invoice from the responsible party. Any disagreement regarding the amount of or entitlement to such reimbursement shall be resolved by the parties pursuant to Section 10.

7. Financing, Construction and Ownership of Facilities.

a. SHII/East Orange Area: IRWD will finance and construct (or cause to be donated by the developer or property owner), and will own, operate and maintain, all facilities (other than regional water wholesaler or OCSD facilities) for provision of potable water, sewage collection, treatment and disposal, and nonpotable water service to the SHII/East Orange Area. IRWD's financing will be provided through its Improvement District Nos. 105 and 250, and Nos.153 and 253, as applicable.

b. Santiago Hills I: ORANGE will own, operate and maintain all facilities (other than regional water wholesaler or OCSD facilities) for provision of potable water and sewage collection, treatment and disposal service to Santiago Hills I; IRWD has financed and constructed (or caused to be donated by the developer) a portion of such water facilities through its Improvement District No. 105. IRWD will finance and construct (or cause to be donated by the developer or property owner), and will own, operate and maintain the wholesale

and retail nonpotable water facilities to supply nonpotable water to Santiago Hills I. IRWD's financing of such nonpotable water facilities will be provided through its Improvement District No. 252. IRWD will use the existing tax receipts (ad valorem assessments levied for debt service on bonds of Improvement District No. 250) collected within Improvement District No. 252 to construct nonpotable water facilities or capacity therein serving only Santiago Hills I. IRWD will preserve and maintain its existing authority to collect ad valorem debt service taxes within Improvement District 252; provided no future taxes will be levied or collected by IRWD for Improvement District No. 252 without the explicit written consent of Orange. The subject non-potable facilities shall be constructed prior to issuance of the first Certificate of Occupancy issued by ORANGE in the Santiago Hills II development. If IRWD fails to construct the subject nonpotable facilities by the date of the first Certificate of Occupancy, then IRWD will refund the existing tax receipts.

c. Irrespective of facility ownership, all reasonable interconnections between ORANGE and IRWD facilities for operational efficiency and/or emergency purposes shall be allowed as determined by the Joint Engineering and Management Committee.

d. Design of all developer-donated facilities for potable water, sewage collection, non-potable water and natural treatment system service shall be in accordance with applicable design criteria of IRWD, and prior to construction thereof, ORANGE will require the developer to obtain IRWD's approval of the design. Following completion and prior to use of developer-donated facilities, ORANGE will require the developer to obtain IRWD's approval of the facilities.

8. Fees and Charges.

a. Connection Charges; Standby Charges; Taxes: IRWD will be entitled to collect all of its customary water and sewer connection charges from developers of the SHII/East OrangeArea. Prior to issuance of certificates of occupancy, ORANGE will require the receipt from IRWD of an occupancy release letter in the form attached as Exhibit "D", as evidence of the payment of such connection charges to IRWD. In addition, IRWD will be entitled to collect taxes (ad valorem assessments for debt service on bonds) from property owners within Improvement District Nos. 105, 250, 252, 153 and 253, as applicable, and also will be entitled to collect potable and nonpotable water and sewer standby charges from property owners within the SHII/East Orange Area. No general tax rate (except for such assessments for debt service and IRWD's share of the general 1% property tax levy) is to be imposed by IRWD on the ultimate water or sewer service consumer.

b. User Rates: The rates collected by IRWD for water (including natural treatment system), sewer and non-potable water service in the SHII/East Orange Area shall be set in a manner consistent with the principles used in setting rates generally applicable in IRWD under its rules and regulations applicable to all classes of customers. (For this purpose, "rates generally applicable in IRWD" shall mean rates that IRWD sets generally, plus applicable pumping surcharges based on actual cost of pumping, but shall not mean the rates determined

under special rate agreements governing all or portions of former service areas of water agencies that have become part of IRWD through reorganization). The foregoing notwithstanding, the cumulative total of IRWD water charges in the SHII/East Orange area, including fixed and water commodity charges but not including any pumping surcharges, sewer, natural treatment system, or non-potable water charges, for an average residential customer using the IRWD median amount of water ("Cumulative IRWD Charges") shall not exceed the cumulative total charges that would have been paid by an identical customer under the prevailing ORANGE water rate structure ("Cumulative Cap"). For purposes of making the foregoing comparison between the Cumulative IRWD Charges and the Cumulative Cap, the water charges for such average SHII/East Orange Area residential customer shall be aggregated for the most recently concluded IRWD billing period and all prior IRWD billing periods since the date of this Second Amended Agreement, using the applicable IRWD and ORANGE rate structures that were in effect during each such billing period. The ORANGE and IRWD water rates will be reviewed by the Joint Engineering and Management Committee as requested by ORANGE, but no more frequently than once per year. If the Committee finds that the Cumulative IRWD Charges have exceeded the Cumulative Cap, then prospective adjustments to the fixed and/or commodity water rates in the SHII/East Orange area will be applied by IRWD at the time of its next annual budget approval. Adjustments applied by IRWD to future fixed and/or commodity water charges shall be the sole method of bringing such charges back into conformance with the Cumulative Cap, and no retroactive adjustments or refunds for any period prior to adjustment will be required hereunder.

c. ORANGE Rates and Charges: ORANGE will not impose any connection charges or other rates and charges with respect to potable or nonpotable water service or sewer service to the SHII/East OrangeArea.

d. OCSD Fees: IRWD shall be responsible for collecting and remitting any OCSD fees in the SHII/East Orange Area and shall defend and indemnify ORANGE against any claims by OCSD made after the date hereof that fees due OCSD from the SHII/East Orange Area have not been paid.

e. Collection of Rates and Charges: IRWD may, as permitted by law and upon taking proceedings as appropriate, collect sewer rates and charges within the SHII/East Orange Area by means of property tax bills. IRWD agrees to coordinate with ORANGE to include ORANGE's fees for municipal services such as paramedic billing, trash collection and tree trimming, in IRWD's retail water service bills for the SHII/East Orange Area.

9. Annexations. a. ORANGE agrees not to oppose, or support any proposal inconsistent with, the annexation to Orange County Water District ("OCWD") of that portion of the SHII/East Orange area not currently within OCWD, for the purpose of supplying groundwater to the residents thereof.

b. If the Local Agency Formation Commission proposes a reorganization of the East Orange County Water District ("EOCWD") and ORANGE seeks to retain the portion

of the EOCWD service area that is currently within ORANGE's city limits, IRWD agrees not to oppose ORANGE's request or support any request inconsistent with ORANGE's request.

10. Joint Engineering and Management Committee.

The parties shall continue in existence the Joint Engineering Committee created under the Existing Agreement, hereby renamed the Joint Engineering and Management Committee (the "Joint Committee"), and shall each continue to appoint one representative and one alternate representative to the Joint Committee. The primary purpose of the Joint Committee shall be to facilitate communication between the parties and aid in the administration of this Agreement. The parties shall give full consideration to all recommendations of the Joint Committee. The Joint Committee shall meet periodically, but at least once a year, to perform such tasks as may be assigned to it by the parties from time to time, including, but not limited to, the following:

(a) Make minor adjustments between Santiago Hills I and the SHII/East Orange Area as may be necessary or appropriate from time to time to achieve the most efficient service arrangements based on facilities, system looping, continuity of neighborhoods, gravity flow and similar factors. Any such adjustments shall be depicted in addenda to Exhibits B and C or new exhibits which shall, upon approval by the parties, supersede such exhibits;

(b) Resolve disagreements pursuant to Section 6 this Agreement;

(c) Perform such other tasks as may be assigned by the parties hereto.

11. Groundwater Production. ORANGE and IRWD will review and evaluate cooperative groundwater production opportunities. Any municipal groundwater production wells operated by IRWD within the Sphere of Influence of ORANGE shall only serve water customers within the Sphere of Influence of ORANGE (to be determined on the basis of water accounting, showing no net export) unless otherwise authorized by ORANGE's prior written consent.

12. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original.

13. Modifications. This Agreement cannot be changed, amended, modified or supplemented except in writing signed by the parties hereto.

14. Entire Agreement. This Agreement and its exhibits constitute the entire agreement between the parties hereto pertaining to the subject matter hereof, and the final, complete and exclusive expression of the terms and conditions thereof. All prior agreements, representations, negotiations and understandings of the parties hereto, oral or written, express or implied, are hereby superseded and merged herein.

15. Notices. All notices and other communications given hereunder shall be

in writing and shall be delivered or mailed by registered or certified mail, return receipt requested, and postage prepaid, addressed as follows:

If to IRWD: IRVINE RANCH WATER DISTRICT
ATTENTION: GENERAL MANAGER
P.O. Box 57000
15600 Sand Canyon Avenue
Irvine, California 92619-7000

If to ORANGE: CITY OF ORANGE
ATTENTION: WATER MANAGER
189 South Water
Orange, California 92666

16. Term of Agreement. This Agreement shall continue in effect until terminated by mutual agreement of the parties.

17. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

18. Attorneys' Fees. In the event any declaratory or other legal or equitable action is instituted between ORANGE and IRWD in connection with this Agreement, then the prevailing party shall be entitled to recover from the losing party all of its costs and expenses, including court costs and reasonable attorneys' fees.

19. Exhibits. The following exhibits are incorporated into this Agreement by this reference:

Exhibit "A" - Property [Recital A]
Exhibit "B" - Santiago Hills I [Recital B]
Exhibit "C" - SHII/East Orange Area [Recital B]
Exhibit "D" - Form of Occupancy Release [Section 8a]

The parties hereto cause this Agreement to be executed on the day and year first above written.

City of Orange

City of orange

BY _____
MAYOR

Mark A. Murphy

ATTEST:

_____
CLERK

Mary E. Murphy

Irvine Ranch Water District

BY _____
PRESIDENT

ATTEST:

_____
SECRETARY

APPROVED AS TO FORM:

_____
City Attorney

_____
Attorney for Irvine Ranch Water

District

jca/ 031406

EXHIBITS

A: Property
B: Santiago Hills I
C: SHII/East OrangeArea
D: Form of Occupancy Release

EXHIBIT A

DEPICTION OF THE PROPERTY

EXHIBIT "A"

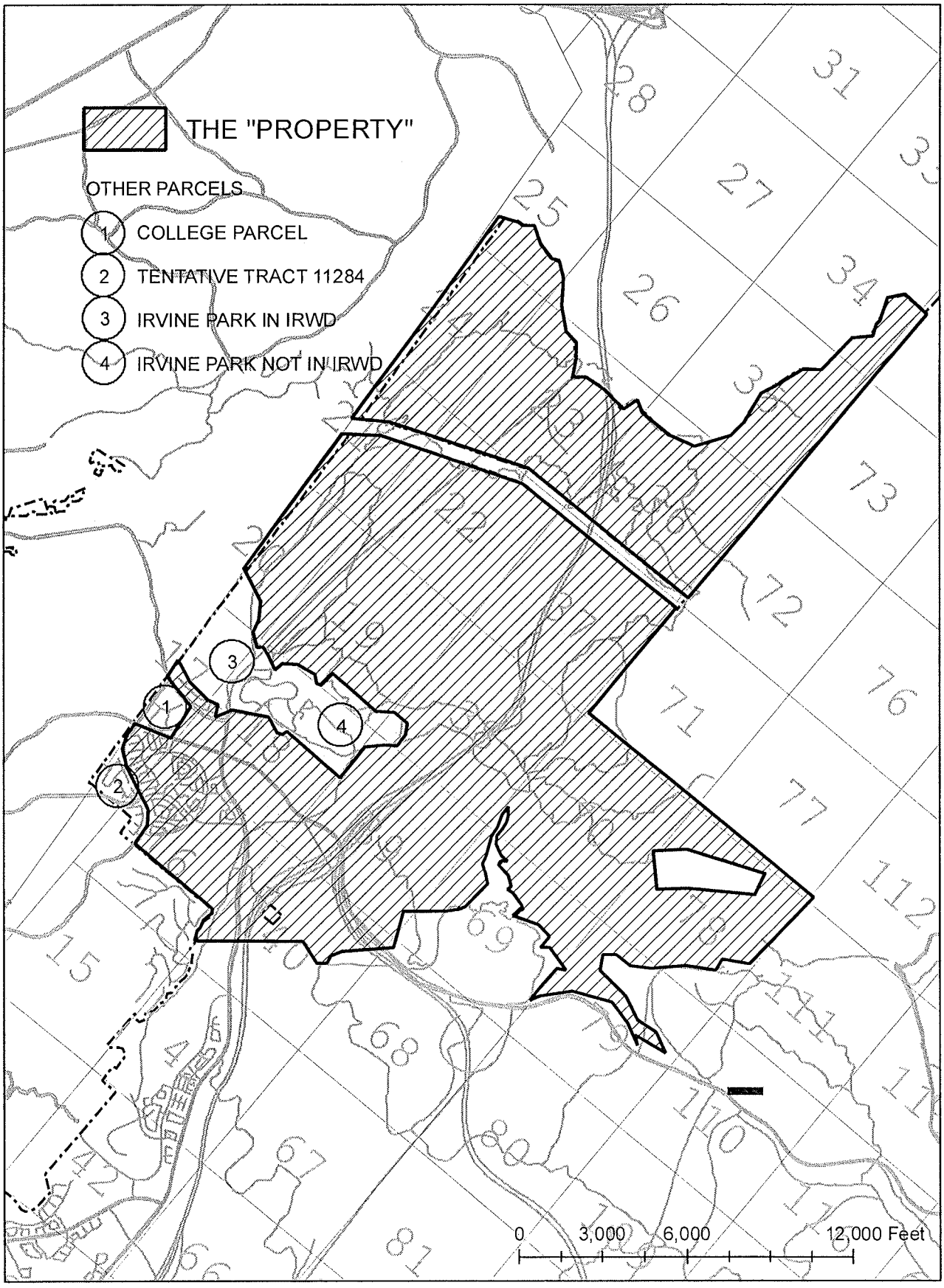

THE "PROPERTY"
OTHER PARCELS
1 COLLEGE PARCEL
2 TENTATIVE TRACT 11284
3 IRVINE PARK IN IRWD
4 IRVINE PARK NOT IN IRWD
0 3,000 6,000 12,000 Feet

EXHIBIT B

DEPICTION OF THE SANTIAGO HILLS I

EXHIBIT "B"

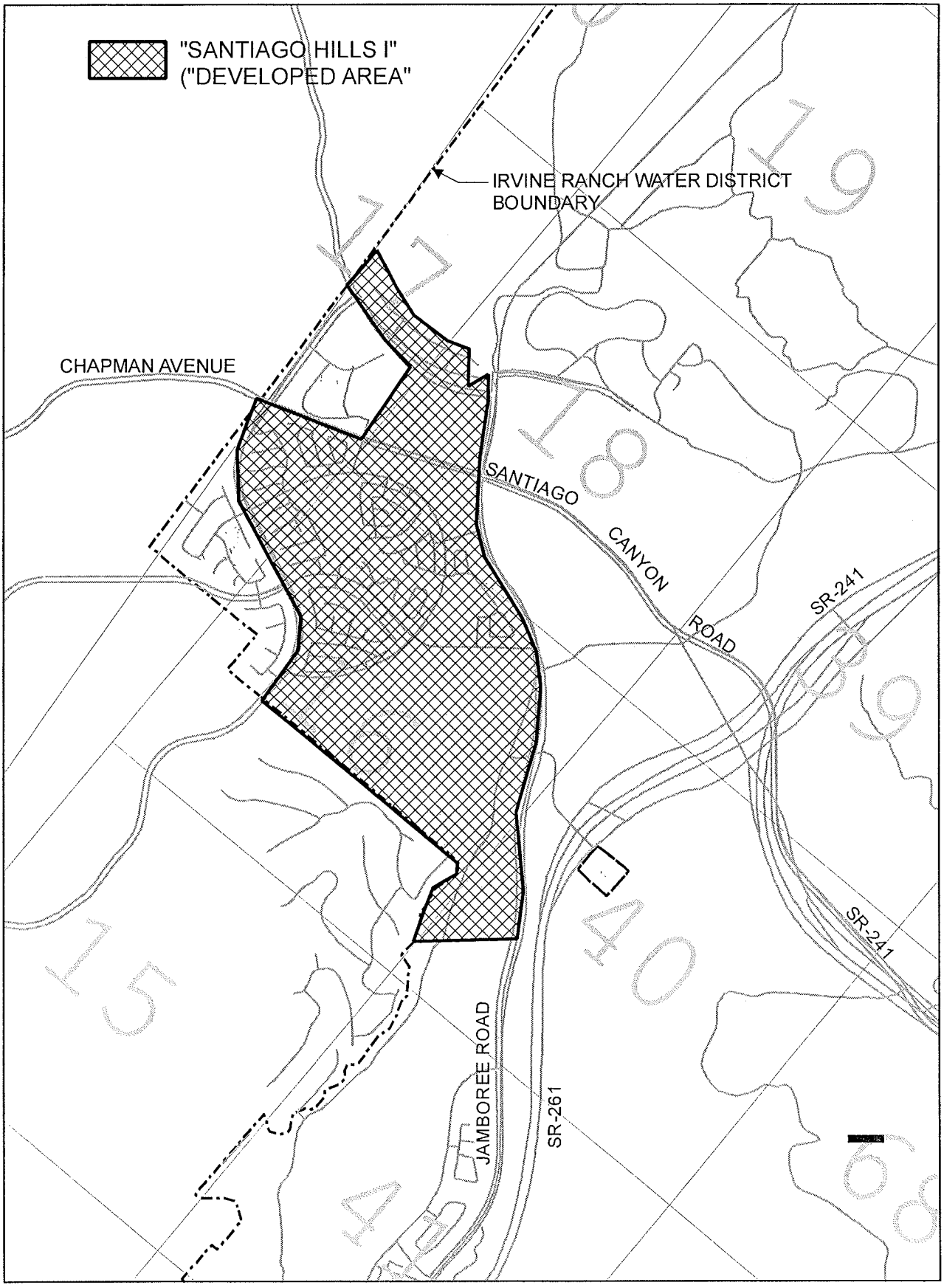

"SANTIAGO HILLS I"
("DEVELOPED AREA"
IRVINE RANCH WATER DISTRICT
BOUNDARY
CHAPMAN AVENUE
SANTIAGO
CANYON
ROAD
SR-241
SR-241
JAMBOREE ROAD
SR-261

EXHIBIT C

DEPICTION OF THE SH II/EAST ORANGE

EXHIBIT "C"

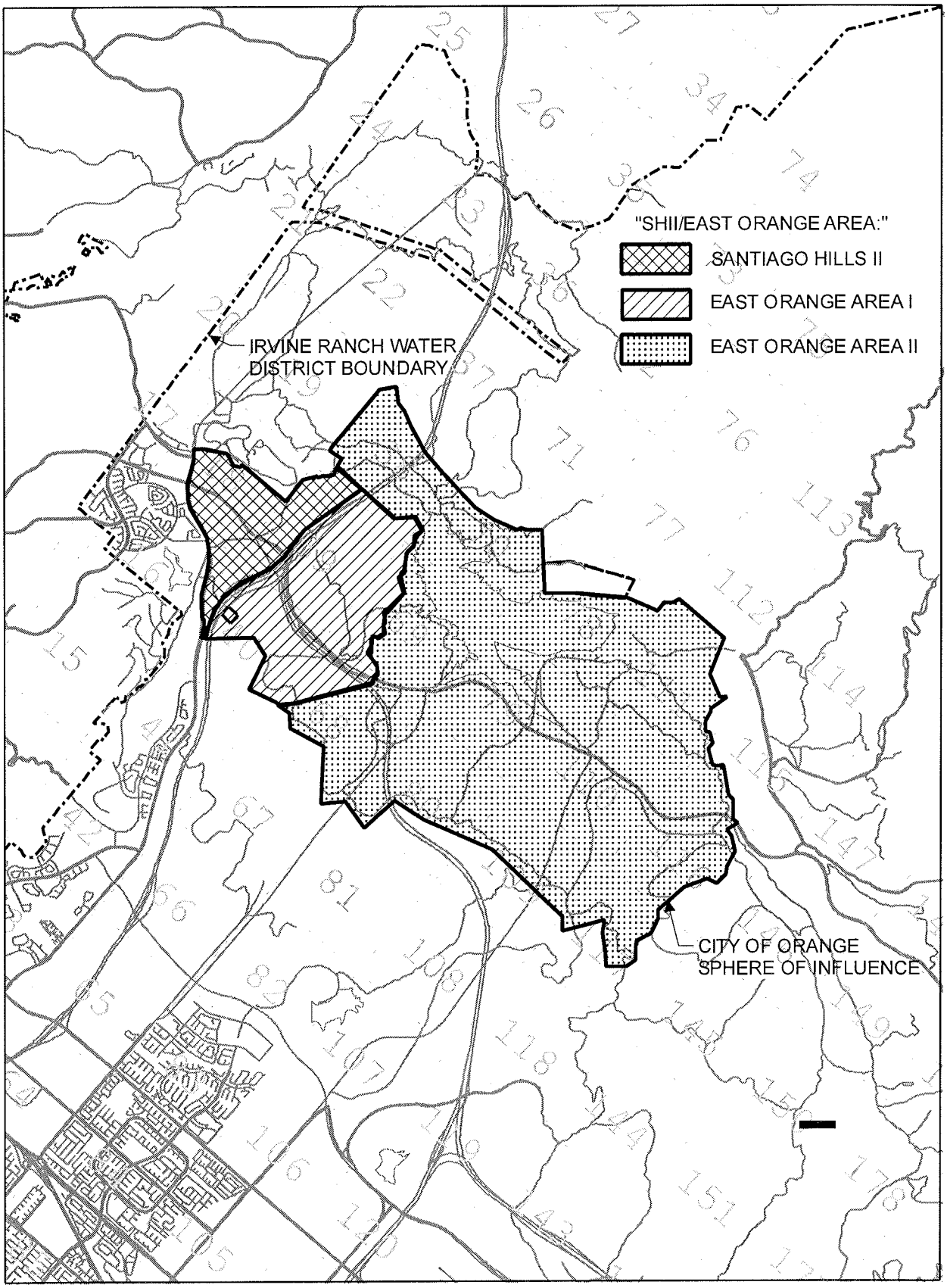

"SHII/EAST ORANGE AREA:"
SANTIAGO HILLS II
EAST ORANGE AREA I
EAST ORANGE AREA II
IRVINE RANCH WATER DISTRICT BOUNDARY
CITY OF ORANGE SPHERE OF INFLUENCE

EXHIBIT D

FORM OF OCCUPANCY RELEASE

IRVINE RANCH WATER DISTRICT 15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92619-7000 (949) 453-5300

Date

MST00001
SD1.
Ref. Code:

Name
Building Official
City of Orange
300 East Chapman Avenue
Orange, CA 92866

Subject: Release for Residential Use

Dear Mr. Nguyen:

Irvine Ranch Water District hereby releases Lot Nos. _____ of Tract No. _____ for the following:

RELEASE FOR OCCUPANCY - Sewage can be accepted in sewer system. Water meter has been installed by developer.

Yours truly,

Mike Jack
Construction Inspection Manager

MJ/

cc: Developer -
IRWD Inspector -
IRWD Developmental Services
IRWD Customer Service (2)
IRWD Greg Springman FAX# 949-476-2854
Chron

Appendix B

LAFCO Annexation Agreement

Item 7b

Orange Park Acres Annexation to the Irvine Ranch Water District (DA 07-26)

December 19, 2007

TO: Local Agency Formation Commission

FROM: Executive Officer

SUBJECT: Proposed "Irvine Ranch Water District Annexation of Orange Park Acres Mutual Water Company (DA 07-26)"

PROPOSAL:

The Irvine Ranch Water District (IRWD) Board has adopted a resolution to amend the District's sphere of influence and concurrently annex the 646-acre service area of the Orange Park Acres Mutual Water Company (OPAMWC). The purpose of the annexation is to provide water and ultimately local sewer service to the residents of Orange Park Acres.

The unincorporated Orange Park Acres community is generally located north of Chapman Avenue, south and west of Jamboree Road, and east of Cannon Street. (Exhibit A, attached to this report, is a map of the proposed annexation area.) The area is characterized by equestrian-oriented, single family homes.

In August of 2006 the OPAMWC Board circulated a Request for Information to several agencies, including IRWD, the City of Orange and Golden State Water Company, regarding interest in merging with OPAMWC. The OPAMWC Board wanted to determine if OPAMWC's customers might receive more efficient and cost-effective service through consolidation with a larger agency. Based on the responses received, the OPAMWC Board decided to enter into negotiations with IRWD.

While a relatively simple annexation, the proposal is different from other annexations because it involves a mutual water company. A general overview of mutual water companies is included in subsequent paragraphs followed by a discussion of water and sewer issues in Orange Park Acres.

General Overview of Mutual Water Companies

Mutual water companies have been critical in the development of California. They were typically formed in isolated areas where access to larger public water systems, such as special districts and cities, was not available. They are still formed today, usually by developers in connection with subdivisions. For example in Riverside County several mutual water companies were formed in the past few years to provide water to golf courses. As the surrounding area develops, those buying into the development also pay for their share in the mutual water company. Orange County has, to the best of the LAFCO staff's knowledge, four mutual water companies.

Mutual water companies are formed under either the General Corporation Law or Non-Profit Corporation Law and are private corporations. Shares are issued to customers of the water company who are usually land owners within the boundaries of the mutual water company. The landowners give the mutual water company their water rights (if any) and provide revenue, through rates, to secure and distribute water to their land. [1]

Mutual water companies, as private corporations, are not regulated by the Public Utilities Commission (PUC), LAFCO or other public agencies. The PUC can assert jurisdiction, however, if the water company serves water to other than its shareholders. The Department of Corporations and Department of Real Estate gets involved if additional shares of stock in the mutual water company are issued.

Mutual water companies are at a financial disadvantage compared to public agencies due to an inability to receive or levy property taxes and to a lack of access for some funding. Since the revenue comes from the shareholders, it's not unusual for mutual water companies to have facilities in need of repair since the cost of replacing or rehabilitating the system may be cost-prohibitive to the mutual's shareholders.

Therefore, the challenge for public agencies acquiring such systems is they are usually in need of substantial capital replacement funding. Attempting to isolate such costs to the former service area of the mutual raises the same cost-prohibitive issues as faced by the mutual water company although a public agency has more access to public grant funds or other public funding.

Another challenge is the process of acquiring a mutual water company. Since it is a private corporation, a public entity must complete an analysis of the mutual water company system to determine a fair and reasonable value per share. Then a formal offer is made to the existing shareholders; a simple majority of existing shareholders is needed for approval..

Annexation and Water Service

The OPAMWC was incorporated on March 13, 1929. OPAMWC provides water service to approximately 530 customers located within 646 acres, delivering an average of 800 acre feet of potable water annually. Average monthly customer demand is approximately 5,700 cubic feet. The water system consists of approximately 15 miles of pipelines, a single well, a one-million gallon storage reservoir, and five small pump stations. Much of the water infrastructure has reached the end of its useful life and needs to be replaced now or in the near future. Water rates are among the highest in the county. The combination of high user rates and the need for significant capital upgrades were the primary impetus for the OPAMAC Board of Directors to consider consolidation with a larger agency.

The Company is shareholder-owned with approximately 722 shares of stock outstanding that were issued in 1929. In addition, there are approximately 170 shares of stock that were issued in

[1] Conversation with John Schatz, General Manager of Santa Margarita Water District

1962 to fund a planned expansion that never materialized. An affirmative vote by a simple majority of the shareholders will be required to successfully merge the OPAMWC into IRWD.

A pre-annexation agreement (see Exhibit B. attached) was executed by OPAMWC and IRWD which incorporates terms and conditions for a transfer of OPAMWC's responsibilities and liabilities to IRWD. The agreement recognizes five key components which are summarized below:

(1) Recognition of Equity: IRWD has established an "acquisition balance" to ensure equity to current customers of both IRWD and OPAMWC. The acquisition balance consists of a buy-in by current OPAMWC customers of IRWD's water infrastructure and consists of costs to upgrade and/or replace existing OPAMCW water infrastructure. Funding to retire the acquisition balance will come from the difference in revenues between the reduced water rates OPAMWC customers will immediately receive and the standard IRWD water rates. Upon retirement of the acquisition balance, user rates in the OPAMWC service area will have the same rates as the rest of IRWD's customers. IRWD estimates approximately eight (8) years to retire the acquisition balance for OPAMCW.

(2) Rates: Upon the effective date of annexation, water rates in the OPAMWC service area will be reduced by 20%. Overall, a typical residential customer in the OPAMWC service area will see a reduction in monthly charges from approximately $160.00 to $128.00 each month or savings of $384.00 per year.

(3) Governance and Local Representation: The executed agreement provides for the formation of a Management Advisory Committee comprised of up to three of the current OPAMWC Board members. Under the terms of the agreement, the Management Advisory Committee will remain as a subcommittee of the IRWD Board of Directors through the retirement of the acquisition balance and completion of specific infrastructure upgrades.

One feature of the agreement (Section 10.9) involves LAFCO. If a dispute arises in the future with customers in the Orange Park Acres area, the agreement lists a three level dispute resolution procedure. The dispute is reviewed by the General Manager and if resolution is not achieved, then the dispute is heard by the IRWD Board. If no resolution is reached at the Board level, the item is sent to LAFCO for a binding decision.

(4) System Integration and Levels of Service: Under the terms of the agreement. OPAMWC customers will have access to additional water supply reliability, substantial emergency response capabilities, preventive maintenance programs, enhanced customer service capabilities, and state-of-the-art computing and information technologies. In addition, the OPA service area will benefit from a number of significant water improvements to its water infrastructure. Major improvements include:

- A new 6,600 linear foot 16" transmission main built in Chapman Avenue
- Removal and abandonment of the OPAMWC 1 million gallon storage tank
- Rehabilitation of the existing well

- Replacement of the 16" well transmission line in Bond Avenue with a new line rated for higher pressure
- Replacement of approximately 5,300 feet of 1927 steel pipe
- Installation of two Pressure Reducing Stations to equalize pressures throughout the system
- Possible abandonment of four the five existing pump stations due to the increased pressure from IRWD's Zone 5 reservoir

(5) Community Issues and Involvement: Terms in the agreement recognize the ongoing role of the Orange Park Acres Homeowner's Association as the central representative for the interest of OPAMWC customers.

Annexation and Sewer Service

The proposed annexation to IRWD would also address long-standing issues of sewer service provision. A 2003 septic system study completed for the County of Orange in 2003 found 84% of all homes (or approximately 332 residences) in Orange Park Acres are on septic. The ongoing use of septic tanks presents both public health and water quality concerns, as these systems are prone to failure for a variety of reasons (i.e., lack of maintenance, age, root intrusion from landscaping, etc.). Continued use of septic systems makes the area highly susceptible to groundwater contamination and urban runoff.

Previously when a property owner applied for a building permit in Orange Park Acres, they were required to connect to a public sewer system. This involved annexing to the Orange County Sanitation District (OCSD). The property owners were required to pay OCSD and LAFCO annexation fees as well as the cost for construction of sewer mains. In one case, the cost of construction of the main sewer line was approximately $300,000 for 1500' of line. Property owners financing the construction could be reimbursed as other residents hooked into the main line,

However property owners had more hurdles to overcome than just financing. OCSD provides regional collection and treatment and, while it provides some local sewer collection, it has consistently stated it will not provide additional local sewer service. The most logical provider of local sewer service in Orange Park Acres was the City of Orange.

Residents generally opposed annexation to the City of Orange. However since the mid 1990s the City, in the interests of good government and efficient service provision, agreed to provide local sewer service outside its corporate boundaries through out-of-area service agreements (OASA) with individual property owners. The OASAs, in addition to specifying reimbursement to the property owner and dedication of the lines, also requires that the property owner not oppose annexation to the City. But neither the City nor the residents initiated any subsequent annexations.

In some instances, the City of Orange accepted the dedication of the completed lines and didn't in other areas. The City could maintain lines within their boundaries but did not have an agreement with the County of Orange to maintain lines in the County. Thus the City could not

issue permits to connect to the sewer but presumably could not respond to problems/repairs. Technically some of the sewer lines were private, some were City lines, some were OCSD and the status of others unknown. Within the last year the City of Orange stated it would no longer provide sewer service outside its boundaries due to these legal and financial issues.

By IRWD providing local sewer service (through an improvement area) these sewer issues can be addressed; IRWD would then become the local sewer service provider and a clear and coherent process for public sewer service could be implemented. It is expected that IRWD would establish a two tiered approach to the sewer issues in Orange Park Acres. In general, IRWD would most likely separate sewer issues into the short-term acute issues and the long-term master plan/financing issues. IRWD would try to resolve the short-term, acute issues on a case-by-case basis after the effective date of the annexation. The long-term sewer master plan would require a thorough engineering study, meetings with the community and acceptance by the community of financing obligations, if they so choose. This could take some time but would ensure the community's participation in and acceptance of any solutions.

In addition upon annexation IRWD could propose purchasing all the sewers owned by the City of Orange in the unincorporated area at a replacement value depreciated for use and could also look at acquiring other local sewers that were constructed under some reimbursement/out-of-area service agreement with the City. IRWD could then take full responsibility for all operation and maintenance of the sewers acquired by IRWD and could bill customers monthly for their use per the agency's standard practice.

Portions of the Orange Park Acres community are not in the boundaries of the OCSD. But OCSD has submitted an application to LAFCO for annexation of the remainder of the area and it is expected that the Commission will consider that annexation at their January 9th, 2008 meeting. After annexation to OCSD, residents will work with IRWD to ultimately receive local sewer service.

City of Orange

Groundwater is increasingly important in Orange County and concerns were expressed by the City of Orange regarding the pumping and use of groundwater in the annexation area. In order to coordinate groundwater production, monitoring and the mitigation of impacts from new wells, IRWD and the City of Orange have agreed to establish a Joint Groundwater Engineering and Management Committee. Each agency shall appoint one representative and one alternate representative to the Joint Committee. The primary purpose of the Joint Committee shall be to facilitate communication between IRWD and the City of Orange and to cooperatively monitor and evaluate groundwater production and distribution activities in Orange Park Acres and in the East Orange area. The Committee shall coordinate its activities and recommendations with the Orange County Water District (OCWD) and shall request OCWD's participation. The Joint Committee shall meet at least once a year and its charges shall include but not be limited to, the following:

- Monitoring of groundwater levels and production
- Monitoring of water quality

- Reviewing any proposed IRWD and City of Orange well sites .
- Development of mitigation measures for IRWD and City of Orange wells
- Allocation of cost of groundwater mitigation measures.
- Development of programs to augment groundwater production

CONCLUSION

IRWD will extend a buyout offer to the shareholders of the OPAMWA. In the event that IRWD does not obtain a simple majority of the shareholder votes, the OPAMWA would continue to provide water service and the proposed annexation would not be recorded. LAFCO staff is recommending that the effective date be the date of recordation; if the acquisition of the OPAMWC by IRWD is not successful, the annexation would not be recorded.

Creation of an improvement area for IRWD to provide local sewer service is also requested and has also been included as a term and condition. With the potential annexation of the remaining portions of Orange Park Acres to OCSD expected at the January 2008 LAFCO meeting, residents will also be able to receive local sewer service from IRWD if requested. The two annexations will save residents annexation fees, provide a clear process for receiving sewer service and will protect water quality in the area.

This proposal is supported by both the IRWD and OPAMWC Boards of Directors. Both parties concur that the proposal, if implemented, will produce efficiencies in service delivery and will benefit the residents and ratepayers of each district. The primary objective of the proposed annexation is to maximize economic and operational efficiencies while maintaining equity to the ratepayers and property owners in each district. Annexation of OPA by IRWD will result in a significant reduction to current OPA water rates and charges without negative impacts to current IRWD customers. It will also provide for more diverse and reliable water and sewer service provision to OPA, greater operational flexibility and reliability, and enhanced emergency preparedness. Participation by members of OPA's current Board in a post-annexation Management Advisory Committee will provide local participation in decision making.

ENVIRONMENTAL REVIEW

As lead agency, the Irvine Ranch Water District has determined that the proposed annexation is categorically exempt from the California Environmental Quality Act (Class 1, 2, 3 and 20).

PROPERTY TAX EXCHANGE

No property tax exchange will occur as a result of this proposal pursuant to the Master Property Tax Agreement adopted by the Board of Supervisors for enterprise special district reorganization proposals.

RECOMMENDATIONS

Staff recommends that the Commission approve the proposed change to the Irvine Ranch Water District sphere of influence to include the Orange Park Acres Municipal Water Company territory and concurrently annex the territory into Irvine Ranch Water District. The proposed

action is contingent on a successful buyout of existing OPAMWC shareholders by IRWD. Specifically, staff recommends that the Commission take the following actions:

1. Adopt the Statement of Determinations for the proposed IRWD sphere of influence change pursuant to Government Code Section 56425 (Exhibit D).

2. Adopt the resolution approving the sphere of influence change for IRWD to include the OPAMWC service area and concurrently annexing the same territory into IRWD subject to the terms and condition contained therein.

Respectfully submitted,

JOYCE CROSTHWAITE

Exhibits:
- A. Location Map
- B. Pre-annexation agreement – IRWD and OPAMWC
- C. MOU – IRWD and City of Orange
- D. Statement of Determinations – Sphere of Influence Change
- E. LAFCO Resolution

Exhibit B

RESOLUTION NO. 2007-35

RESOLUTION OF THE BOARD OF DIRECTORS OF THE IRVINE RANCH WATER DISTRICT MAKING APPLICATION TO THE LOCAL AGENCY FORMATION COMMISSION FOR THE ANNEXATION OF TERRITORY (ANNEXATION NO. 28 TO IRVINE RANCH WATER DISTRICT)

WHEREAS, the Orange Park Acres Mutual Water Company ("OPAMWC") provides water service to the service area generally depicted on the map attached hereto and incorporated by reference as Exhibit "A;" and

WHEREAS, the governing boards of OPAMWC and the Irvine Ranch Water District ("IRWD"), based on an evaluation of efficiencies in service delivery, have determined that it would be in the best interest of their respective customers and property owners for IRWD to acquire and absorb the water system of OPAMWC; and

WHEREAS, IRWD and OPAMWC have developed and entered into an Agreement For Acquisition and Annexation ("Agreement"), a copy of which is attached hereto as Exhibit "B", setting forth the terms and conditions of the merger of OPAMWC into a California limited liability company controlled by IRWD and the completion of proceedings for the annexation of the OPAMWC service area into IRWD; and

WHEREAS, the Agreement will provide for measures to assure continuity and transitional representation of the former OPAMWC service area, to maximize economic and operational efficiencies to the extent possible while maintaining equity to the ratepayers and property owners of the respective service territories, and for the interim operation of the former service territories of OPAMWC and IRWD as separate economic units to facilitate the satisfaction of equity considerations with the ultimate objective of a uniform rate structure; and

WHEREAS, OPAMWC and IRWD desire to obtain approval of such annexation by the Local Agency Formation Commission of Orange County ("LAFCO"), subject to the terms and conditions set forth in the Agreement; and

WHEREAS, subject to the successful completion of the merger and assumption of OPAMWC's water service by IRWD, it is contemplated that IRWD will make retail sewer service available if and to the extent desired by the inhabitants within all or portions of the annexed territory following the development of necessary institutional arrangements; and

WHEREAS, application for annexation can be made by adoption of a resolution of application to LAFCO by the legislative body of IRWD, pursuant to California Government Code section 56654 and other requirements set forth in the Cortese-Knox-Hertzberg Local Government Reorganization Act; and

WHEREAS, the territory of OPAMWC is outside the existing sphere of influence of IRWD; and

WHEREAS, acting as lead agency under the California Environmental Quality Act (CEQA), IRWD has determined that, with regard to water service, the annexation is categorically exempt from CEQA (Categorical Exemption Classes 1, 2, 3 and 20) as a project consisting of repairs and minor alterations of existing utility facilities involving negligible or no expansion of use; addition of safety and health protection devices in conjunction with existing facilities; demolition and removal of individual small structures; replacement or reconstruction of existing utility systems and facilities involving negligible or no expansion of capacity, where the new facilities will be located on the same sites as the facilities replaced; construction and location of limited numbers of new, small facilities or structures; and changes in organization of local agencies not changing the area in which existing powers are exercised, under the California Code of Regulations, Title 14, Article 19, Sections 15301, 15302, 15303 and 15320; and

WHEREAS, acting as lead agency under CEQA, IRWD has determined that, (1) if and to the extent sewer service is provided by IRWD within the Orange Park Acres area following the annexation of such area to IRWD, such action IRWD triggers an associated action, the annexation to OCSD of the portions of the subject sewer service area not currently within OCSD, to allow for wastewater to be treated using IRWD's capacity in OCSD's regional treatment facilities; (2) OCSD'S 1999 Strategic Plan and Collection System Improvement Plan describe improvements to the regional wastewater collection and treatment facilities to ensure capacity for wastewater flows in Northern and Central Orange County; (3) the 1999 Strategic Plan PEIR and the PEIR for the Collection System Improvement Plan analyze environmental impacts associated with construction and operation of the OCSD wastewater collection and treatment facilities; (4) an Addendum to the PEIR has been prepared to address the sewer service actions as described above; (5) regional capacity in OCSD's facilities sufficient to serve the subject area is contemplated in OCSD's strategic planning, and IRWD's use of its Revenue Area 14 capacity in OCSD's regional treatment facilities for flows from the subject annexation area can be more than offset by equivalent flows that IRWD can divert from area outside Revenue Area 14 and treat at IRWD's Michelson Water Reclamation Plant (MWRP) as a result of the expansion of MWRP presently underway the actions as described herein would not result in new significant environmental effects or a substantial increase in the severity of significant effects from those determined by the 1999 Strategic Plan PEIR certified by the OCSD Board of Directors on October 27, 1999 and by the PEIR for the Collection System Improvement Plan certified by the OCSD Board of Directors on August 22, 2007, there are no mitigation measures or alternatives that were previously found infeasible or that are considerably different from those analyzed in the EIR and that would substantially reduce one or more significant effects, and no additional mitigation measures or alternatives are required; and (6) appropriate CEQA proceedings will be conducted in the future to address any local sewer collection facilities as such time as sufficient information on such facilities is available;

NOW THEREFORE, the Board of Directors of IRWD DOES HEREBY RESOLVE,

DETERMINE and ORDER as follows:

Section 1. This resolution of application is submitted pursuant to Title 5, Division 3, Part 3 (commencing with section 56650) of the California Government Code.

Section 2. The Board of Directors of IRWD does hereby make the following described proposal for a change of organization and request that proceedings to approve such proposal be taken by LAFCO.

Section 3. The proposal consists of an annexation, hereby designated "Annexation No. 28 to the Irvine Ranch Water District" for purposes of the records of LAFCO.

Section 4. A map of the affected territory is attached as Exhibit "A" to this Resolution, and shall be subject to such changes therein as may be made to conform to the requirements of the County Surveyor. The affected territory generally consists of the service territory of OPAMWC. The affected territory is "inhabited territory" as defined in Government Code section 56046.

Section 5. This change of organization is proposed by the IRWD Board of Directors subject to each and all of the terms and conditions set forth in the Agreement, attached as Exhibit "B" hereto, and the separate, supplemental terms and conditions, attached as Exhibit "C" hereto, which shall be deemed incorporated herein by reference.

Section 6. This change of organization is proposed for the purpose of more efficiently providing water, sewer and reclaimed water services within the annexed area. Services will be provided pursuant to the Plan of Services, which, upon completion thereof in final form, shall be deemed incorporated herein by reference and shall be submitted to LAFCO to accompany this application.

Section 7. The following persons are hereby designated to receive notices in these proceedings for IRWD:

Douglas Reinhart, President
Paul Jones, General Manager.

Section 8. The proposal is inconsistent with the sphere of influence of IRWD. It is hereby requested that the IRWD sphere of influence be amended to include the annexed territory, in conjunction with the proposed change of organization.

Section 9. The Secretary is hereby authorized and directed to file a certified copy of this Resolution with the Executive Officer of LAFCO. The Secretary and each other officer, employee and agent of IRWD are hereby authorized and directed to supply any other supporting information as may be requested from IRWD's staff by LAFCO and to pay required fees and take such other actions as may be necessary to carry out the purposes of this Resolution.

ADOPTED, SIGNED AND APPROVED this 24 day of September 2007.

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

By

STATE OF CALIFORNIA)
) SS.
COUNTY OF ORANGE)

I, Leslie Bonkowski, Secretary of the Board of Directors of Irvine Ranch Water District, do hereby certify that the foregoing Resolution was duly adopted by the Board of Directors of said District at a regular meeting of said Board held on the 24th day of September, 2007, and that it was so adopted by the following vote:

AYES:	DIRECTORS	Swan, Matheis, Reinhart, and Miller
NOES:	DIRECTORS	None
ABSTAIN:	DIRECTORS	None
ABSENT:	DIRECTORS	Withers*

(SEAL)

Leslie Bonkowski
Secretary of IRVINE RANCH WATER DISTRICT and of the Board of Directors thereof

STATE OF CALIFORNIA)
) SS.
COUNTY OF ORANGE)

I, Leslie Bonkowski, Secretary of the Board of Directors of Irvine Ranch Water District, do hereby certify that the above and foregoing is a full, true and correct copy of Resolution No. 2007-35 of said Board, and that the same has not been amended or repealed.

Dated: 9/26/07

Leslie Bonkowski
Secretary of IRVINE RANCH WATER DISTRICT and of the Board of Directors thereof

(SEAL)

* Left at 6:25 p.m.

EXHIBIT "A"

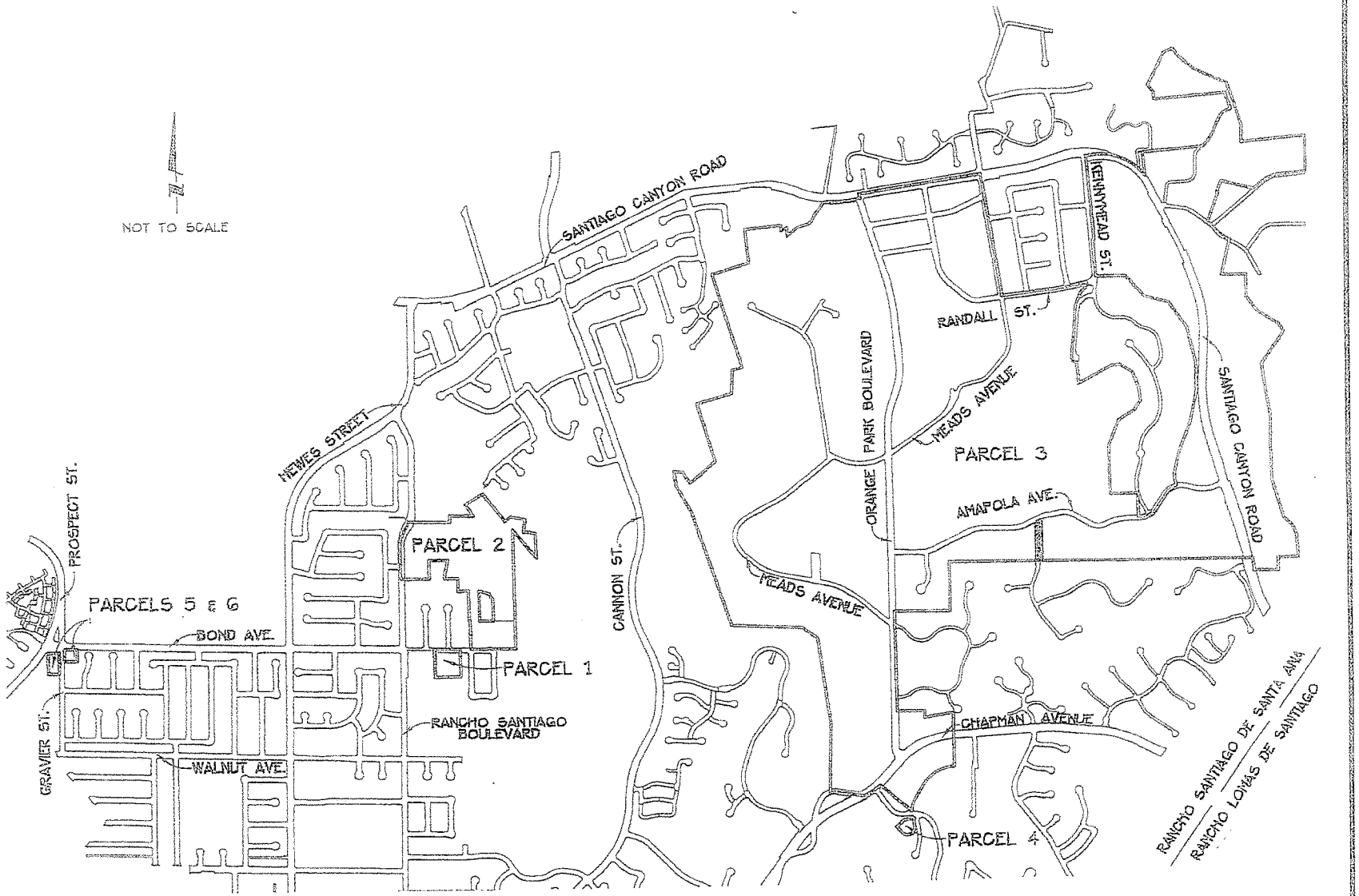

NOT TO SCALE
SANTIAGO CANYON ROAD
KENNYMEAD ST.
RANDALL ST.
MEADS AVENUE
PARCEL 3
ORANGE PARK BOULEVARD
SANTIAGO CANYON ROAD
AMAPOLA AVE.
NEWES STREET
PROSPECT ST.
PARCEL 2
CANNON ST.
PARCELS 5 & 6
BOND AVE.
PARCEL 1
MEADS AVENUE
RANCHO SANTIAGO BOULEVARD
GRAVIER ST.
WALNUT AVE.
CHAPMAN AVENUE
PARCEL 4
RANCHO SANTIAGO DE SANTA ANA
RANCHO LOMAS DE SANTIAGO

EXHIBIT "B"

09/18/07 Revision

AGREEMENT FOR ACQUISITION AND ANNEXATION

This AGREEMENT FOR ACQUISITION AND ANNEXATION ("Agreement") is entered into this 24th day of September, 2007, by and between ORANGE PARK ACRES MUTUAL WATER COMPANY, a California corporation ("**OPAMWC**"), and IRVINE RANCH WATER DISTRICT, a California water district organized and existing pursuant to Section 34000 *et seq.* of the California Water Code ("**IRWD**").

RECITALS:

A. OPAMWC provides water service to the service area generally depicted on Exhibit "A," which exhibit is attached hereto and incorporated herein by this reference.

B. The governing boards of OPAMWC and IRWD, based on an evaluation of efficiencies in service delivery, have determined that it would be in the best interest of their respective customers and property owners for IRWD to acquire and absorb the water system of OPAMWC. More particularly, the parties have determined to pursue the merger of OPAMWC into a California limited liability company to be formed by IRWD, proposed to be called the Irvine Ranch Water District Water Service Company LLC II ("**LLC II**"), together with the annexation of the OPAMWC service area into IRWD, all in accordance with the terms and provisions set forth in this Agreement.

C. It is the objective of the parties that the merger and annexation be accomplished in a manner that will maximize economic and operational efficiencies to the extent possible, while maintaining equity to the ratepayers and property owners of each party.

D. It is the intent of the parties that following the merger and annexation, customers within the former service territory of OPAMWC will ultimately be under the same water rate structure as other IRWD customers. For a transitional period, the former service territory of OPAMWC will be operated as a separate economic unit within IRWD's service area to facilitate the satisfaction of equity considerations as described in this Agreement, with the objective that the transitional period be as short as possible.

E. The parties desire to provide for measures to assure continuity and transitional representation of the former OPAMWC service area.

F. OPAMWC and IRWD desire to set forth proposed terms of the annexation, including but not limited to the terms of completing the merger, to be submitted by IRWD to the Local Agency Formation Commission of Orange County ("**LAFCO**").

NOW, THEREFORE, in consideration of the premises and the mutual agreements herein contained, the parties hereto agree as follows:

I. GENERAL

Section 1.1. Concurrent Merger and Annexation. It is the intent of the parties that this Agreement will provide for the company, operations and system of OPAMWC to become a part of IRWD through two parallel processes, the completion of each of which shall be conditioned upon the successful completion of the other as more particularly set forth herein: (A) the merger of OPAMWC into LLC II, and (B) an annexation to include OPAMWC's service territory within the jurisdictional boundary of IRWD.

Section 1.2. Effective Date. It is the further intent of the parties that the filing of the certificate of merger and the filing of LAFCO's certificate of completion of the annexation shall have the same effective date (the "**Effective Date**"). This Agreement contains provisions regarding matters to exist, occur or be performed prior to the Effective Date, as well as the commencement of water service by IRWD within the former OPAMWC service territory, water system upgrades and other matters herein contemplated to be carried out after the Effective Date in conjunction with such service. The Effective Date shall be the first date on which all of the following have occurred:

1.2.1 The satisfaction of all conditions, or waiver of all conditions and rights of termination, pursuant to Section 9.5;

1.2.2 The filing of the necessary certificates to complete the merger; and

1.2.3 The filing of LAFCO's certificate of completion of the annexation.

II. MERGER

Section 2.1. Merger Agreement. Subject to approval by OPAMWC's shareholders as required by law, including without limitation any shareholder approval that may have been obtained or initiated prior to the effective date of this Agreement, OPAMWC shall be merged with and into LLC II (the "**Merger**"). The Merger shall be implemented in accordance with a merger agreement between OPAMWC and LLC II in the form attached hereto as Exhibit "B," which exhibit is attached hereto and incorporated herein by this reference (the "**Merger Agreement** "). The Merger shall not become effective without the approval of the shareholders.

Section 2.2. Maintenance of LLC II. IRWD may maintain LLC II in existence for as long as IRWD deems appropriate and useful in accomplishing the objectives of this Agreement. IRWD may dissolve LLC II and/or may cause LLC II to transfer any property, rights, obligations or activities to IRWD or another IRWD subsidiary entity so that IRWD or such entity may carry out any of the functions of LLC II, and IRWD may use the below-described planning area and/or any other accounting mechanisms as IRWD deems necessary to carry out such functions within

IRWD, with or without the assistance of LLC II. Unless otherwise specified herein, it is intended that the merger process, application of water rate differentials, system improvements and other obligations of IRWD herein may be performed either by IRWD or LLC II or another IRWD subsidiary entity on IRWD's behalf, and performance of any obligation hereunder by any of the foregoing shall constitute performance by IRWD under this Agreement. OPAMWC agrees that the agreements, promises and representations made herein by OPAMWC to IRWD are also made for the benefit of, and may be relied upon by, LLC II and any such other IRWD successor entity.

Section 2.3. Cash-Out Payment for Stock. The parties agree that if all conditions to the Merger have been satisfied or waived, all OPAMWC shares will be canceled and paid for in cash as provided herein (in a so-called "cash out merger"). Pursuant to the Merger Agreement, the cash-out payment for the stock of OPAMWC shall be submitted for approval by the shareholders in the amount of $579.94 per share.

Section 2.4. Completion of the Merger. The necessary filings to complete the Merger will be effectuated by IRWD and OPAMWC during or as soon as possible after the approval of the Merger and the satisfaction or waiver of all conditions set forth in this Agreement, subject to compliance with requirements of California law applicable to mergers. Shares will become payable on the first business day following the Effective Date.

Section 2.5. Presentation of Shares. IRWD will specify the method for delivery of the shares with appropriate instruments of transfer. Payment will be made promptly by check. If IRWD so determines, payment may be made through an escrow agent or depositary, selected by IRWD and acceptable to OPAMWC. Prior to the Effective Date, OPAMWC will assist IRWD with information on the ownership of shares, the addresses of share owners and similar information necessary or useful in the processing of the share payments.

Section 2.6. Recordation; Out of Area Service. A copy of this Agreement or memorandum thereof may be recorded by IRWD, for the purpose of notifying future property owners within the OPAMWC service territory of the provisions of this Agreement. IRWD may require each customer within the OPAMWC service territory to acknowledge in writing the receipt of a copy of this Agreement or memorandum thereof as a condition of obtaining service from IRWD.

III. ANNEXATION

Section 3.1. Application. IRWD shall make application to LAFCO for the annexation of the OPAMWC service territory to IRWD, upon the terms and conditions constituting this Agreement (the "**Annexation**") and other terms and conditions as IRWD may specify that are not inconsistent herewith and do not create any additional burden that is not provided in this Agreement on the customers within Planning Area No. 156 (defined in Section 3.2). The application shall request that the terms and conditions of the annexation include the fixing of the effective date of the Annexation to be concurrent with the effective date of the Merger established by the filing of the certificate of merger. IRWD shall cause the preparation of a

survey and legal description of such territory meeting LAFCO's requirements and other applicable legal requirements.

Section 3.2. Planning Area No. 156. Effective upon the Effective Date, all of the service territory of the former OPAMWC shall be designated by IRWD as a water planning area to be known as "Planning Area No. 156." Future financial participation by Planning Area No. 156 in the construction and acquisition of facilities and other property of IRWD shall be in accordance with the terms of this agreement, including the terms relating to the Acquisition Balance (defined below), and otherwise at the discretion of IRWD's board on the basis of benefit to be received, consistent with IRWD's funding policies and practices.

IV. ACQUISITION BALANCE

Section 4.1. Water Service. Upon the Effective Date, the provisions of this Agreement governing water rates and charges shall be considered a special contract under IRWD's Rules and Regulations For Water, Sewer, Recycled Water, and Natural Treatment System Service ("Rules and Regulations"). To the extent of any inconsistency, the provisions of this Agreement shall control over inconsistent provisions of the Rules and Regulations.

Section 4.2. Commodity Rate Reduction and Differential. Upon the Effective Date, the water commodity charges within Planning Area No. 156 will be reduced to 80% of the respective OPAMWC water commodity charges for all classes of service and meter sizes that were in effect on the Effective Date. Until the Acquisition Balance equals zero, whenever IRWD's standard commodity charges are changed, each commodity charge within Planning Area No. 156 will be changed by the amount necessary to maintain constant the dollar amounts of the differences (that resulted from the initial percentage reduction) between each such commodity charge and IRWD's corresponding standard commodity charge. If the Metropolitan Water District of Southern California or any intermediate wholesaler modifies its rate structure in a way that causes an unintended effect in the foregoing method of indexing the commodity charges for Planning Area No. 156, IRWD may modify such method of indexing in order to preserve the intent of this subparagraph to maintain constant the dollar amounts of the differences between each Planning Area No. 156 commodity charge and IRWD's corresponding standard commodity charge.

Section 4.3. Service Charge Reduction and Differential; Other Charges. Upon the Effective Date, the water service charges within Planning Area No. 156 will be reduced to 80% of the OPAMWC water service charges that were in effect on the Effective Date. Until the Acquisition Balance equals zero, whenever IRWD's standard water service charges are changed, the service charges within Planning Area No. 156 will be changed by the amount necessary to maintain constant the dollar amounts of the differences (that resulted from the initial percentage reduction) between such water service charges and the respective standard water service charges of IRWD. All other water fees and charges for Planning Area No. 156 shall be IRWD's standard fees and charges. A summary of OPAMWC's water commodity and service charges and

IRWD's corresponding standard water commodity and service charges, revised as of the Effective Date, shall be attached hereto as Exhibit "C" and incorporated herein by this reference.

Section 4.4. Application of Commodity Rate and Service Charge Differentials. Commencing on the Effective Date, the difference between (1) water revenues actually collected by IRWD within Planning Area No. 156 at the commodity rates and service charges in effect pursuant to Sections 4.2 and 4.3 above and (2) water revenues that would have been collected using IRWD's base commodity rates and service charges in effect at such time will be computed and applied by IRWD after each billing period to reduce the remaining Acquisition Balance.

Section 4.5. Connection and Capacity Charges. Connection and capacity charges within Planning Area No. 156 shall be set by IRWD based upon the sub-area master plan (SAMP) to be prepared by IRWD for the Planning Area or other method consistent with connection and capacity charge-setting in other portions of IRWD.

Section 4.6. Rates After Retirement of Acquisition Balance. Upon the reduction of the Acquisition Balance to zero, water user rates and water service charges within Planning Area No. 156 will be established in the same manner as in other portions of IRWD. It is acknowledged by IRWD that IRWD's current practice is, and its historical practice has been, to use planning areas as a mechanism for setting separate connection fees, not user rates, in different portions of IRWD (other than areas that are or have been subject to interim area-specific user rates pursuant to terms of an annexation or consolidation).

Section 4.7. Allocation-Based Rate Structure in Planning Area No. 156. IRWD has established and revises from time to time in its discretion an allocation-based rate structure as a "best management practice" for the purpose of encouraging conservation of water. The water commodity rates imposed within Planning Area No. 156 shall be transitioned to IRWD's allocation-based rate structure after an appropriate customer education and information period, but in no event prior to reduction of the Acquisition Balance to zero.

Section 4.8. Acquisition Balance. Commencing on the Effective Date, Planning Area No. 156 will make an equitable contribution toward the cost of the existing IRWD replacement fund and the cost of correcting existing OPAMWC system deficiencies, equal to the sum of following amounts (the "Acquisition Balance"):

4.8.1 Replacement fund contribution, agreed to be $1,060,000;

4.8.2 Capital cost to fund the following listed existing system upgrades, not to exceed the actual cost thereof or the aggregate amount of $7,607,250.00, whichever is less. It is mutually understood that all lineal feet, quantities and similar figures set forth below are approximations and are subject to engineering and field verification of need:

4.8.2.1 Installation of 6,600 feet of 16-inch transmission main

in Chapman Avenue between Jamboree Road and Orange Park Boulevard, to connect to IRWD Zone 5 service zone;

4.8.2.2 Remove four of five existing hydropneumatic pump stations and repipe as required to bypass;

4.8.2.3 Install two pressure reducing stations as needed to protect system and pressure reducing valves on individual services as needed to protect services where maximum pressure will exceed approximately 80 pounds per square inch (psi);

4.8.2.4 Refurbish and equip existing well to provide capability to pump to IRWD's Zone 5 Santiago Hills Reservoir;

4.8.2.5 Replace existing chlorine disinfection system at well with sodium hypochlorite system;

4.8.2.6 Replace 6,000 feet of 16-inch transmission main segments constructed circa 1929, as needed where pressures will exceed approximately 150 psi (between well and intersection of Rancho Santiago and Glen Albyn Lane);

4.8.2.7 Replace 5,300 feet of 16-inch and 10-inch transmission main segments constructed circa 1929, and other distribution pipelines as needed;

4.8.2.8 General system modifications, consisting of installations, replacements, refurbishments and removals of the following components: pipelines, laterals, valves, pumps, tanks, casings, pressure regulation devices, disinfection equipment, hydrants, pavement, concrete, and associated fittings, boxes, vaults, housings and appurtenances;

4.8.2.9 Remove one million gallon (mg) tank, including importation and placement of backfill;

4.8.3 One-half of the costs of preparation of the survey and legal description of the Annexation area and LAFCO fees to process the Annexation;

4.8.4 Outstanding debts of OPAMWC, including without limitation any

deferred balances under the Operation Agreement (defined below), and the cost of payment or discharge of all liabilities of OPAMWC incurred or accrued prior to the Effective Date, excluding: (i) the cost to correct any structural, sanitary or other defect in the physical condition of the OPAMWC water system following transfer to IRWD, and (ii) the portion of any liability covered by the proceeds of insurance paid to IRWD;

4.8.5 The fees and costs incurred to obtain an independent accounting firm's review of OPAMWC's financial records and preparation and updating of closing financial statements, pursuant to Section 5.3;

4.8.6 Any pipeline relocation costs incurred as a result of lack of valid prior easement rights in areas affected by non-party public agency capital projects identified by either party in writing to the other prior to the execution of this Agreement;

4.8.7 Deferred balance, if any, of cost of improvement work performed pursuant to Operation Agreement (defined in Section 5.4);

4.8.8 Any costs allocable to the Acquisition Balance pursuant to Section 10.9.6.

It is acknowledged that the Acquisition Balance is based on the assumption that the entire OPAMWC service area will be included in the area that will be annexed to IRWD and will be designated as Planning Area No. 156. If less than such area is included in the Annexation, the amount of the Acquisition Balance shall be reduced proportionately on the Effective Date by the same methodology as provided in Section 4.10.6.

Section 4.9. Stock Payment. The Acquisition Balance shall be increased by the amount of the cash-out payment for the OPAMWC stock at the amount per share specified in Section 2.3, and any payment for OPAMWC stock and associated fees and costs incurred by IRWD in connection with the exercise of shareholder's rights as described in Section 9.2 hereof.

Section 4.10. Acquisition Balance Reductions. The Acquisition Balance shall be reduced by the following amounts:

4.10.1 Actual cash balances in OPAMWC funds transferred to the operating funds of IRWD pursuant to Section 5.2 hereof;

4.10.2 Value of 0.67 acre reservoir site, agreed to be $875,000.00, which represents the appraised value of the vacant land at the highest and best use, adjusted for entitlement status, less the cost of the appraisal ($1,250.00);

4.10.3 Value of headquarters site (three parcels and prorated acreage of fourth parcel not used as well site), totaling 0.645 acres, agreed to be $1,125,000.00, which represents the appraised value of the vacant land at the highest and best use, adjusted for entitlement status, less the cost of the appraisal ($1,250.00);

4.10.4 The following listed prorated values of capacity to serve IRWD areas other than OPAMWC, agreed to be $3,114,100 in the aggregate (based on the listed minimum prorated values; if any of such minimum values are increased by IRWD, the increase will be added to such aggregate amount):

4.10.4.1 Pro rata share (minimum 42.01%, or greater if determined by IRWD) of transmission main replacement cost described in Section 4.8.2.1;

4.10.4.2 Pro rata share (minimum 42.01%, or greater if determined by IRWD) of transmission main replacement cost described in Section 4.8.2.7;

4.10.4.3 Pro rata share (minimum 56.51%, or greater if determined by IRWD) of well refurbishment and equipment cost described in Section 4.8.2.4;

4.10.4.4 Pro rata share (minimum 56.51%, or greater if determined by IRWD) of transmission main replacement cost described in Section 4.8.2.6;

4.10.5 All rate-differential credits applied by IRWD on a periodic basis under Section 4.4 above;

4.10.6 The fractional share, as of the date of removal, of the remaining Acquisition Balance attributable to any parcel removed (by detachment or otherwise) from Planning Area No. 156 after the Effective Date. The share shall be determined in proportion to projected water use for the removed parcel, taking into consideration usage records, projected changes in use of the parcel and other relevant information. This Section 4.10.6 shall not apply to service connections or land hereafter removed from Planning Area No. 156 in accordance with the executory provisions of Section 4, 5, or 6 of that certain Compromise and Settlement Agreement, dated as of September 18, 1979, by and between the City of Orange and OPAMWC.

Section 4.11. New Development in Planning Area No. 156. It is acknowledged and agreed that the Acquisition Balance contributions have been determined based on existing connections within Planning Area No. 156. The contribution to water system costs by future development that may occur within Planning Area No. 156 shall be determined as described in Section 4.5. Nothing herein shall be deemed to satisfy any contribution that may be required from future development occurring within Planning Area No. 156 in addition to such development's payment of the rate differentials applied to the Acquisition Balance. Connection and capacity charges shall not be applied to reduce the Acquisition Balance.

Section 4.12. Reports on Acquisition Balance. On a quarterly basis, IRWD will cause its staff to generate a report on (i) the Acquisition Balance as computed pursuant to Section 4.8 and 4.9 and the reductions applied to the Acquisition Balance pursuant to Section 4.10 and (ii) the status of the system upgrades described in Section 4.8.2, and provide such report to the management advisory committee established pursuant to Section 6.1 until the Acquisition Balance has been retired and the upgrades have been completed.

V. SERVICE TRANSITION

Section 5.1. Continuation of Water Service. Upon completion of the Merger and Annexation in accordance with the provisions of this Agreement, IRWD shall, as the successor-in-interest to OPAMWC, assume OPAMWC's obligations to provide the property owners and customers in Planning Area No. 156 with water service to such property. Except as otherwise specifically provided herein, service to Planning Area No. 156 shall be provided in accordance with the Rules and Regulations.

Section 5.2. Assets and Liabilities. The acquisition of OPAMWC shall include all assets, real or personal, tangible or intangible, licenses, claims or rights of any kind, including but not limited to cash balances, vehicles, office furniture and equipment and documents, which shall be transferred to IRWD. Upon the Effective Date, IRWD will assume all outstanding liabilities, debts and obligations of OPAMWC that exist at the Effective Date, subject to Section 4.8.4. Existing contracts of OPAMWC shall be canceled or transferred to IRWD at IRWD's discretion.

Section 5.3. Funds and Accounting. Operations of OPAMWC shall be consolidated into IRWD's operating budget. Segregation of operating funds shall not be required except as needed to carry out the provisions in Section IV or as otherwise deemed necessary by IRWD. IRWD will retain (or has retained prior to the execution of this Agreement) an independent accounting firm to review OPAMWC's financial records and prepare closing financial statements with the highest level of assurance such firm is able and willing to provide for the period ended June 30, 2007, and to update such closing financial statements from June 30, 2007 to the Effective Date. OPAMWC will provide management representations reasonably requested by such firm in preparing such statements. Nothwithstanding any separate accounting required by or necessary under this Agreement, funds or other assets or operational expenses may, at the discretion of

IRWD, be commingled for investment and operating purposes.

Section 5.4. Water System Maintenance. Until the Effective Date, maintenance of facilities will continue to be performed under the agreement between the parties titled "Agreement To Perform Contract Services For Interim Operation Of Water System Of Orange Park Acres Mutual Water Company," dated as of March 1, 2007, as it may be subsequently amended (the "Operation Agreement").

Section 5.5. Permits. All permits issued to and by OPAMWC will be transferred and assigned to IRWD as of the Effective Date, in full force and effect.

Section 5.6. Completion of Water System Upgrades. IRWD will complete the system upgrades described in Section 4.8.2 within five (5) years of the Effective Date, except to the extent completion of any upgrade(s) is delayed by unforeseen circumstances. In consultation with the management advisory committee pursuant to Section 6.1, IRWD may make modifications and substitutions to the listed upgrade items; provided that the combined resulting level of function and service will be at least equivalent to that of the original list.

Section 5.7. Sewer Service; Other Services. Sewer service is provided to some portions of the area within OPAMWC by the City of Orange or Orange County Sanitation District; other portions are currently on septic systems. Reclaimed water service and natural treatment system service are not presently contemplated but may be provided in the future within the former OPAMWC service area at the discretion of IRWD.

VI. MANAGEMENT ADVISORY COMMITTEE

Section 6.1. Committee Formation and Duties. A management advisory committee shall be formed, consisting of up to three (3) of the OPAMWC board members in office immediately prior to the Effective Date, who shall be selected by the OPAMWC board, to initiate and/or review and make recommendations concerning all matters coming before IRWD's board that pertain to the former OPAMWC service area, including but not limited to matters pertaining to the implementation of this Agreement. The term of the management advisory committee shall be until the Acquisition Balance has been retired and the system upgrades described in Section 4.8.2 have been completed. The eligibility criterion for service as a member of the management advisory committee shall be legal residence within Planning Area No. 156. Any vacancy on the committee as a result of loss of eligibility or other cause shall be filled by appointment by IRWD's board of a person who is recommended by a majority of the remaining members of the committee and who meets such eligibility criteria. The committee shall sit as an advisory committee with one member of the IRWD board, and shall meet (i) up to once per month during the first three (3) years after the Effective Date and (ii) for the remainder of the committee's term, shall meet annually and on an ad hoc basis as required pursuant to Section 10.9.4.

Section 6.2. Directors' and Officers' Liability. IRWD agrees that all indemnification rights existing in favor of the current officers and directors of OPAMWC, for liabilities incurred prior to the Effective Date while acting as such officers and directors within the course and scope

of their duties, as provided in the Articles of Incorporation and Bylaws of OPAMWC, will continue in full force and effect for three years following the Effective Date, and has agreed that OPAMWC's existing directors and officers liability insurance policy (or a comparable insurance policy) will be maintained in force for three years following the Effective Date. OPAMWC represents and warrants that, except as disclosed by OPAMWC in writing to IRWD prior to the date on which IRWD's Board of Directors approved this Agreement, (i) there are not now (a) pending, asserted or existing, or to the best of the knowledge of the current members of the OPAMWC Board of Directors threatened, any claims or actions of the type which would be covered by the indemnification provisions of this paragraph or (b) to the best of the knowledge of the current members of the OPAMWC Board of Directors, any facts upon which any such claims or actions could be based, and (ii) that such officers and directors are not entitled to any indemnification rights other than as described in this paragraph.

VII. CONDITIONS TO EFFECTIVENESS OF MERGER AND ANNEXATION

Section 7.1. Operation Pending Effective Date; Notice of Unbudgeted Expenditures. Pending the Effective Date, OPAMWC agrees to operate only in the ordinary course of business and to use its best efforts to preserve intact its existing business organization. Until the Effective Date, OPAMWC shall give IRWD reasonable advance notice of any expenditure greater than $25,000 approved or made by OPAMWC, except to the extent the expenditure is identified in an adopted budget or budget amendment, a copy of which has previously been provided to IRWD. OPAMWC agrees that there shall not be any payment of dividends or other distribution pending the Effective Date.

Section 7.2. Reserved.

Section 7.3. Notice of Events. Each party shall give prompt written notice to the other party of the occurrence or threatened or impending occurrence of any event which, if known on the date of this Agreement, would have been required to be disclosed under this Agreement, or which would cause any of its representations, warranties or covenants herein to be inaccurate or otherwise misleading or which might result in the non-fulfillment of any condition herein.

Section 7.4. Regulatory Approvals; No Legal Proceedings. There shall not be any legal proceedings pending seeking to prohibit the Merger, Annexation or any other transaction contemplated herein; and all regulatory approvals required by law shall have been obtained.

Section 7.5. Reserved.

Section 7.6. Corporate Matters. OPAMWC agrees to call such meetings of its shareholders as may be needed to vote upon the approval of the Merger and other corporate matters necessary to carry out the transactions contemplated in this Agreement. If the Merger is duly submitted to a vote of the shareholders and is disapproved, at IRWD's request OPAMWC shall call such meetings of its shareholdersas may be needed to seek reconsideration by the shareholders.

Section 7.7. Other Proposals. If, prior to the vote of the OPAMWC's shareholders on this Agreement, the OPAMWC Board of Directors receives any proposal from any person or entity to acquire OPAMWC or any interest in OPAMWC that requires approval by the shareholders ("third-party proposal"), OPAMWC's Board of Directors may disclose such third-party proposal to OPAMWC's shareholders as it deems appropriate in the conduct of its fiduciary duties. If OPAMWC (1) recommends such proposal to its shareholders, or recommends against or withdraws its approval of the Merger or this Agreement in favor of the competing proposal, or otherwise acts to favor the competing proposal with its shareholders in opposition to this Agreement or the Merger, and, (2) the Merger fails to be submitted for, or fails to receive, an approving vote of the shareholders, and, (3) an acquisition transaction is accepted and implemented by OPAMWC and its shareholders with the person or entity who submitted the third-party proposal or an affiliated person or entity within thirty (30) months of the date of the failure, then OPAMWC shall pay to IRWD an amount equal to all reasonable costs and expenses incurred by or on IRWD's behalf in connection with negotiating, drafting, executing and implementing this Agreement, not to exceed the sum of Two Hundred and Fifty Thousand Dollars ($250,000.00); provided, the foregoing shall not apply to limit costs and expenses incurred under any other agreement, including without limitation the Operation Agreement. The costs and expenses payable under the preceding sentence shall be and remain payable notwithstanding the termination of this Agreement. This is not intended to be a prevailing party attorneys fees clause pursuant to Civil Code Section 1717. The action of one or more individual Board members of OPAMWC shall not be deemed the action of OPAMWC under this Section unless such individual Board members collectively constitute a majority of the OPAMWC Board or such action has been approved by a majority of the OPAMWC Board. Allowing a minority of Board members to state their position shall not constitute "approval" under this Section when the majority does not concur in the minority position.

Section 7.8. Certain Further Conditions For the Benefit of OPAMWC. IRWD shall not be in default of any material obligation contained in this article or other provision of this Agreement, and no event shall have occurred which would constitute a material breach of IRWD's representations or warranties contained in this Agreement or would cause such representations or warranties to be inaccurate in any material respect if made as of the Effective Date.

Section 7.9. Certain Further Conditions For the Benefit of IRWD. OPAMWC shall not be in default of any material obligation contained in this article or other provision of this Agreement, and no event shall have occurred which would constitute a material breach of OPAMWC's representations or warranties contained in this Agreement or would cause such representations or warranties to be inaccurate in any material respect if made as of the Effective Date. Representations made herein shall be accurate in all material respects. There shall not have been any material adverse change in the financial condition or business of OPAMWC from the date of the closing financial statements prepared by an independent accounting firm as contemplated pursuant to Section 5.3 to the Effective Date. OPAMWC must have good title at the Effective Date to its water system and the properties described in Sections 4.10.2 and 4.10.3 hereof. There must not be more than 722.42 shares of OPAMWC stock and there must not be any options, warrants, rights or similar agreements by which OPAMWC is bound with respect to

the issuance, voting or sale of issued or unissued stock. All required state and federal tax returns shall have been filed by OPAMWC and all tax liabilities of any kind that are due and owing shall have been paid. There shall be no material litigation or regulatory action other than as disclosed by OPAMWC to IRWD in writing prior to execution hereof. There shall have been no condemnation of the facilities or property of OPAMWC for which OPAMWC will not receive insurance or condemnation proceeds sufficient to completely rebuild, replace or restore the condemned facilities. IRWD shall have completed the Annexation without the imposition by LAFCO of any unusual or burdensome requirements on IRWD.

Section 7.10. Procedural Revisions. The parties agree that procedural matters set forth in this Agreement shall be deemed revised as necessary to allow compliance with applicable laws governing the Annexation and Merger, provided that no material change in the terms hereof results except with the approval of the parties.

VIII. REPRESENTATIONS AND WARRANTIES

Section 8.1. Material Events. OPAMWC represents that, except as disclosed to IRWD in writing prior to the date on which IRWD's Board of Directors approved this Agreement, there is no material litigation (pending or to the best of the knowledge of the current members of the OPAMWC Board of Directors threatened), regulatory action (pending or to the best of the knowledge of the current members of the OPAMWC Board of Directors threatened), liability, unplanned expenditure, defect in title to its water system or either of the properties described in Sections 4.10.2 and 4.10.3 hereof, loss, contingency, or similar item materially affecting the financial or operating condition of OPAMWC. OPAMWC has disclosed in writing to IRWD prior to the date on which IRWD's Board of Directors approved this Agreement, any known environmental contamination in its water system or either of the properties described in Sections 4.10.2 and 4.10.3 hereof and any investigations within the last five years to determine the existence of any such environmental contamination. For purposes of the preceding sentence, "known" shall be limited to the knowledge of the current members of the OPAMWC Board of Directors, and "environmental contamination" shall mean contamination by any hazardous or toxic substance, material or waste which is regulated by any local government authority, the State of California or the United States Government including, (i) any "hazardous materials" as defined in Section 25501(o) of the California Health and Safety Code or predecessor statute, and (ii) petroleum hydrocarbons or any fractions or byproducts therefrom, but shall not mean any contamination or pollution of the water produced, delivered through or stored by the OPAMWC system.

Section 8.2. Financial Condition. OPAMWC represents that it shall promptly disclose to IRWD any material adverse change in its financial or operating condition from the date of the closing financial statements prepared by an independent accounting firm as contemplated pursuant to Section 5.3 to the Effective Date.

Section 8.3. Board Approval. OPAMWC hereby represents that its board of directors has approved this Agreement and determined that the terms of the Agreement are fair to and in the best interests of OPAMWC's shareholders.

Section 8.4. Good Standing; Outstanding Contracts. OPAMWC represents that it is a corporation in good standing under the laws of the State of California, and is not required to be qualified to do business in any other state, and that there are no outstanding contracts affecting OPAMWC or to which OPAMWC is a party (other than the Operation Agreement and OPAMWC's service contract with the East Orange County Water District), involving obligations exceeding $25,000 and which are not terminable by OPAMWC within 90 days.

IX. TERMINATION

Section 9.1. General. In addition to other events permitting termination hereunder, this Agreement may be terminated as provided in this article.

Section 9.2. By Either Party. Either party shall have the right to terminate this Agreement, without any penalty, upon written notice to the other party, which shall be given not later than thirty (30) days after the end of the period during which OPAMWC shareholders may exercise dissenting shareholder's rights in connection with the Merger by demanding the purchase of shares, or any share or portion thereof may be identified by its holder as a dissenting share, if any such exercise or identification occurs during such period. If the parties waive their rights to terminate under this Section, the parties agree to meet and confer in good faith to determine their approach in responding to such exercise of rights, and neither OPAMWC nor IRWD shall settle, reject a settlement of, or contest any such exercise of rights if the other objects.

Section 9.3. OPAMWC's Right To Terminate. In the event there is a failure of a condition to OPAMWC's obligation, as set forth in Section 7.8, OPAMWC may terminate this Agreement, without any penalty, by giving written notice to IRWD not later than ten (10) days after the condition has failed.

Section 9.4. IRWD's Right To Terminate. In the event (A) the Merger is duly submitted to a vote of the shareholders and is disapproved; or (B) the Annexation is disapproved by LAFCO or is terminated by LAFCO pursuant to LAFCO's protest proceeding; or (C) there is a failure of a condition set forth in Section 7.4 or 7.5; or (D) there is a failure of a condition to IRWD's obligation, as set forth in Section 7.9, IRWD may terminate this Agreement, without any penalty, by giving written notice to OPAMWC not later than ten (10) days after such event or after such failure of a condition.

Section 9.5. Waiver of Condition. Each party shall have the right to waive any condition for its benefit or any termination right it may have.

Section 9.6. Effect of Termination or Failure To Terminate. A party's failure to terminate this Agreement upon the failure of a condition shall be deemed a waiver of the condition which has failed. No such waiver or failure to terminate shall affect amounts includable in the Acquisition Balance pursuant to Section 4.8.4 or 4.9. Termination of this Agreement shall not release any party thereto from any claim arising or derived from its breach

of this Agreement. Termination of this Agreement will terminate the Merger Agreement.

Section 9.7. Automatic Termination. If the matters specified in Sections, 1.2.1, 1.2.2, and 1.2.3 have not occurred on or before December 31, 2008, then this Agreement shall automatically terminate.

Section 9.8. Costs. Notwithstanding the termination hereof, in the event of such termination each party shall bear its own legal fees, filing fees and other costs incurred in the preparation of this Agreement and the implementation of the Merger and Annexation transactions contemplated herein, except as provided in Section 7.7.

X. MISCELLANEOUS

Section 10.1. Counterparts. This Agreement may be executed in one or more counterparts. Each will be deemed an original and all, taken together, will constitute one and the same instrument.

Section 10.2. Successors and Assigns; Entire Agreement. No party may assign its rights or obligations under this Agreement without the prior written consent of the other parties to this Agreement. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of OPAMWC and IRWD. This Agreement constitutes the entire agreement between OPAMWC and IRWD and supersedes all prior understandings and agreements between the parties with respect to the subjects hereof.

Section 10.3. No Effect on Operation Agreement. The Operation Agreement shall remain in effect until its termination as provided therein.

Section 10.4. Amendment. This Agreement may be amended only in writing signed by the parties hereto.

Section 10.5. No Waiver. A waiver by any party of a breach of any of the covenants, conditions or agreements under this Agreement to be performed by the other party shall not be construed as a waiver of any succeeding breach of the same or other covenants, agreements, restrictions or conditions of this Agreement.

Section 10.6. Jurisdiction and Venue. This Agreement shall be construed under the laws of the State of California in effect at the time of the signing of this Agreement. The parties consent to the jurisdiction of the California courts with venue in Orange County.

Section 10.7. Titles and Captions. Titles and captions are for convenience of reference only and do not define, describe or limit the scope or the intent of this Agreement or of any of its terms. References to section numbers are to sections in this Agreement, unless expressly stated otherwise.

Section 10.8. Cooperation. Each party agrees to cooperate with the other and, in that

regard, agrees to sign any and all documents which may be reasonably necessary, helpful, or appropriate to carry out the purposes and intent of this Agreement.

Section 10.9. No Third-Party Beneficiaries. No customer, shareholder or other person or entity other than OPAMWC and IRWD, LLC II and other IRWD-affiliated entities shall be deemed to be a beneficiary hereof, and nothing in this Agreement, either express or implied, is intended to confer upon any customer, shareholder or other person or entity, other than the parties, LLC II and other IRWD-affiliated entities and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement. The foregoing notwithstanding, customers within Planning Area No. 156 shall have the right under this Agreement to obtain resolution of any disputes they may have regarding the performance by IRWD, LLC II and other IRWD-affiliated entities under this Agreement, which right shall be limited to the use of the procedure and measures provided in this Section 10.9, below.

10.9.1 Dispute Resolution Procedure For Certain Non-Parties. The procedures set forth in Sections 10.9.1 through 10.9.9, inclusive, provide the exclusive method by which customers within Planning Area No. 156 may obtain resolution of a dispute as to the performance by IRWD, LLC II or other IRWD-affiliated entities (each, an "IRWD Entity") of its obligations under this Agreement. Said procedure shall not limit any rights that any persons may have other than under this Agreement. Said procedure shall be available only to Customers as specified in Section 10.9.2.

10.9.2 Scope. The right of a Planning Area No. 156 water service customer ("Customer") to use the below procedure shall be limited to alleged non-performance by an IRWD Entity of obligations contained in the Agreement. It is acknowledged by the parties that the procedure is intended to encompass disputes as to performance under the following Sections of this Agreement: Sections 4.2; 4.3; 4.4; 4.6; 4.7; 4.8; 4.9; 4.10; 4.12; 5.6; 10.9.1 through 10.9.9, inclusive, and, with regard to the existence of the Management Advisory Committee, only, but not any activities, deliberations or recommendations of such Committee, Section 6.1.

10.9.3 Initial Dispute Resolution Measure: General Manager Review. The Customer desiring to seek resolution of a matter under this procedure shall first send a written communication to the IRWD General Manager, specifying the alleged non-performance, stating which section(s) of the agreement contains the obligation(s) and including a description of supporting facts and other information necessary or useful to an understanding of the issue. The IRWD General Manager shall provide a written response to the Customer within thirty (30) days of the Customer's written communication. By mutual agreement the General Manager and Customer may

extend such time for the purpose of gathering more information. If the Customer is dissatisfied with General Manager's response under Section 10.9.3, then within thirty (30) days of the date of the General Manager's response, the Customer will so notify General Manager in writing. Within thirty (30) days of Customer's notice described in the preceding sentence, either the General Manager or Customer may in writing request an informal meeting to attempt to resolve the dispute, and the other party shall reasonably cooperate with the scheduling of and participation in such meeting.

10.9.4 Second Dispute Resolution Measure: Board Review. If the Customer believes the issue is unresolved after the steps in Sections 10.9.3, then within thirty (30) days of the informal meeting (or sixty (60) days from the notice that was delivered by the Customer under Section 10.9.3 indicating dissatisfaction with the General Manager's response, if no meeting was requested) the Customer will provide written notice to the General Manager requesting to have the matter considered by the IRWD Board of Directors. Upon receiving the request the General Manager will submit the matter to a meeting of the OPAMWC Management Advisory Committee held within thirty (30) days of receipt of said notice, and will submit the matter to a meeting of the IRWD Board of Directors held within sixty (60) days of the receipt of the notice. If the Management Advisory Committee is no longer meeting monthly at such time pursuant to Section 6.1, then IRWD shall convene the Management Advisory Committee on an ad hoc basis. The Customer must attend the Committee and Board meetings. The General Manager will notify the Customer of the decision of the Board.

10.9.5 Third Dispute Resolution Measure: LAFCO Executive Officer Review. If Customer is dissatisfied with the decision of the IRWD Board, then within thirty (30) days of the date of the General Manager's notice of that decision, the Customer may submit a written request to the General Manager to have the matter submitted to the Executive Officer of LAFCO. The request must be signed by, or accompanied by similar requests signed by, a minimum of ten (10) other Customers. The Executive Officer will notify the General Manager and the Customer of a schedule for submission of materials by both parties and meeting date(s). The Executive Officer may conduct meetings of the parties to mediate a resolution of the dispute. Any materials submitted to the Executive Officer concerning the dispute will first be served on the other party, and the Executive Officer's decision will be based upon the materials submitted and the information provided at

meetings concerning the dispute at which both parties are present. If the dispute is not resolved, the Executive Officer will render a decision, which shall be binding.

10.9.6 Costs. Each party will bear any and all of its costs in the above procedure. The costs of the Executive Officer (and Executive Officer's counsel, should the Executive Officer elect to have advice of counsel) will be divided equally between the Acquisition Balance and IRWD.

10.9.7 Availability of Procedure. The procedure described in this Section shall be available only until the retirement of the Acquisition Balance and completion of the upgrades. IRWD shall designate as "FINAL" the quarterly report that is prepared under Section 4.12 following the date of the reduction of the Acquisition Balance to zero or the filing of a notice of completion on the last upgrade to be completed, whichever occurs last. Any procedure not initiated prior to the date of such final quarterly report shall be deemed untimely and invalid. For purposes of the filing of quarterly reports as described herein, the reduction of the Acquisition Balance to zero shall be determined without regard to the addition of any amount to the Acquisition Balance under Section 10.9.6 that occurs or may occur because any procedures are pending when the Acquisition Balance would otherwise have been retired. Except as limited in this Section 10.9.7, this procedure may be initiated at any time, provided, however, that the General Manager, IRWD Board and LAFCO Executive Officer may take into consideration the timeliness of such initiation, resulting prejudice and good cause for the delay.

10.9.8 Timely Responses. The failure of the Customer to timely give a notice or complete any other requirement specified herein shall be deemed to conclusively indicate the Customer's acceptance of the results to that point as satisfactory, and no further proceedings will be taken. In the event of the failure of IRWD to timely complete any requirement specified herein, the Customer may omit any remaining steps in Sections 10.9.3 and 10.9.4 and submit the matter directly to the Executive Officer of LAFCO in accordance with Section 10.9.5.

10.9.9 LAFCO's Acceptance of Executive Officer's Duties. The inclusion of the terms and conditions of this Agreement in the terms and conditions of the Annexation pursuant to Section 3.1 shall constitute LAFCO's acceptance of the duties assigned herein to the Executive Officer.

Section 10.10. Severability. The provisions for the Annexation and the provisions for the Merger are not intended to be severable from one another. Except to that extent, if any covenant, term, condition, or provision of this Agreement shall, to any extent, be invalid or unenforceable, the remainder of this Agreement shall be valid and enforceable to the fullest extent permitted by law unless that covenant, term, condition, or provision declared to be invalid is so material that its invalidity deprives any party of the basic benefit of their bargain or renders the remainder of this Agreement meaningless.

Section 10.11. California Environmental Quality Act (CEQA). The parties agree that IRWD shall be the lead agency for purposes of compliance with or determination of exemption from CEQA with respect to the actions contemplated in this Agreement.

Section 10.12. Notices. Any notice or other document and all billings and payments required or permitted to be given by either party hereto to the other party shall be deemed received upon delivery in person to the recipient or within two (2) business days after the date of deposit in the United States mail in the State of California, with postage prepaid, and addressed to the party for whom intended at the following address:

To OPAMWC:
Orange Park Acres Mutual Water Company
678 North Gravier Street
Orange, CA 92869
Attn: Bruce Williams

With a copy to:

Michael Rubin, Esq.
Rutan & Tucker, LLP
611 Anton Boulevard, Suite 1400
P.O. Box 1950
Costa Mesa, CA 92626-1950

To IRWD:
Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
Attn: General Manager

Section 10.13. Legal Advice. Each party represents and warrants to the other the following: they have carefully read this Agreement, and in signing this Agreement, they do so with full knowledge of any right which they may have; they have received independent legal advice from their respective legal counsel as to the matters set forth in this Agreement, or have knowingly chosen not to consult legal counsel as to the matters set forth in this Agreement; and, they have freely signed this Agreement without any reliance upon any agreement, promise,

statement or representation by or on behalf of the other party, or their respective agents, employees, or attorneys, except as specifically set forth in this Agreement, and without duress or coercion, whether economic or otherwise.

IN WITNESS WHEREOF, each of the parties hereto, pursuant to the authority given by resolutions adopted by its Board of Directors and by its Articles of Incorporation, respectively, has caused this Agreement to be executed as of the date first written above.

ORANGE PARK ACRES MUTUAL WATER COMPANY

By _____

Title: Pres

By _____

Title: VICE PRES

IRVINE RANCH WATER DISTRICT

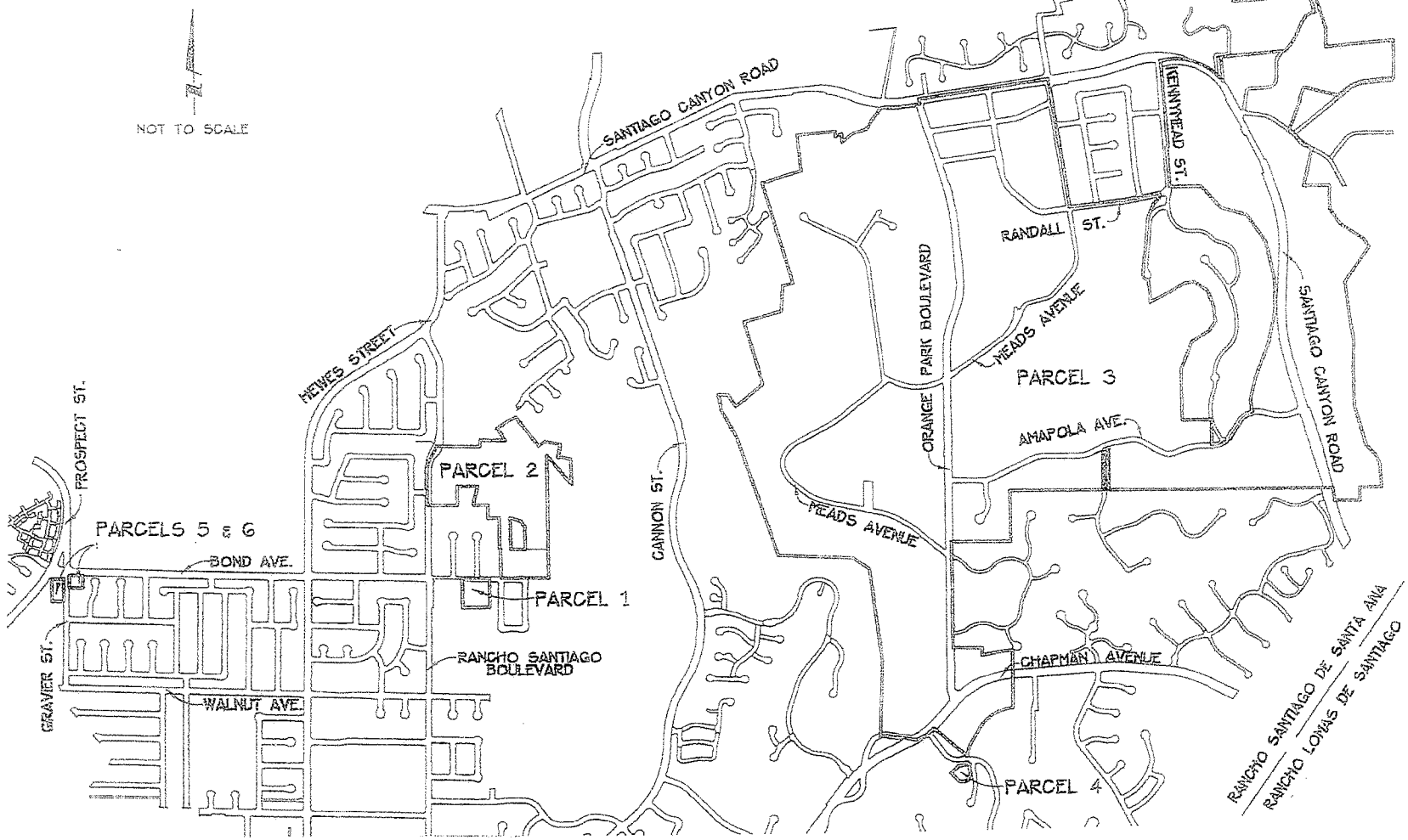
By _____
Doug Reinhart

Title: President

By _____
Leslie Bonkowski

Title: Secretary

EXHIBIT "A"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NOT TO SCALE
SANTIAGO CANYON ROAD
KENNYMEAD ST.
RANDALL ST.
MEADS AVENUE
ORANGE PARK BOULEVARD
SANTIAGO CANYON ROAD
PARCEL 3
AMAPOLA AVE.
HEWES STREET
PROSPECT ST.
PARCEL 2
CANNON ST.
PARCELS 5 & 6
BOND AVE.
PARCEL 1
MEADS AVENUE
GRANVER ST.
RANCHO SANTIAGO BOULEVARD
WALNUT AVE.
CHAPMAN AVENUE
RANCHO SANTIAGO DE SANTA ANA
RANCHO LOMAS DE SANTIAGO
PARCEL 4

EXHIBIT "B"

09/12/07 Draft

AGREEMENT OF MERGER

This AGREEMENT OF MERGER ("Agreement") is entered into this ____ day of _____, 2007, by and between Orange Park Acres Mutual Water Company, a California corporation ("OPAMWC"), and Irvine Ranch Water District Water Service Company LLC II, a California limited liability company ("LLC II"). OPAMWC and LLC II are sometimes hereinafter collectively referred to as the "Constituent Entities."

WHEREAS, Irvine Ranch Water District, a California water district ("IRWD") and OPAMWC have entered into an Acquisition and Annexation Agreement, dated as of _____, 2007, which contemplates, among other things, the merger of OPAMWC with and into LLC II in accordance with the terms of this Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual agreements herein contained, the parties hereto agree as follows:

ARTICLE I

MERGER

In accordance with the provisions of this Agreement and the California Corporations Code (the "Corporation Law"), at the Effective Time (as defined in Article II hereof), OPAMWC shall be merged with and into LLC II (the "Merger"), the separate corporate existence of OPAMWC shall cease, and LLC II shall continue as the surviving entity (the "Surviving Entity") under its present corporate name, but doing business also under the name of OPAMWC upon filing of a separate Fictitious Business Name Statement where required.

ARTICLE II

EFFECTIVE TIME OF THE MERGER

As used in this Agreement, the "Effective Time" of the Merger shall mean 5:01 p.m. on the date on which an executed original (with respect to which the execution may be in counterparts) of this Agreement, together with a Certificate of Merger duly executed by the appropriate member(s) of LLC II and officers of OPAMWC, has been duly filed with the Office of the California Secretary of State.

ARTICLE III

PAYMENT AND CONVERSION OF SHARES

3.1 Payment.

3.1.1 On the first business day after the Effective Time, each holder of a certificate or certificates representing Common Stock, par value of $100 per share (the "Common Stock") of OPAMWC or fractions thereof, shall be entitled, upon the surrender

thereof, accompanied by satisfactory proof of ownership, to LLC II or such other person or entity as may be designated in writing by LLC II, to receive payment therefor in cash in the amount of $531.35 per share. The record date for ownership of shares for the purpose of receiving such payment shall be the Effective Time.

3.1.2 After the Effective Time and until surrendered pursuant to this Article, each certificate which previously represented shares of Common Stock or fractions thereof shall be deemed for all corporate purposes to evidence only the right to receive cash in the manner set forth in Section 3.1.1.

3.2 Cancellation of Shares. Each share and fractional share of Common Stock issued and outstanding at the Effective Time shall be cancelled and shall cease to exist.

ARTICLE IV

MISCELLANEOUS

4.1 Termination. Notwithstanding the approval of this Agreement by the members of LLC II and shareholders of OPAMWC, this Agreement may be terminated at any time prior to the Effective Time by mutual written consent of the boards of directors of IRWD and OPAMWC and the members of LLC II.

4.2 Amendments and Waivers. This Agreement may not be amended except by an instrument in writing signed on behalf of each of the parties hereto. No amendment, supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (whether or not similar), nor shall such waiver constitute a continuing waiver unless otherwise expressly provided.

4.3 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same document.

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IN WITNESS WHEREOF, each of the parties hereto, pursuant to the authority given by resolutions adopted by its Board of Directors and by its Articles of Incorporation, respectively, has caused this Agreement to be executed as of the date first written above.

ORANGE PARK ACRES MUTUAL WATER COMPANY

By _____

Title: _____

By _____

Title: _____

IRVINE RANCH WATER DISTRICT WATER SERVICE COMPANY LLC II

By: IRVINE RANCH WATER DISTRICT, Manager

By _____

Title: _____

By _____

Title: _____

EXHIBIT "C"

COMPARISON TABLE OF EXISTING AND PROPOSED RATES & CHARGES
FOR ORANGE PARK ACRES

	Existing Rates for Orange Park Acres (FY 2006-07)		Proposed Rates for Orange Park Acres (with 20% reduction)		Comments
Monthly Service Charge (Irvine Ranch Area Residential Service Charge: FY 2007-08 - $7.50)	1/2"	$20.00	1/2"	$16.00	
	5/8"	$20.00	5/8"	$16.00	
	3/4"	$20.00	3/4"	$16.00	
	1"	$20.00	1"	$16.00	
	1 1/2"	$20.00	1 1/2"	$16.00	
	2"	$20.00	2"	$16.00	
	3"	$20.00	3"	$16.00	
	4"	$20.00	4"	$16.00	
	5"	$20.00	5"	$16.00	
	6"	$20.00	6"	$16.00	
	8"	$20.00	8"	$16.00	
	10"	$20.00	10"	$16.00	
Commodity Rate	Tier I	$1.984	Tier I	$1.587	0 – 10 ccf
	Tier II	$2.318	Tier II	$1.854	11 – 40 ccf
	Tier III	$2.896	Tier III	$2.317	41+ ccf
Delinquency and Service Restoration Charges:					
Previous Balance	Penalty	10%	Penalty	10.0%	
Second Month	Penalty	10%	Unpaid Balance	1.5%	
	discontinue water service		discontinue water service		
Reconnect Charge:		$100.00		$100.00	
Non-Sufficient Funds:		$25.00		$25.00	
If original NSF is paid with second NSF:		$100.00		$100.00	If not paid in full then service is discontinued

EXHIBIT "C"

TERMS AND CONDITIONS FOR ANNEXATION OF ORANGE PARK ACRES MUTUAL WATER COMPANY SERVICE AREA TO IRVINE RANCH WATER DISTRICT

Revised 10 December 2007

Condition No. 1 – Annexation Agreement.

The annexation ("Annexation") of the Orange Park Acres Mutual Water Company ("OPAMWC") into the Irvine Ranch Water District ("IRWD") shall be subject to the terms and conditions set forth in the Agreement for Acquisition and Annexation, dated as of September 24, 2007, by and between Orange Park Acres Mutual Water Company and Irvine Ranch Water District (the "Annexation Agreement").

Condition No. 2 – Designation of Successor

IRWD is designated as the successor to the OPAMWC for the purpose of succeeding to all of the rights, duties and obligations of OPAMWC with respect to enforcement, performance or payment of any outstanding contracts and obligations of OPAMWC upon its merger into IRWD's limited liability company as provided in the Annexation Agreement. The foregoing designation shall include, but not be limited to, that certain Compromise and Settlement Agreement, dated as of September 18, 1979, by and between the City of Orange and OPAMWC, as affected by Agreement Between Korbel Family Inter-Vivos Trust and Orange Park Acres Mutual Water Company For Release of Certain Appurtenant Water Rights, Abandonment of Service Area and Quitclaim of Interests In Real Property, dated January 13, 1992; as further affected by Agreement Between Orange Park Acres Mutual Water Company and Certain Property Owners Within Glen Arran Section of Orange Park Acres Mutual Water Company Service Area, dated January 20, 1992; and as further affected by Water Service Area Agreement, dated October 12, 1995, by and between the City of Orange and OPAMWC (collectively, the "1979 Service Area Agreement").

Condition No. 3 – Service Area

The annexing territory is within the Sphere of Influence of the City of Orange and a portion of the annexing territory is within the City of Orange. However, the 1979 Service Area Agreement provides, with respect to water service, that the City of Orange and OPAMWC will each provide water service within their respective service areas, only, except as to certain identified parcels for which the future water service provider may be changed under certain circumstances and in the manner provided in the 1979 Service Area Agreement.

EXHIBIT "C"

TERMS AND CONDITIONS FOR ANNEXATION OF ORANGE PARK ACRES MUTUAL WATER COMPANY SERVICE AREA TO IRVINE RANCH WATER DISTRICT

Condition No. 1 – Annexation Agreement

The annexation shall be subject to the terms and conditions set forth in the Agreement For Acquisition and Annexation, dated as of September 24, 2007, by and between Orange Park Acres Mutual Water Company and Irvine Ranch Water District (the "Annexation Agreement").

Condition No. 2 – Designation of Successor

Irvine Ranch Water District ("IRWD") is designated as the successor to the Orange Park Acres Mutual Water Company ("OPAMWC"), for the purpose of succeeding to all of the rights, duties and obligations of OPAMWC with respect to enforcement, performance or payment of any outstanding contracts and obligations of OPAMWC upon its merger into IRWD's limited liability company as provided in the Annexation Agreement. The foregoing designation shall include, but not be limited to, that certain Compromise and Settlement Agreement, dated as of September 18, 1979, by and between the City of Orange and OPAMWC, as affected by Agreement Between Korbel Family Inter-Vivos Trust and Orange Park Acres Mutual Water Company For Release of Certain Appurtenant Water Rights, Abandonment of Service Area and Quitclaim of Interests In Real Property, dated January 13, 1992; as further affected by Agreement Between Orange Park Acres Mutual Water Company and Certain Property Owners Within Glen Arran Section of Orange Park Acres Mutual Water Company Service Area, dated January 20, 1992; and as further affected by Water Service Area Agreement, dated October 12, 1995, by and between the City of Orange and OPAMWC (collectively, the "1979 Service Area Agreement").

Condition No. 3 – Service Area

The annexing territory is within the sphere of influence of the City of Orange and a portion of the annexing territory is within the City of Orange. However, the 1979 Service Area Agreement provides, with respect to water service, that the City of Orange and OPAMWC will each provide water service within their respective service areas, only, except as to certain identified parcels for which the future water service provider may be changed under certain circumstances and in the manner provided in the 1979 Service Area Agreement. It is acknowledged that the 1979 Service Area Agreement can be amended only by mutual agreement of the City and IRWD, as OPAMWC's successor.

Condition No. 4 – Compensation For Removal of Service Territory

(A) Protection of the Acquisition Balance. Under the Annexation Agreement, IRWD acquire the OPAMWC stock and will provide a means for the OPAMWC customers to correct deficiencies in the water system and to make a contribution and obtain participation in the IRWD replacement fund to pay for refurbishments that may be needed in such system in the future, by advancing the cost thereof (the "Acquisition Balance" as defined in the Annexation Agreement) and recovering such amount through a water rate differential borne by all former OPAMWC customers. Any future removal of parcels from the area of IRWD containing the former service area of OPAMWC (designated by IRWD as "Planning Area No. 156") shall be conditioned upon the payment to IRWD by the new water service provider of the amount representing the fractional share of the then-remaining Acquisition Balance attributable to the removed parcels.

(B) Lost Fixed Charges. In addition to compensation for the loss of water rate differentials that will retire the Acquisition Balance, removal of service area parcels from Planning Area No. 156 will result in the loss of future fixed meter charge payments. Any future removal of parcels from Planning Area No. 156 shall be conditioned upon the payment to IRWD of an amount representing the loss of this revenue, computed by escalating the then-current IRWD fixed meter charge and determining the discounted lump-sum value of the future cash flow therefrom, at reasonable escalation and discount rates and term.

(C) Value of Facilities. In addition to the foregoing, if the removal of service parcels includes the transfer of any water system capacity or facilities, any future removal of parcels from Planning Area No. 156 shall be conditioned upon the payment to IRWD of an amount representing depreciated replacement value of the capacity or facilities to be transferred.

(D) Facilities Retained. Under the Annexation Agreement, IRWD will achieve cost and operational efficiencies for the mutual benefit of the former OPAMWC customers and IRWD's existing service territory, by interconnecting and utilizing portions of IRWD's current system in lieu of refurbishing some of the deteriorated OPAMWC facilities. Any future removal of parcels from Planning Area No. 156 shall be conditioned upon the retention by IRWD of ownership of any facilities that have capacity in excess of the needs of the removed area and that are used to serve areas that remain in IRWD. In the instance of such facilities, only capacity would be transferred to the new provider in respect of the removed areas. A further condition shall be an appropriate mechanism for the allocation of flows if such sewer transfers result in combined tributary flows to any sewers.

Conditions 4(B), (C) and (D) above shall apply to both water and sewer service. Condition 4(A) is applicable to water service.

Condition No. 4 – Future Annexation of Former OPAMWC Service Area to the City of Orange

If through future LAFCO action, the former OPAMWC service area is annexed in its entirety into the City of Orange ("City's Annexation"), IRWD will cooperate with the City of Orange, at its request, to transfer water and sewer service and facility ownership to the City. Any transfer will require that the City assume both water and sewer service, will secure detachment of the area in its entirety from IRWD through LAFCO, and will secure an administrative transfer through Orange County Sanitation District ("OCSD") of the area from Revenue Area 14 (IRWD) to the OCSD Consolidated Revenue Area. Notwithstanding the City of Orange's ability to exercise its general police powers, under no circumstances, except as provided in the terms and conditions, shall this reorganization permit the City's concurrent provision of water or sewer service to the Orange Park Acres Mutual Water Company service area.

In addition, such transfer of territory or service provision will result in no negative financial or operational impacts to IRWD or to the customers formerly served by OPAMWC, and will be subject to an agreement to terminate the 1979 Service Area Agreement based upon the following:

(A) Maintenance of Obligations. As a condition of water service and facility ownership transfer, the City of Orange will assume all then-current and remaining obligations of IRWD to the former customers of the OPAMWC contained in the Annexation Agreement.

(B) Compensation for Water Facilities. Any transfer of water service facilities or capacity to the City shall be conditioned upon payment to IRWD of an amount representing the depreciated replacement value of:

1. The current OPAMWC water system in existence on the effective date of the annexation of the OPAMWC service area into IRWD;
2. Upgraded or replaced facilities constructed by IRWD as described in the Annexation Agreement; and
3. Other facilities or upgrades to facilities constructed by IRWD in the OPAMWC service area as a result of system deficiencies, wear or failures encountered by IRWD during its ownership of the system.

Attachment A hereto shows the methodology for the valuation using the current OPAMWC water system value and cost estimates for recommended upgrades to that system included in (B)1, and (B)2, above. The City's payment to IRWD shall be reduced by a "credit" representing the cumulative amount paid by OPAMWC residents through water rates and charges to IRWD from the effective date of the Annexation to the effective date of the City's Annexation for upgraded or replaced facilities constructed by IRWD as described in the Annexation Agreement. The "credit" shall be decreased by the cumulative amount representing the rate and charge reductions provided by IRWD to former OPAMWC customers as described in Sections 4.2, 4.3 and 4.6 of the Annexation

Agreement from the effective date of the Annexation to the date of the City's Annexation, and any costs incurred by IRWD for planning, engineering, legal, and other infrastructure design and construction related expenses, including staff time, as well as costs for implementing the Annexation and merger as identified in the Annexation Agreement.

(C) Compensation for Sewer Facilities. Any transfer of sewer service facilities and treatment and disposal capacity at OCSD to the City shall be conditioned upon payment to IRWD of an amount representing:

1. The depreciated replacement value of all sewer infrastructure existing or acquired by IRWD from the effective date of the Annexation of the OPAMWC service area into IRWD to the effective date of the City's Annexation,
2. The depreciated replacement value of all sewer infrastructure constructed by IRWD from the effective date of the Annexation to the effective date of the City's Annexation, including any master planned facilities and any facilities constructed to remedy system deficiencies, or to correct wear or failures encountered by IRWD during its ownership of the system;
3. OCSD annexation fees applicable at the time of the City's Annexation, plus the cumulative costs incurred by IRWD from the effective date of the Annexation to the effective date of the City's Annexation for OCSD regional sewage treatment and disposal capacity including equity payments and payments to the Capital Outlay Revolving Fund (CORF); and
4. Expenses incurred by IRWD for planning, engineering, legal, debt issuance and other related expenses, including staff time, through the effective date of the City's Annexation.

The City's payment to IRWD shall be reduced by a "credit" representing the cumulative amount of principal payments made by former OPAMWC residents from the effective date of the Annexation to the date of the City's Annexation through IRWD levied taxes, sewer rates or other capital charges for sewer infrastructure included in (C)2, and regional sewage treatment and disposal capacity related expenses included in (C)3, less any equity adjustments attributable to the transfer of flows from OCSD Revenue Area 14 (IRWD) to the Consolidated Revenue area as a result of the City's Annexation.

(D) Acquisition and Ownership of Facilities and Capacity. As provided in (B), above, the City may acquire and own all pipes, pumps, wells and appurtenant equipment ("water system") purchased or installed by IRWD as part of the Annexation Agreement. IRWD shall retain capacity ownership in the water system not needed to serve the OPAMWC service area, as provided for in the Annexation Agreement. The foregoing notwithstanding, well and well capacity ownership will be made subject to alternative ownership arrangements as may be necessary to meet the requirements of Orange County Water District without impairing the optimal utilization of the wells or the capacity rights

described herein. City will be obligated to operate the acquired facilities in which IRWD retains and utilizes capacity, subject to emergency, facility destruction, regulatory requirements and other appropriate exceptions. IRWD will reimburse the City of Orange for costs associated with the operation and maintenance of the acquired facilities on a pro-rata basis. The foregoing will be detailed in an agreement to be entered into by IRWD and Orange prior to the City's Annexation.

Conditions 4(B) and (D) above shall apply to water service. Condition 4(C) is applicable to sewer service.

Condition No. 5 – Annexation of Future Development Parcels within the Former OPAMWC Service Area to the City of Orange

IRWD will cooperate to transfer service responsibility for any parcels that are formerly served by the OPAMWC and undeveloped as of the effective date of the Annexation ("Future Development Parcels") when such parcels are located in the City of Orange and can be more logically served from City water and sewer systems. These transfers would be evaluated on a case-by-case basis pursuant to mutual agreement of the City and IRWD and in accordance with the 1979 Service Area Agreement, and would require landowner consent. Any transfer of service responsibility for Future Development Parcels to the City will require that the City assume both water and sewer service, and secure detachment of the parcels from IRWD through LAFCO. In addition, such transfer will result in no negative financial or operational impacts to IRWD or to the customers formerly served by OPAMWC. Any subsequent agreement(s) between IRWD and the City regarding changes in the service area boundary to transfer service responsibility for Future Development Parcels will require executing an amendment to the 1979 Settlement Agreement between OPAMWC and the City of Orange, and will also be subject to the following:

(A) Protection of the Acquisition Balance. Under the Annexation Agreement, IRWD will acquire the OPAMWC stock and will provide a means for the OPAMWC customers to correct deficiencies in the water system and to make a contribution and obtain participation in the IRWD replacement fund to pay for refurbishments that may be needed in such system in the future, by advancing the cost thereof (the "Acquisition Balance" as defined in the Annexation Agreement) and recovering such amount through a water rate differential borne by all former OPAMWC customers. Any transfer of service responsibility for Future Development Parcels to the City shall be conditioned upon the payment to IRWD by the City, as the new water service provider, of the amount representing the fractional share of the then-remaining Acquisition Balance attributable to the future development parcels.

(B) Lost Fixed Charges. In addition to compensation for the loss of water rate differentials that will retire the Acquisition Balance, transfer of service responsibility for Future Development Parcels to the City will result in the loss of future fixed meter charge

Condition No. 7 – Sewer Service

Sewer service will be provided in the annexing area at the request of area residents, subject to: (1) successful completion of the merger of OPAMWC; (2) successful annexation to OCSD; and (3) IRWD's investigation of the physical, institutional, and financial feasibility of providing sewer collection service to all or a part of the annexing area desiring such service, and if found to be feasible, development of necessary institutional arrangements and implementation of a financing mechanism to fund the required facilities that is acceptable to the residents of the service area, design and construction of sewer facilities. Within twelve (12) months of the effective date of the Annexation, IRWD shall provide and activate IRWD sewer service to the properties within Planning Area No. 156 currently served by the City pursuant to out of area sewer service agreements ("Out of Area Agreements"). Prior to said activation, IRWD would acquire sewer system facilities or capacity owned by the City of Orange or other owners, as needed, based upon replacement value less depreciation or other method as specified by existing Out of Area Agreements. Upon said activation, IRWD shall be the City's successor to City's right and obligation to provide sewer service under each Out of Area Agreement, City shall retain the right to receive any then accrued and unpaid sums due from any customer and shall retain and discharge, prior to activation of service, any obligations for sums owed to any customer under such Out of Area Agreement, and the Agreement shall be extinguished.

Condition No. 8 – Effective Date

The effective date of the Annexation shall be the date of recordation which shall generally correspond to the effective date of the merger of OPAMWC into IRWD's limited liability company, as such date is established by the filing of the certificate of merger. The effectiveness of any separate or concurrent annexation to OCSD of the portion of the herein subject territory which is not already within OCSD, shall be conditioned upon the effectiveness of the Annexation and the receipt of IRWD's commitment to be the local sewer service provider.

Condition No. 9 – Coordination of Groundwater Production, Monitoring and Mitigation of Impacts from New or Upgraded Wells

The Second Amended Agreement between the City of Orange and IRWD (dated August 28, 2006) regarding water service to the SHII/East Orange Area, provides that any municipal groundwater production wells operated by IRWD within the Sphere of Influence of the City of Orange shall only serve water customers within the Sphere of Influence of the City of Orange (to be determined on the basis of water accounting, showing no net export) unless otherwise authorized by the City of Orange's prior written consent.

In order coordinate groundwater production, monitoring and the mitigation of impacts from new wells, IRWD and the City of Orange shall establish a Joint Groundwater Engineering and Management Committee and shall each appoint one representative and one alternate representative to the Joint Committee. The primary purpose of the Joint Committee shall be to facilitate communication between IRWD and the City of Orange and to cooperatively monitor and evaluate groundwater production and distribution activities in OPAMWC and the SHII/East Orange Area. IRWD and the City of Orange shall give full consideration to all recommendations of the Joint Committee. The Committee shall coordinate its activities and recommendations with the Orange County Water District (OCWD) and shall request OCWD to participate in the Committee's tasks. The Joint Committee shall meet periodically, but at least once a year, to perform such tasks as may be assigned to it by IRWD and the City of Orange from time to time, including, but not limited to, the following:

- Monitoring of groundwater levels and production in the OPAMWC and east Orange area
- Monitoring of water quality in the OPAMWC, east Orange area.
- Reviewing any proposed IRWD and City of Orange well sites for drawdown impact and spacing considerations within OPAMWC and East Orange areas.
- Development of mitigation measures for IRWD and City of Orange wells effected by increased pumping or water quality changes.
- Allocation of cost of groundwater mitigation measures.
- Development of programs to augment groundwater production in the east Orange area.

Appendix C

Air Quality Calculations

2/23/2011 10:01:48 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Work\IRWD\OPA Wells\Analysis\IRWD OPA Wells.urb924

Project Name: IRWD OPA Wells

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	2.86	28.42	12.93	0.00	2.21	1.18	3.38	0.46	1.08	1.54	5,489.22
2012 TOTALS (lbs/day unmitigated)	4.03	36.07	17.91	0.01	2.21	1.63	3.28	0.46	1.50	1.51	6,792.06
2013 TOTALS (lbs/day unmitigated)	3.82	32.75	17.79	0.00	0.02	1.26	1.27	0.01	1.16	1.16	6,792.04

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 7/1/2011-8/31/2011 Active Days: 44	1.64	12.35	8.32	0.00	0.02	0.80	0.82	0.01	0.74	0.74	1,535.66
Building 07/01/2011-08/31/2011	1.64	12.35	8.32	0.00	0.02	0.80	0.82	0.01	0.74	0.74	1,535.66
Building Off Road Diesel	1.49	10.93	6.10	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,111.56
Building Vendor Trips	0.12	1.35	0.98	0.00	0.01	0.06	0.06	0.00	0.05	0.05	264.83
Building Worker Trips	0.04	0.07	1.25	0.00	0.01	0.00	0.01	0.00	0.00	0.01	159.27
Time Slice 9/1/2011-9/30/2011 Active Days: 22	2.86	23.49	12.93	0.00	**2.21**	1.18	**3.38**	**0.46**	1.08	**1.54**	2,371.69
Fine Grading 09/01/2011-09/30/2011	2.86	23.49	12.93	0.00	2.21	1.18	3.38	0.46	1.08	1.54	2,371.69
Fine Grading Dust	0.00	0.00	0.00	0.00	2.20	0.00	2.20	0.46	0.00	0.46	0.00
Fine Grading Off Road Diesel	2.83	23.44	11.96	0.00	0.00	1.17	1.17	0.00	1.08	1.08	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.06	0.98	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.37
Time Slice 10/3/2011-11/30/2011 Active Days: 43	2.78	28.42	11.42	0.00	0.00	1.07	1.07	0.00	0.98	0.98	5,489.22
Trenching 10/01/2011-11/30/2011	2.78	28.42	11.42	0.00	0.00	1.07	1.07	0.00	0.98	0.98	5,489.22
Trenching Off Road Diesel	2.75	28.38	10.68	0.00	0.00	1.07	1.07	0.00	0.98	0.98	5,395.95
Trenching Worker Trips	0.02	0.04	0.73	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.28
Time Slice 12/1/2011-12/30/2011 Active Days: 22	1.82	15.81	9.09	0.00	0.02	0.80	0.82	0.01	0.74	0.75	2,547.98
Building 12/01/2011-08/31/2012	1.82	15.81	9.09	0.00	0.02	0.80	0.82	0.01	0.74	0.75	2,547.98
Building Off Road Diesel	1.66	14.39	6.87	0.00	0.00	0.74	0.74	0.00	0.69	0.69	2,123.88
Building Vendor Trips	0.12	1.35	0.98	0.00	0.01	0.06	0.06	0.00	0.05	0.05	264.83
Building Worker Trips	0.04	0.07	1.25	0.00	0.01	0.00	0.01	0.00	0.00	0.01	159.27

Time Slice 1/2/2012-8/14/2012 Active Days: 162	1.72	14.34	8.82	0.00	0.02	0.71	0.73	0.01	0.65	0.66	2,547.96
Building 12/01/2011-08/31/2012	1.72	14.34	8.82	0.00	0.02	0.71	0.73	0.01	0.65	0.66	2,547.96
Building Off Road Diesel	1.58	13.07	6.76	0.00	0.00	0.66	0.66	0.00	0.61	0.61	2,123.88
Building Vendor Trips	0.11	1.20	0.90	0.00	0.01	0.05	0.06	0.00	0.04	0.05	264.83
Building Worker Trips	0.04	0.07	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.01	159.25
Time Slice 8/15/2012-8/31/2012 Active Days: 13	3.55	25.22	17.31	**0.01**	0.03	**1.63**	1.66	0.01	**1.50**	1.51	3,771.71
Asphalt 08/15/2012-08/31/2012	1.83	10.89	8.49	0.00	0.01	0.92	0.93	0.00	0.85	0.85	1,223.75
Paving Off-Gas	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.16	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	26.92
Paving Worker Trips	0.05	0.09	1.59	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.61
Building 12/01/2011-08/31/2012	1.72	14.34	8.82	0.00	0.02	0.71	0.73	0.01	0.65	0.66	2,547.96
Building Off Road Diesel	1.58	13.07	6.76	0.00	0.00	0.66	0.66	0.00	0.61	0.61	2,123.88
Building Vendor Trips	0.11	1.20	0.90	0.00	0.01	0.05	0.06	0.00	0.04	0.05	264.83
Building Worker Trips	0.04	0.07	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.01	159.25
Time Slice 9/3/2012-10/31/2012 Active Days: 43	1.09	7.86	5.80	0.00	1.27	0.54	1.81	0.27	0.50	0.76	1,001.25
Demolition 09/01/2012-10/31/2012	1.09	7.86	5.80	0.00	1.27	0.54	1.81	0.27	0.50	0.76	1,001.25
Fugitive Dust	0.00	0.00	0.00	0.00	1.26	0.00	1.26	0.26	0.00	0.26	0.00
Demo Off Road Diesel	0.98	6.77	4.49	0.00	0.00	0.49	0.49	0.00	0.45	0.45	700.30
Demo On Road Diesel	0.08	1.04	0.40	0.00	0.01	0.04	0.05	0.00	0.04	0.04	176.60
Demo Worker Trips	0.03	0.05	0.91	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.35

Time Slice 11/1/2012-11/30/2012 Active Days: 22	2.72	22.00	12.42	0.00	**2.21**	1.08	3.28	**0.46**	0.99	1.45	2,371.66
Fine Grading 11/01/2012-11/30/2012	2.72	22.00	12.42	0.00	2.21	1.08	3.28	0.46	0.99	1.45	2,371.66
Fine Grading Dust	0.00	0.00	0.00	0.00	2.20	0.00	2.20	0.46	0.00	0.46	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.03	0.05	0.91	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.35
Time Slice 12/3/2012-12/31/2012 Active Days: 21	**4.03**	**36.07**	**17.91**	0.00	0.01	1.43	1.44	0.00	1.31	1.32	**6,792.06**
Trenching 12/01/2012-01/31/2013	4.03	36.07	17.91	0.00	0.01	1.43	1.44	0.00	1.31	1.32	6,792.06
Trenching Off Road Diesel	4.00	36.01	16.78	0.00	0.00	1.42	1.42	0.00	1.31	1.31	6,636.63
Trenching Worker Trips	0.03	0.06	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.43
Time Slice 1/1/2013-1/31/2013 Active Days: 23	3.82	32.75	17.79	0.00	0.01	1.26	1.27	0.00	1.16	1.16	6,792.04
Trenching 12/01/2012-01/31/2013	3.82	32.75	17.79	0.00	0.01	1.26	1.27	0.00	1.16	1.16	6,792.04
Trenching Off Road Diesel	3.79	32.69	16.74	0.00	0.00	1.25	1.25	0.00	1.15	1.15	6,636.63
Trenching Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.41
Time Slice 2/1/2013-10/31/2013 Active Days: 195	1.60	13.06	8.58	0.00	0.02	0.62	0.64	0.01	0.57	0.57	2,547.94
Building 02/01/2013-10/31/2013	1.60	13.06	8.58	0.00	0.02	0.62	0.64	0.01	0.57	0.57	2,547.94
Building Off Road Diesel	1.47	11.93	6.67	0.00	0.00	0.57	0.57	0.00	0.53	0.53	2,123.88
Building Vendor Trips	0.10	1.06	0.83	0.00	0.01	0.04	0.05	0.00	0.04	0.04	264.83
Building Worker Trips	0.03	0.06	1.08	0.00	0.01	0.00	0.01	0.00	0.00	0.01	159.23

Phase Assumptions

Phase: Demolition 9/1/2012 - 10/31/2012 - Residence Demo

Building Volume Total (cubic feet): 30000

2/23/2011 10:01:48 AM

Building Volume Daily (cubic feet): 3000

On Road Truck Travel (VMT): 41.67

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 9/1/2011 - 9/30/2011 - OPA Well 1 Site Preparation

Total Acres Disturbed: 0.7

Maximum Daily Acreage Disturbed: 0.18

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Fine Grading 11/1/2012 - 11/30/2012 - OPA Well 2 Site Preparation

Total Acres Disturbed: 0.7

Maximum Daily Acreage Disturbed: 0.18

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 10/1/2011 - 11/30/2011 - OPA Well 1 Drilling

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 24 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 4 hours per day

Phase: Trenching 12/1/2012 - 1/31/2013 - OPA Well 2 Drilling

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 24 hours per day

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/15/2012 - 8/31/2012 - Default Paving Description

Acres to be Paved: 0.23

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 12/1/2011 - 8/31/2012 - OPA Well 1 Final Construction

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 6 hours per day

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 7/1/2011 - 8/31/2011 - Deconstruction of OPA Well 3

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Pumps (53 hp) operating at a 0.74 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 2/1/2013 - 10/31/2013 - OPA Well 2 Final Construction

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 6 hours per day

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Work\IRWD\OPA Wells\Analysis\IRWD OPA Wells.urb924

Project Name: IRWD OPA Wells

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (tons/year unmitigated)	0.15	1.32	0.67	0.00	0.02	0.06	0.09	0.01	0.06	0.06	205.92
2012 TOTALS (tons/year unmitigated)	0.26	2.11	1.28	0.00	0.05	0.11	0.16	0.01	0.10	0.11	349.83
2013 TOTALS (tons/year unmitigated)	0.20	1.65	1.04	0.00	0.00	0.07	0.08	0.00	0.07	0.07	326.53

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2011	0.15	1.32	0.67	0.00	0.02	0.06	0.09	0.01	0.06	0.06	205.92
Building 07/01/2011-08/31/2011	0.04	0.27	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	33.78
Building Off Road Diesel	0.03	0.24	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	24.45
Building Vendor Trips	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.83
Building Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
Fine Grading 09/01/2011-09/30/2011	0.03	0.26	0.14	0.00	0.02	0.01	0.04	0.01	0.01	0.02	26.09
Fine Grading Dust	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.03	0.26	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.72
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37
Trenching 10/01/2011-11/30/2011	0.06	0.61	0.25	0.00	0.00	0.02	0.02	0.00	0.02	0.02	118.02
Trenching Off Road Diesel	0.06	0.61	0.23	0.00	0.00	0.02	0.02	0.00	0.02	0.02	116.01
Trenching Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
Building 12/01/2011-08/31/2012	0.02	0.17	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	28.03
Building Off Road Diesel	0.02	0.16	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	23.36
Building Vendor Trips	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91
Building Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
2012	0.26	2.11	1.28	0.00	0.05	0.11	0.16	0.01	0.10	0.11	349.83
Building 12/01/2011-08/31/2012	0.15	1.25	0.77	0.00	0.00	0.06	0.06	0.00	0.06	0.06	222.95
Building Off Road Diesel	0.14	1.14	0.59	0.00	0.00	0.06	0.06	0.00	0.05	0.05	185.84
Building Vendor Trips	0.01	0.11	0.08	0.00	0.00	0.00	0.01	0.00	0.00	0.00	23.17
Building Worker Trips	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.93

Asphalt 08/15/2012-08/31/2012	0.01	0.07	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	7.95
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	6.36
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
Demolition 09/01/2012-10/31/2012	0.02	0.17	0.12	0.00	0.03	0.01	0.04	0.01	0.01	0.02	21.53
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.02	0.15	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	15.06
Demo On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80
Demo Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67
Fine Grading 11/01/2012-11/30/2012	0.03	0.24	0.14	0.00	0.02	0.01	0.04	0.01	0.01	0.02	26.09
Fine Grading Dust	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.03	0.24	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.72
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37
Trenching 12/01/2012-01/31/2013	0.04	0.38	0.19	0.00	0.00	0.02	0.02	0.00	0.01	0.01	71.32
Trenching Off Road Diesel	0.04	0.38	0.18	0.00	0.00	0.01	0.01	0.00	0.01	0.01	69.68
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63

2013	0.20	1.65	1.04	0.00	0.00	0.07	0.08	0.00	0.07	0.07	326.53
Trenching 12/01/2012-01/31/2013	0.04	0.38	0.20	0.00	0.00	0.01	0.01	0.00	0.01	0.01	78.11
Trenching Off Road Diesel	0.04	0.38	0.19	0.00	0.00	0.01	0.01	0.00	0.01	0.01	76.32
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
Building 02/01/2013-10/31/2013	0.16	1.27	0.84	0.00	0.00	0.06	0.06	0.00	0.06	0.06	248.42
Building Off Road Diesel	0.14	1.16	0.65	0.00	0.00	0.06	0.06	0.00	0.05	0.05	207.08
Building Vendor Trips	0.01	0.10	0.08	0.00	0.00	0.00	0.01	0.00	0.00	0.00	25.82
Building Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.52

Phase Assumptions

Phase: Demolition 9/1/2012 - 10/31/2012 - Residence Demo

Building Volume Total (cubic feet): 30000

Building Volume Daily (cubic feet): 3000

On Road Truck Travel (VMT): 41.67

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 9/1/2011 - 9/30/2011 - OPA Well 1 Site Preparation

Total Acres Disturbed: 0.7

Maximum Daily Acreage Disturbed: 0.18

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Fine Grading 11/1/2012 - 11/30/2012 - OPA Well 2 Site Preparation

Total Acres Disturbed: 0.7

Maximum Daily Acreage Disturbed: 0.18

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 10/1/2011 - 11/30/2011 - OPA Well 1 Drilling

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 24 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 4 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 4 hours per day

Phase: Trenching 12/1/2012 - 1/31/2013 - OPA Well 2 Drilling

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 24 hours per day

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/15/2012 - 8/31/2012 - Default Paving Description

Acres to be Paved: 0.23

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 12/1/2011 - 8/31/2012 - OPA Well 1 Final Construction

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 6 hours per day

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 7/1/2011 - 8/31/2011 - Deconstruction of OPA Well 3

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Pumps (53 hp) operating at a 0.74 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Building Construction 2/1/2013 - 10/31/2013 - OPA Well 2 Final Construction

Off-Road Equipment:

1 Bore/Drill Rigs (291 hp) operating at a 0.75 load factor for 6 hours per day

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Table 6. Total estimated GHG emissions from construction

	Input Emissions					
	Off Road Emissions			On road Emissions		
Year of Construction	**CO2 (metric tons/yr)**	**CH4 (metric tons/yr)**	**N2O (metric tons/yr)**	**CO2 (metric tons/yr)**	**Other (metric tons/yr)**	**CO2e (metric tons/yr)**
2011	171.0	0.0	0.0	15.8	0.8	189.2
2012	273.7	0.0	0.0	43.7	2.3	322.1
2013	257.1	0.0	0.0	39.1	2.1	300.6
Total Construction Emissions	**701.8**	**0.0**	**0.0**	**98.6**	**5.2**	**812.0**

Sources: URBEMIS 2007; CCAR 2008.

27.1

Diesel Fuel	**CO2**	**CH4**	**N2O**
kg CO2/gal diesel	10.15	0.00058	0.00026
g/gal diesel construction equip		0.58	0.26
ratio	1	5.71429E-05	2.56158E-05

Source: CH4 and N2O from Construction

tons/metric ton	Percent other (	GAS	CH4	N2O
0.90718474	5.00%	GWP	21	310

Greenhouse Gas (GHG) Emissions Calculations

Project Name: IRWD OPA Wells

Indirect Greenhouse Gas Emissions From Project Use of Electricity (Power Plant Emissions)

Estimated Project Annual Electrical Use: 5,148,000 kWh/year
5,148 mWh/year

Indirect GHG	Emission Factor (lb/mWh)[1]	Project Electricity (mWh)	GHGs (metric tons)	CO2 Equivalent Factor[2]	CO2 Equivalent Emissions (metric tons)
Carbon Dioxide (CO2)	724.12	5,148	1,691	1	1,691
Nitrous Oxide (N2O)	0.0081	5,148	0.019	310	6
Methane (CH4)	0.0302	5,148	0.071	21	1
		Total Indirect GHG Emisisons from Project Electricity Use =			**1,698**

Conversion:

Pounds per Metric Ton 2204.6226

Sources:

1: California Climate Action Registry. General Reporting Protocol Version 3.1. Appendix C Table C.2

2: California Climate Action Registry. General Reporting Protocol Version 3.1. Appendix C Table C.1

Appendix D

OCWD Basin Model Runs

DRAFT #2

TECHNICAL MEMORANDUM

DATE: May 24, 2011
TO: Patricia Uematsu (IRWD), Bob Baehner (City of Orange)
FROM: Tim Sovich, Roy Herndon

SUBJECT: OCWD Basin Model Runs for Proposed Orange Park Acres Pumping

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This technical memorandum was commissioned by the Joint Groundwater and Engineering Committee comprised of IRWD, City of Orange, and OCWD, to document the input assumptions and to summarize the output results of computer simulations conducted by OCWD staff. The OCWD basin-wide groundwater flow model (basin model) was used to forecast the incremental water level decline (drawdown) resulting from the proposed pumping increase by IRWD at the Orange Park Acres (OPA) site in the City of Orange. Two new wells are proposed on the OPA site, one to replace existing well "OPWC" and a second well to accommodate anticipated future growth.

Two 2035 baseline conditions were formulated for this analysis, one at a lower basin recharge volume (supporting a basin production percentage (BPP) of approximately 52%) and one at a higher basin recharge volume (supporting a BPP of 75%). The lower recharge baseline condition is based on recent projections by OCWD of limited water supplies for recharging the groundwater basin in 2035, especially reduced Santa Ana River (SAR) base flows based on SAWPA projections of increased reclamation in the upper SAR watershed. The higher recharge baseline condition incorporates more optimistic future water supply projections that would support a higher BPP so that a potential maximum amount of OPA pumping can be quantified and evaluated.
Both baseline conditions assumed that OPA pumping without the proposed expansion was 700 AFY, which is representative of the current average production from existing well "OPWC" at the OPA site.

A total of four model runs were conducted:

- Run 1: Low-BPP baseline with OPA pumping of 700 AFY
- Run 2: Low-BPP scenario with future OPA pumping of 4,256 AFY
- Run 3: High-BPP baseline with OPA pumping of 700 AFY
- Run 4: High-BPP scenario with future OPA pumping of 6,210 AFY

For all four model runs, OPA pumping was assumed to follow IRWD's existing demand curve, i.e., OPA pumping was varied on a monthly basis, with somewhat more pumping in the summer and less in the winter. In other words, the annual OPA pumping

amounts for each of the four runs listed above were multiplied by the monthly IRWD demand percentages to obtain the monthly OPA pumping amounts used in the model. The IRWD monthly demand percentages are listed below:

- Jan: 6.17%
- Feb: 5.80%
- Mar: 6.26%
- Apr: 7.54%
- May: 10.05%
- Jun: 10.11%
- Jul: 11.53%
- Aug: 10.81%
- Sep: 10.83%
- Oct: 8.15%
- Nov: 6.71%
- Dec: 6.04%

Since the groundwater produced from the future OPA wells is not expected to require any water quality treatment based on existing well OPWC, the OPA pumping is not expected to qualify for a Basin Equity Assessment (BEA) exemption and thus was assumed to be part of IRWD's pumping below the BPP for all model runs rather than being above the BPP.

The two proposed wells at the OPA site were assumed to have the same screened interval as existing well OPWC. Therefore, the vertical distribution of future OPA pumping was assumed to be the same as existing well OPWC: 98.5% from the Principal aquifer (basin model layer 2) and only 1.5% from the Deep aquifer (basin model layer 3). Existing well OPWC is predominantly screened in the Principal aquifer but does extend slightly down into the Deep aquifer. However, since the Deep aquifer has a much lower permeability than the Principal aquifer in this area, the flow contribution from the Deep aquifer is estimated to be nearly negligible at 1.5%. Since nearly all (98.5%) of both the existing and future OPA pumping modeled herein is from the Principal aquifer, the maximum drawdown will also be in the Principal aquifer. Furthermore, nearby wells of concern (e.g., existing City of Orange production wells) for where OPA-induced drawdown is to be evaluated, are also screened primarily in the Principal aquifer. Therefore, only Principal aquifer (model layer 2) simulation results are presented in this technical memorandum. Model results for layers 1 and 3 were reviewed, and the simulated drawdown was verified to be significantly less than in model layer 2.

After OCWD had completed these four model runs, IRWD staff refined their estimate of average annual OPA water demand (and thus proposed pumping) for OPA to be 4,800 AFY. Since the revised future OPA pumping estimate of 4,800 AFY is relatively close to the modeled low-BPP case of 4,256 AFY (Run 2), the drawdown results from Run 2 were scaled up based on the proportional increase in total OPA pumping rather than conducting additional model runs. This approach is technically valid since drawdown is

linearly proportional to pumping. The calculated results for this revised case are discussed later in this memo and summarized in Table 2.

Upon review of the draft version of this technical memo, City of Orange staff subsequently requested that OCWD evaluate the predicted drawdown for three different future OPA annual pumping amounts of 4,645 AFY, 5,107 AFY, and 6,129 AFY. Since these three OPA pumping amounts are all within the range of the two previously modeled amounts of 4,256 and 6,210 AFY, the same approach as described above was used to factor the previously modeled drawdown amounts for these three new cases rather than conducting new model runs. The calculated results for these three new cases are discussed later in this memo and summarized in Table 2.

Background Conditions Common to All Four Model Runs

2035 water demand projections were used from the producer survey conducted by MWDOC during spring 2008. These demands are approximately 91,500 AFY more than in 2008-09. Annual groundwater production is calculated by multiplying each producer's 2035 water demand projection by the designated BPP for each scenario.

All model runs presented herein assume average hydrology but with a low-basin accumulated overdraft condition of approximately 500,000 AF. Basin-wide production and recharge are sufficiently balanced on an annual basis such that the model-calculated storage change is negligibly small over the course of each model run. Each model run is simulated for 9 years, with each of the 9 years having identical production and recharge input conditions for the entire basin model area, including 9 years of proposed OPA pumping. Carrying out the model runs for 9 years allowed sufficient time for the OPA-induced drawdown to reach its maximum value and stabilize before the end of the model run.

All model runs assumed no In-Lieu Program for 2035, since MWD is not expected to have this surplus water available in most years.

All model runs included existing groundwater quality treatment projects. The amount of pumping above the BPP that was used for the low-BPP model runs is listed below. For the high-BPP model runs, these pumping amounts were reduced slightly to prevent these 3 producers' overall pumping from being greater than their demand.

- IRWD Deep Aquifer Treatment System (DATS): 8,000 AFY
- IRWD Irvine Desalter Project (IDP): 8,593 AFY
- MCWD Colored Water (MCWD wells 6 and 11): 8,700 AFY
- Tustin Nitrate Removal: 1,400 AFY; Tustin Desalter Project: 2,800 AFY

The four model runs completed for this drawdown analysis are summarized below:

Run 1: OPA Baseline Pumping of 700 AFY for Low Recharge Case (52% BPP)

This 2035 baseline scenario used a lower basin recharge volume, which supports a BPP of 51.5%, approximately 10% lower than today's 62% BPP. As was mentioned above, water supplies available for groundwater recharge in 2035 may be reduced, most markedly SAR base flow due to increased conservation and reclamation in the upper SAR watershed. Average hydrology is assumed for purposes of defining incidental recharge and storm flow. Baseline Run 1 includes 18,000 AFY of Mid-Basin Injection supplied by GWR System Phase 2 expansion.

A model-simulated groundwater elevation contour map for model layer 2 (Principal aquifer), representing August 15 of the final year of Run 1, is included in the appendix (Figure A-1).

Run 2: Future OPA Pumping of 4,256 AFY for Low Recharge Case (52% BPP)

Run 2 had all of the same background conditions as baseline Run 1 so that the incremental effect of adding the future OPA pumping could be quantified. The 4,256 AFY of future OPA pumping represented the maximum amount that IRWD could pump while staying within the 51.5% BPP after including all higher priority IRWD pumping. The breakdown of IRWD pumping is shown in Table 1. Two IRWD baseline wells (IRWD-106 and IRWD-53) were removed from Run 2 to offset the OPA pumping increase, thereby keeping total IRWD pumping unchanged from the baseline Run 1.

Figure 1 shows the difference in simulated groundwater elevations between Run 2 and Run 1, representing the incremental water level change due solely to the future OPA increase of **3,556 AFY** above the baseline. A negative water level change represents a decline in simulated water levels from baseline Run 1 to Run 2. The model-predicted water level change in Figure 1 represents August 15 of the final year of the model run (year 9), at which time the water level decline was at a maximum due to the assumed seasonal distribution of future OPA pumping. The maximum water level change at the OPA site was approximately -32 feet (32 feet of drawdown) and reduced radially outward from the site. The drawdown was approximately 8 feet at the nearest large system production wells, O-23 and O-24. Table 2 shows the model-predicted drawdown at other nearby production wells.

The simulated water level rise in the Irvine area (Figure 1) is a by-product of having to remove wells IRWD-106 and IRWD-53 from Run 2 to offset the increase in OPA pumping.

A model-simulated groundwater elevation contour map for model layer 2 (Principal aquifer), representing August 15 of the final year of Run 2, is included in the appendix (Figure A-2).

Run 3: OPA Baseline Pumping of 700 AFY for High Recharge Case (75% BPP)

A second baseline condition was formulated using a higher basin recharge volume, which supports a BPP of 75% and is considered to be a future maximum BPP. Using a higher-recharge/maximum-BPP baseline condition subsequently enabled modeling the maximum amount of future OPA pumping for Run 4. More optimistic 2035 water supply projections for SAR base flow and storm flow were assumed for this baseline condition. Average hydrology was still assumed for incidental recharge.

Baseline Run 3 included Phase 3 GWR System expansion of an additional 10,000 AFY which was assumed to be recharged via Mid-Basin Injection. Run 3 also assumed a more optimistic projection of MWD imported water purchases (36,000 AFY) for direct replenishment. These optimistic water supply assumptions were made for the purpose of developing a baseline condition and future scenario to support a high BPP of 75%.

As with baseline Run 1, baseline Run 3 included 700 AFY of pumping from existing well OPWC at the OPA site. To accommodate the higher BPP of 75%, Run 3 also includes additional future pumping for IRWD: wells 21, 22, 51, 52, 53, and a future Tustin Legacy well. Table 1 shows the assumed production amounts for IRWD wells.

A model-simulated groundwater elevation contour map for model layer 2 (Principal aquifer), representing September 15 of the final year of Run 3, is included in the appendix (Figure A-3).

Run 4: Future OPA Pumping of 6,210 AFY for High Recharge Case (75% BPP)

Run 4 had all of the same background conditions as baseline Run 2 so that the incremental effect of adding the future OPA pumping could be quantified. The 6,210 AFY of future OPA pumping represented the maximum annual amount specified by IRWD staff at the time of this modeling. To accommodate the future OPA pumping increase of 5,510 AFY above the baseline, the Tustin Legacy well was removed, and wells 21 and 22 were both reduced, thereby keeping the total IRWD pumping volume the same as baseline Run 3. Table 1 shows the assumed production amounts for IRWD wells.

Figure 2 shows the difference in simulated groundwater elevations between Run 4 and Run 3, representing the incremental water level change due solely to the future OPA increase of **5,510 AFY** above the baseline. A negative water level change represents a decline in simulated water levels from baseline Run 3 to Run 4. The model-predicted water level change in Figure 2 represents September 15 of the final year of the model run (year 9), at which time the water level decline was at a maximum due to the assumed seasonal distribution of future OPA pumping. The maximum water level change at the OPA site was approximately -49 feet (49 feet of drawdown) and reduced radially outward from the site as before. The drawdown was approximately 12 feet at the nearest large system production wells, O-23 and O-24. Table 2 shows the model-predicted drawdown at other nearby production wells.

As before, the simulated water level rise in the Irvine/Tustin area (Figure 2) is a by-product of having removed and/or reduced IRWD wells from Run 4 that were included in baseline Run 3, so as to offset the OPA pumping increase and to keep IRWD total pumping constant between runs 3 and 4. Therefore, this water level rise is a by-product of the pumping assumptions.

To illustrate the seasonal variation in drawdown, Figure 3 shows the simulated water levels for the last 12 months (year 9) of all four model runs at nearby production well EOCW-W. The simulated water level difference from Run 1 to 2 and from Run 3 to 4 is largest in August/September and smallest in February, March, and April, as expected.

A model-simulated groundwater elevation contour map for model layer 2 (Principal aquifer), representing September 15 of the final year of Run 4, is included in the appendix (Figure A-4).

Drawdown Calculations for Other Potential Future OPA Pumping Amounts

As mentioned earlier, IRWD staff recently revised their estimate of average annual OPA water demand to 4,800 AFY. Rather than conducting a new model run with an OPA pumping amount of 4,800 AFY, drawdown results from Run 2 (4,256 AFY) were multiplied by a factor of 1.13 based on the proportional increase in total OPA pumping: 4,800 / 4,256 = 1.13. The total OPA pumping of 4,800 AFY represents an increase of 4,100 AFY above the baseline OPA pumping amount of 700 AFY.

Figure 4 shows the calculated drawdown contours based on scaling up the maximum drawdown from Run 2 by a factor of 1.13. Since this factor is very close to one, the calculated drawdown is only slightly more than Run 2 and the pattern is essentially the same. The maximum drawdown at the OPA site was 36 feet, as compared to 32 feet in Run 2. At the two nearest production wells O-23 and O-24, the drawdown was 9 feet, as compared to 8 feet in Run 2. Table 2 shows the calculated drawdown at other nearby large system production wells.

Three other proposed OPA pumping amounts were subsequently requested by the City of Orange for this drawdown analysis. As discussed earlier, these three OPA pumping amounts are 4,645 AFY, 5,107 AFY, and 6,129 AFY. All three represent potential future OPA pumping from the two proposed wells at the OPA site. The OPA pumping increase above the baseline is 700 AFY less than the amounts stated above. Since all three proposed OPA pumping amounts are within the range already modeled, the drawdown results from the previous model runs will be factored to obtain the drawdown for these three new cases rather than conducting three new model runs. Table 2 shows the calculated drawdown at nearby large system production wells for these three new cases.

Conclusions and Recommendations

In summary, maximum drawdown simulated in model layer 2 (Principal aquifer) caused by the proposed OPA pumping increase at City of Orange wells 23 and 24 (Orange wells closest to the OPA site) was 8 feet for the low-BPP scenario and 12 feet for the high-BPP scenario. For the other potential OPA pumping cases that were added after the model runs were completed, the calculated drawdown based on factoring the model results ranged between the 8 and 12-foot modeled drawdown results for Orange wells 23 and 24, as expected.

Upon construction and start-up of the first proposed OPA well, and later after the second well is constructed and placed on-line, it is recommended that both static and pumping levels be measured at least monthly at the OPA site. In addition, static water level measurements at nearby monitoring and production wells should be analyzed periodically to estimate the incremental water level decline in the Orange area due to the OPA pumping. However, due to both seasonal and long-term water level fluctuations in the Orange area due to other factors, it may be very difficult to isolate the observed effect of the OPA pumping.

Table 1. IRWD Pumping Distribution for OPA Basin Model Runs

	Run 1	***Run 2***	***Run 3***	***Run 4***
Existing and Future IRWD Wells	Low-BPP Baseline (afy)	Low BPP with Future OPA (afy)	High-BPP Baseline (afy)	High BPP with Future OPA (afy)
Above BPP……				
DATS	8,000	8,000	8,000	8,000
IDP Potable	4,093	4,093	3,580	3,580
IDP Non-Potable	3,900	3,900	3,900	3,900
IDP SGU	600	600	600	600
Subtotal:	16,593	16,593	16,080	16,080
BPP Pumping……	***51.5%***	***51.5%***	***75.0%***	***75.0%***
DRWF	28,000	28,000	28,000	28,000
IDP Potable	0	0	513	513
Well OPWC	700	0	700	0
Well 115	900	900	900	900
OPA (future)	0	4,256	0	6,210
Well 106	1,300	0	1,300	1,300
Well 72	0	0	0	0
Well 51	0	0	2,468	2,468
Well 52	0	0	2,468	2,468
Well 53	2,256	0	2,903	2,903
Well 21	0	0	4,500	2,481
Well 22	0	0	2,900	1,000
Tustin Legacy No.1	0	0	1,591	0
Subtotal:	33,156	33,156	48,242	48,242
Grand Total:	49,749	49,749	64,322	64,322

Table 2. Model-Simulated Drawdown at Nearby Production Wells

	Modeled OPA 4,256 AFY	*Modeled OPA 6,210 AFY*	*Interpolated OPA 4,800 AFY*	*Interpolated OPA 4,645 AFY*	*Interpolated OPA 5,107 AFY*	*Interpolated OPA 6,129 AFY*
Large System Production Well	**Max Drawdown (ft)[1] Due to OPA Pumping Increase of 3,556 AFY [2]**	**Max Drawdown (ft)[1] Due to OPA Pumping Increase of 5,510 AFY [2]**	**Max Drawdown (ft) Due to OPA Pumping Increase of 4,100 AFY [4]**	**Max Drawdown (ft) Due to OPA Pumping Increase of 3,945 AFY [4]**	**Max Drawdown (ft) Due to OPA Pumping Increase of 4,407 AFY [4]**	**Max Drawdown (ft) Due to OPA Pumping Increase of 5,429 AFY [5]**
EOCW-W	**5**	**7**	**6**	**5**	**6**	**7**
O-22	**2**	**4**	**2**	**2**	**2**	**4**
O-23	**8**	**12**	**9**	**9**	**10**	**12**
O-24	**8**	**12**	**9**	**9**	**10**	**12**
O-25	**2**	**4**	**2**	**2**	**2**	**4**
OPWC [3]	**32**	**49**	**36**	**35**	**38**	**49**
RHWC-E	**2**	**3**	**2**	**2**	**2**	**3**
SA-38	**2**	**2**	**2**	**2**	**2**	**2**
SID-3	**6**	**8**	**7**	**7**	**7**	**8**
T-PROS	**1**	**0**	**1**	**1**	**1**	**0**
T-YORB	**1**	**2**	**1**	**1**	**1**	**2**

Notes:

1. Model-predicted drawdown due to simulated pumping from two future IRWD Orange Park Acres (OPA) wells located at same site as existing well OPWC).

2. Modeled OPA pumping increase from baseline conditions under low- and high-BPP scenarios:
   3,556 AFY OPA pumping increase (51.5% BPP): 700 AFY baseline up to 4,256 AFY future
   5,510 AFY OPA pumping increase (75.0% BPP): 700 AFY baseline up to 6,210 AFY future

3. Location of maximum regional drawdown is at the OPA site, or at existing well OPWC. The modeled drawdown does not represent localized drawdown in the proposed pumping wells themselves. Rather, the simulated drawdown represents an average over the entire 500-ft grid cell containing the OPA wells.

4. The model-predicted drawdown from the 4,256 AFY OPA scenario was multiplied by a factor representing the proportional increase in OPA puming:
   4,800 AFY / 4,256 AFY = 1.13
   4,645 AFY / 4,256 AFY = 1.09
   5,107 AFY / 4,256 AFY = 1.20

5. The model-predicted drawdown from the 6,210 AFY OPA scenario was multiplied by 0.99 (6,129 / 6,210), representing the proportional decrease in OPA pumping relative to that model run. Since the OPA pumping amounts only differ by 81 AFY, the drawdown is the same as the modeled 6,210 AFY case.

FIGURE 1

Simulated Water Level Change for 3,556 AFY OPA Pumping Increase

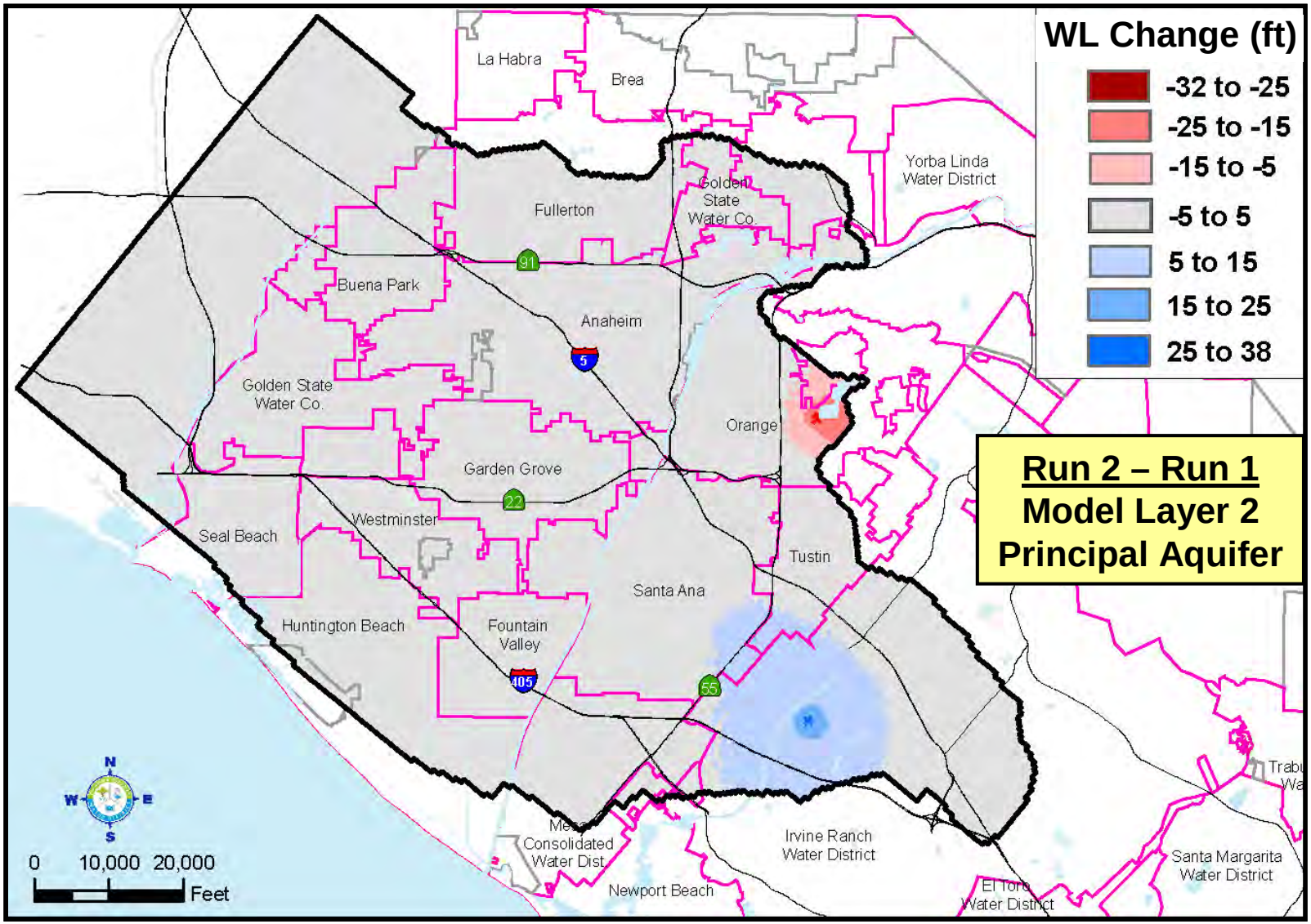


FIGURE 2

Simulated Water Level Change for 5,510 AFY OPA Pumping Increase

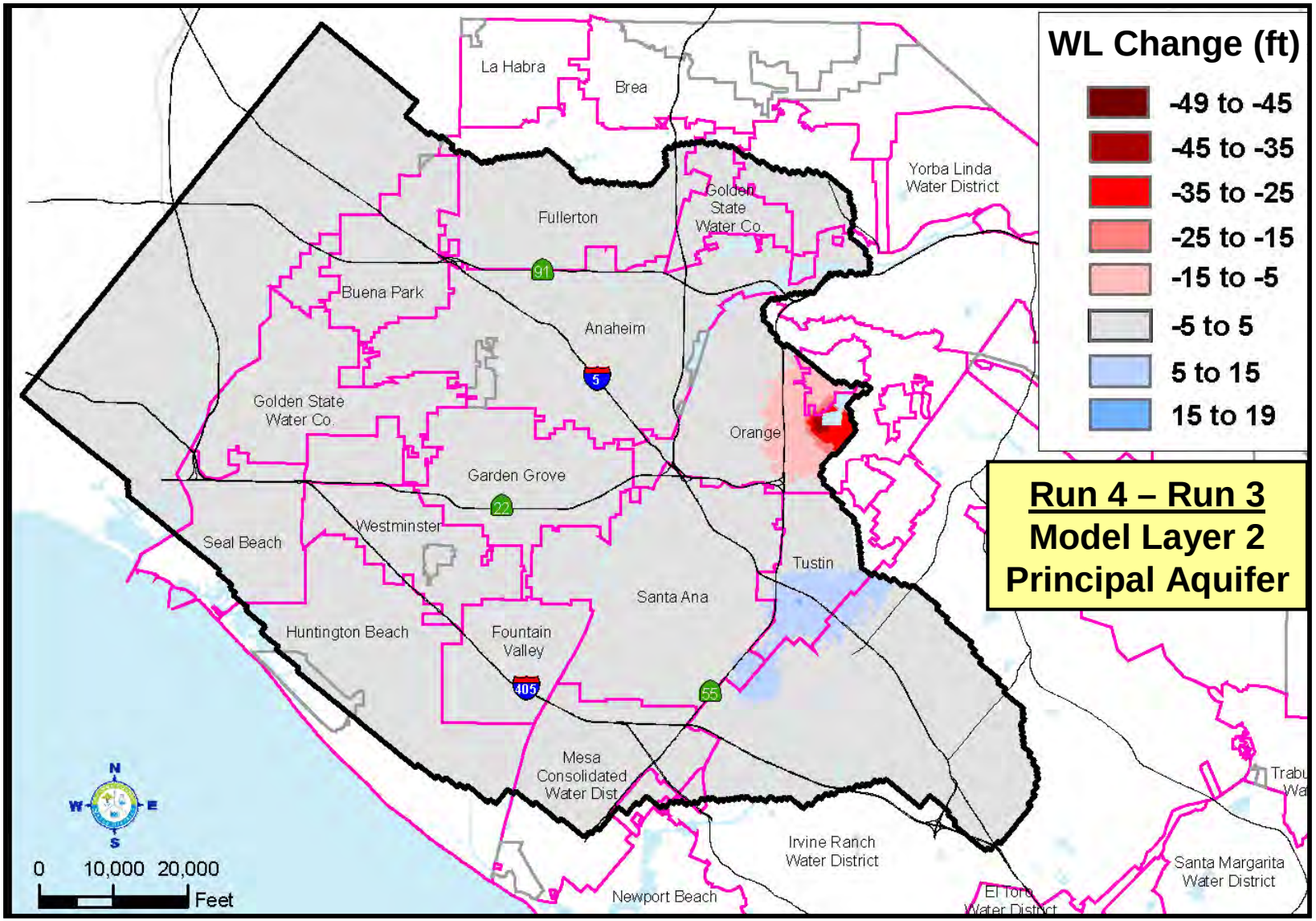
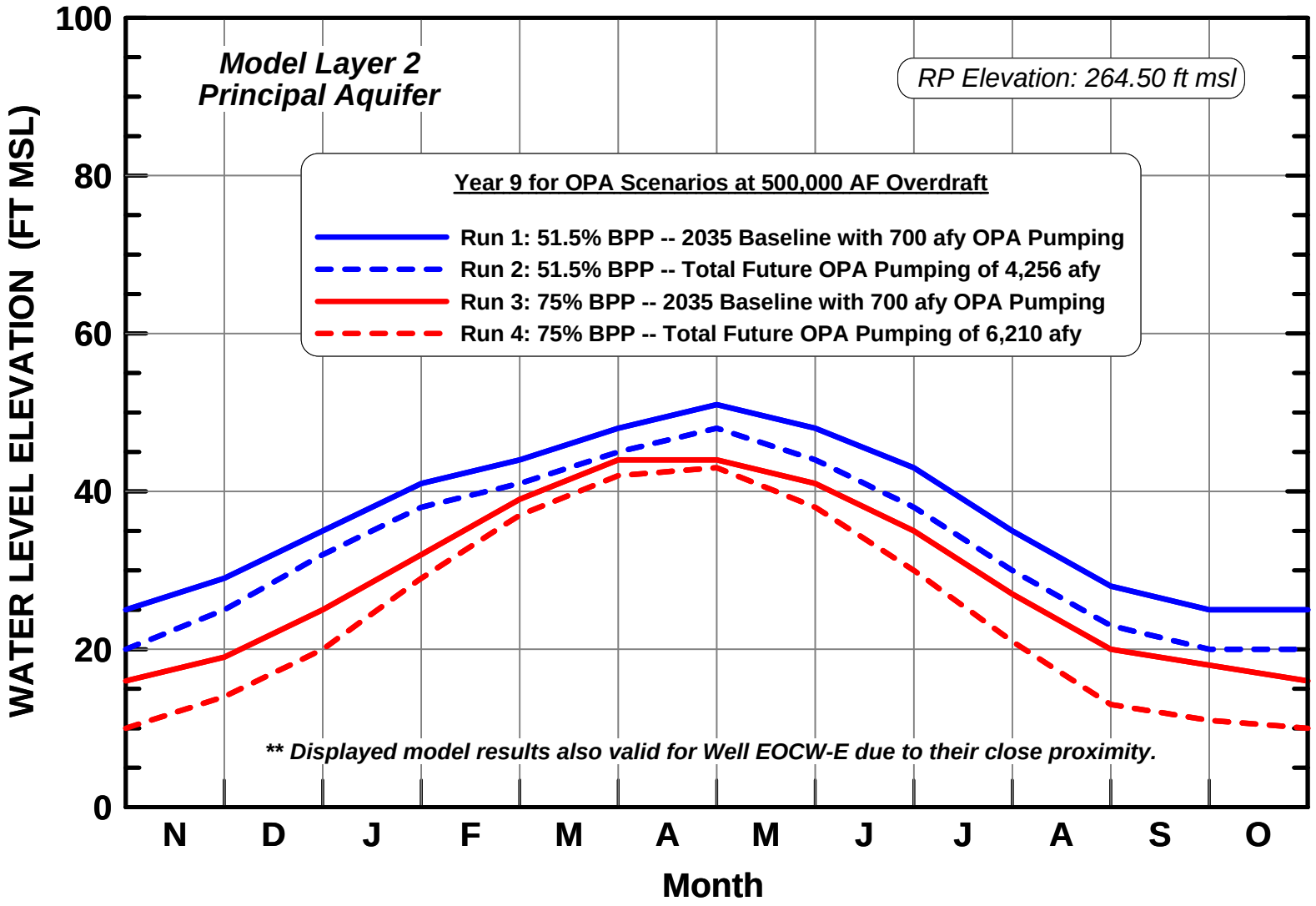
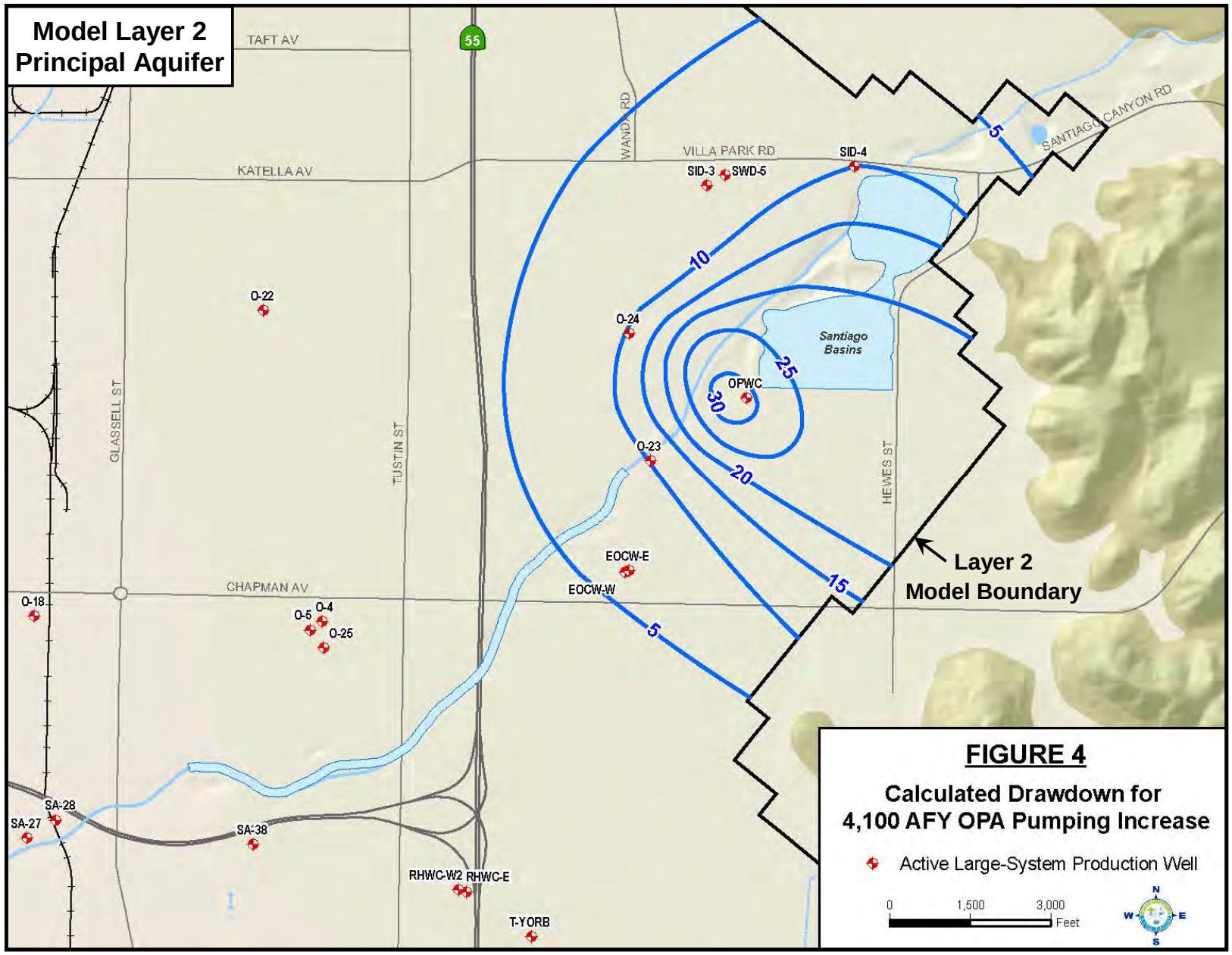


FIGURE 3

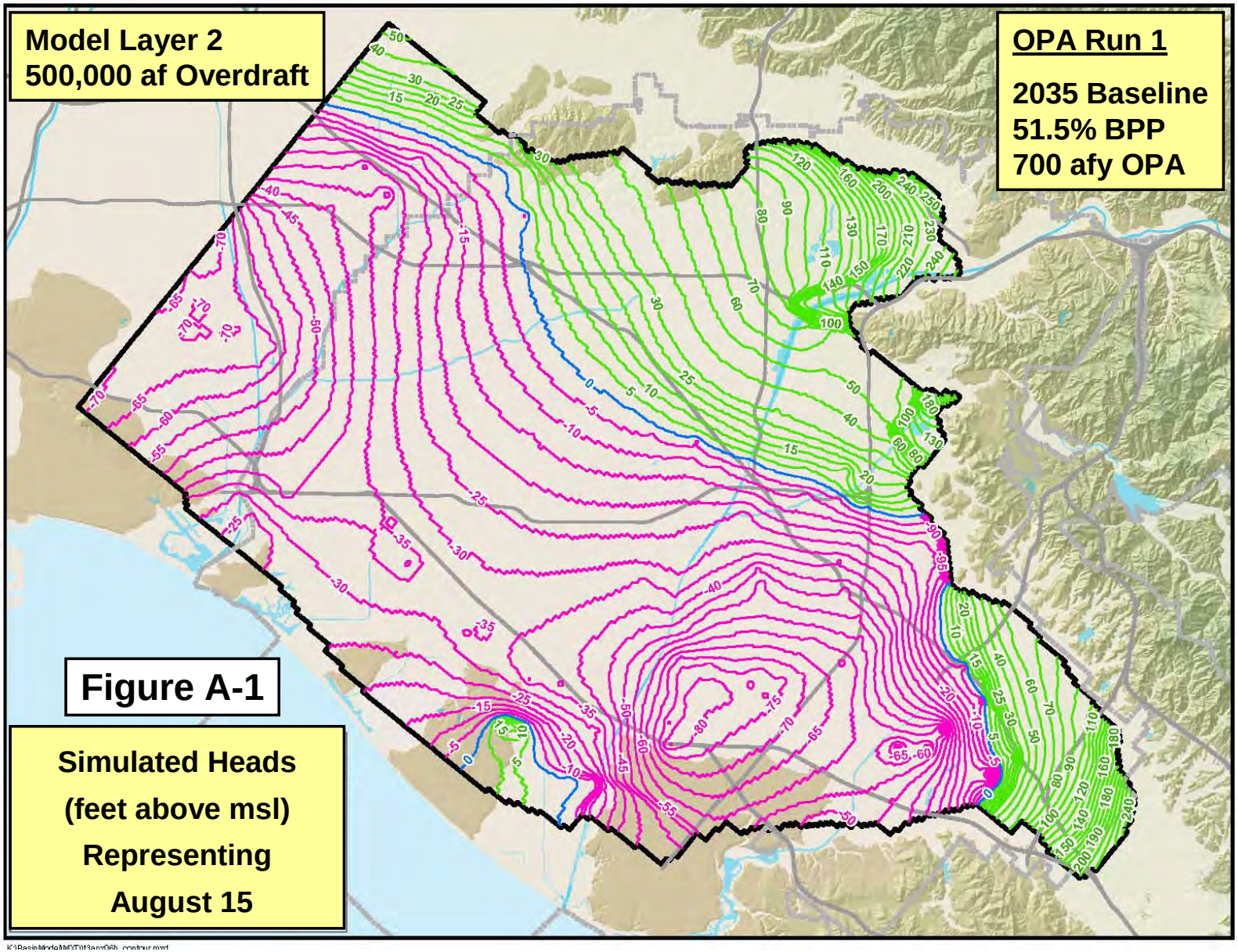
Simulated Water Level Elevations Near Production Well EOCW-W **

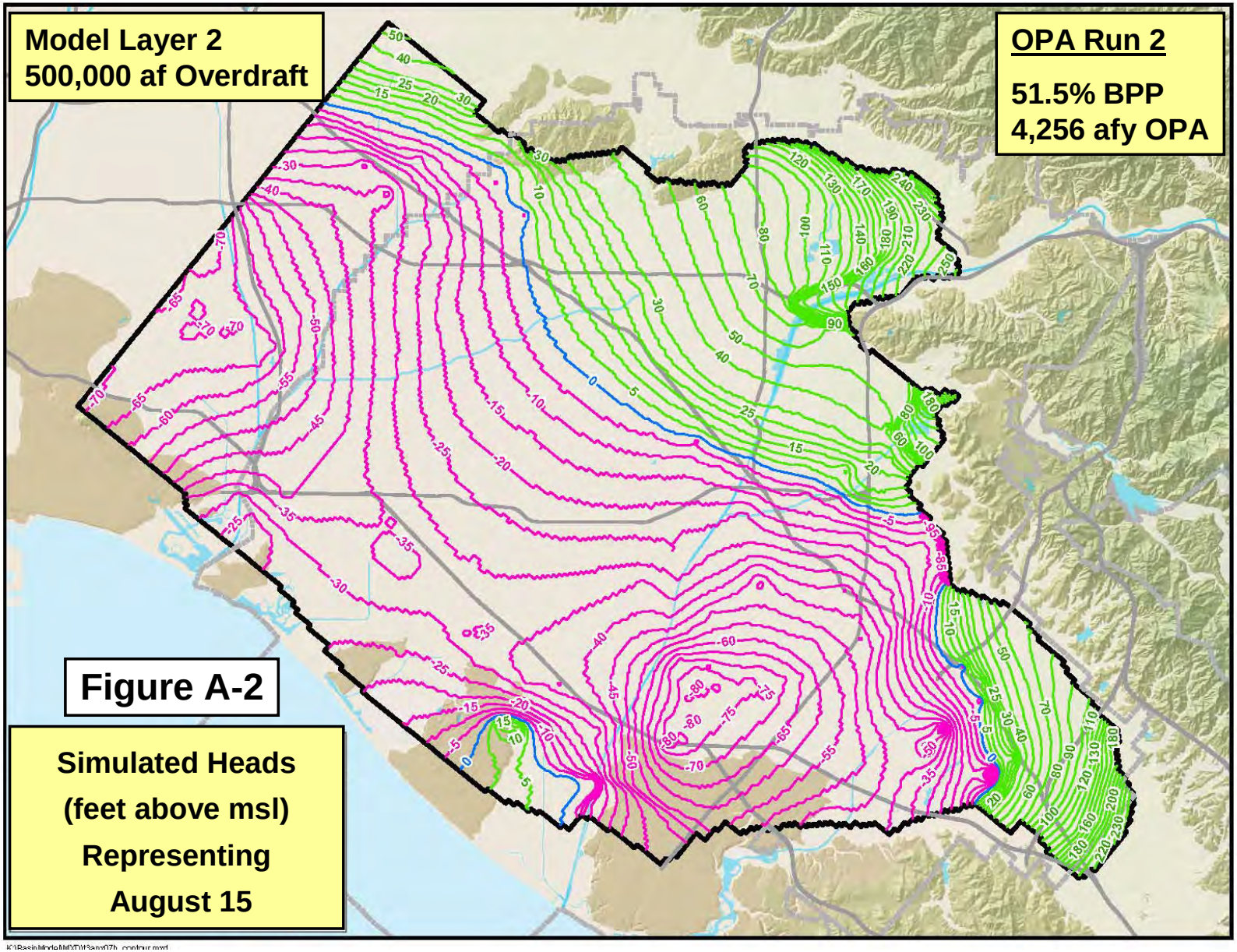


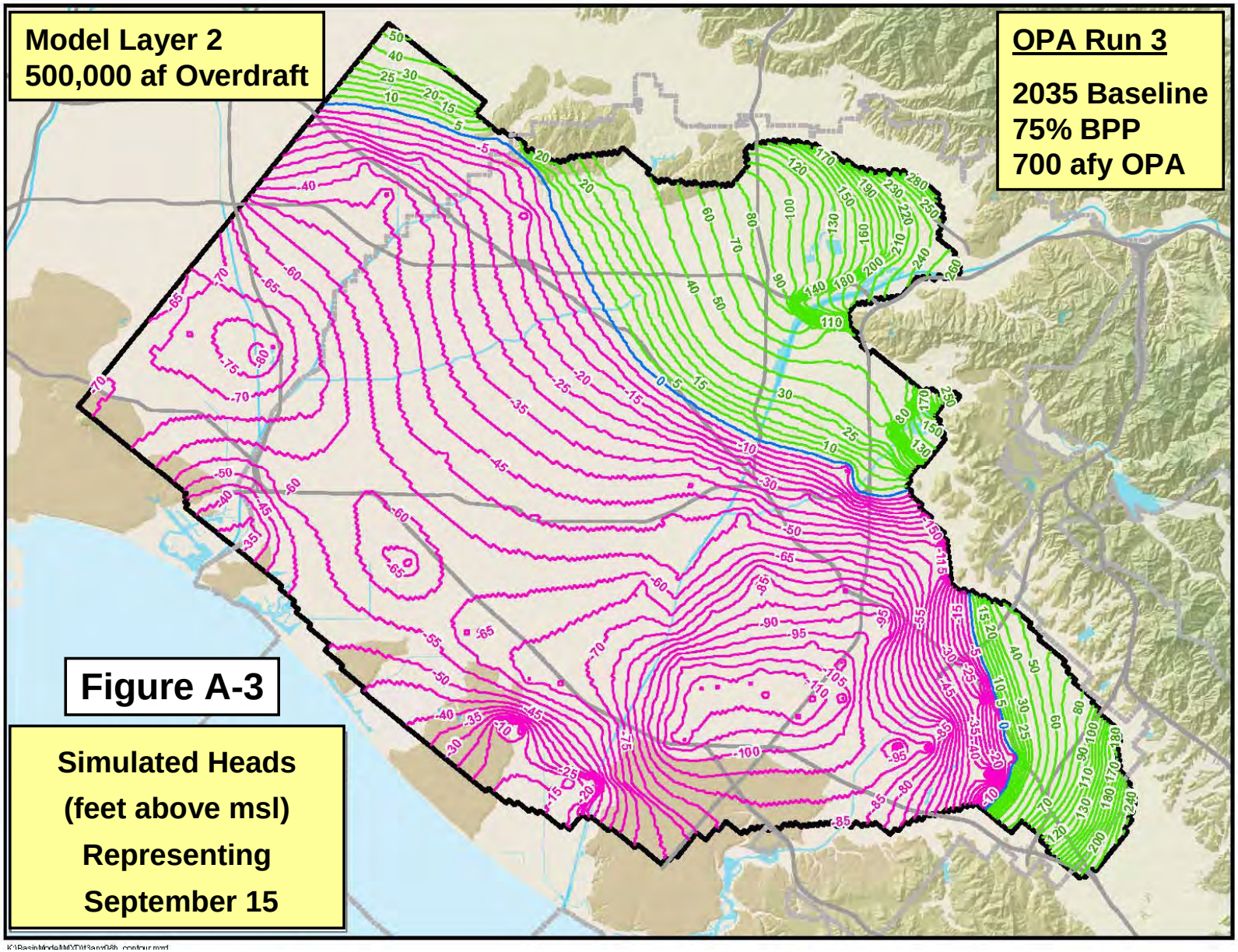

Model Layer 2
Principal Aquifer
TAFT AV
55
KATELLA AV
VILLA PARK RD
WANDA RD
SANTIAGO CANYON RD
SID-4
SID-3
SWD-5
5
10
25
30
20
15
5
O-22
O-24
Santiago
Basins
OPWC
O-23
GLASSELL ST
TUSTIN ST
HEWES ST
EOCW-E
EOCW-W
CHAPMAN AV
O-18
O-5
O-4
O-25
Layer 2
Model Boundary
SA-28
SA-27
SA-38
RHWC-W2
RHWC-E
T-YORB
FIGURE 4
Calculated Drawdown for
4,100 AFY OPA Pumping Increase
Active Large-System Production Well
0
1,500
3,000
Feet
N
W
E
S

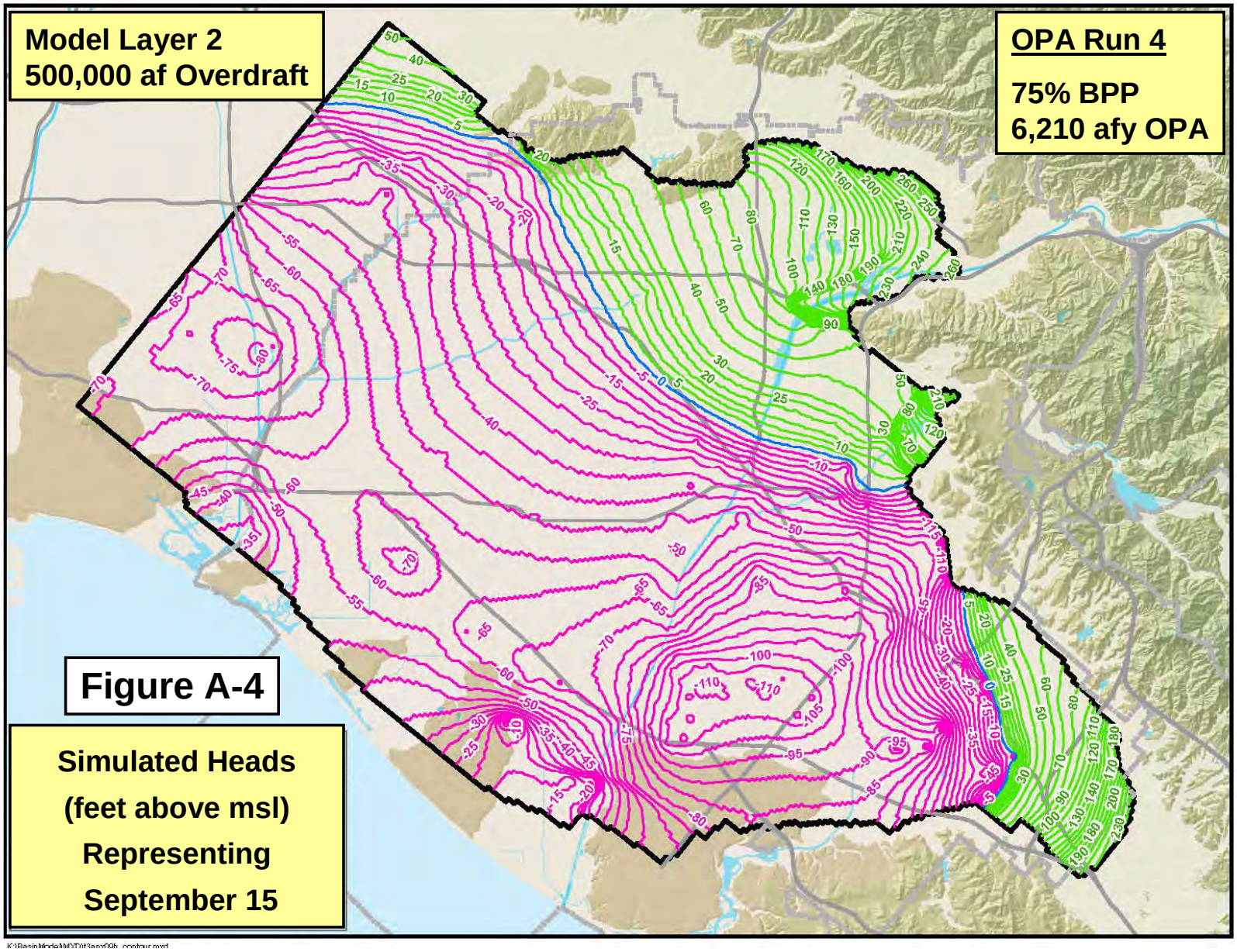
APPENDIX

Model Layer 2 Simulated Groundwater Elevation Contour Maps for the Four OPA Runs


Model Layer 2
500,000 af Overdraft
OPA Run 1
2035 Baseline
51.5% BPP
700 afy OPA
Figure A-1
Simulated Heads
(feet above msl)
Representing
August 15


Model Layer 2
500,000 af Overdraft
OPA Run 2
51.5% BPP
4,256 afy OPA
Figure A-2
Simulated Heads
(feet above msl)
Representing
August 15


Model Layer 2
500,000 af Overdraft
OPA Run 3
2035 Baseline
75% BPP
700 afy OPA
Figure A-3
Simulated Heads
(feet above msl)
Representing
September 15


Model Layer 2
500,000 af Overdraft
OPA Run 4
75% BPP
6,210 afy OPA
Figure A-4
Simulated Heads
(feet above msl)
Representing
September 15

June 11, 2012
Prepared and
Submitted by: N. Savedra
Approved by: Paul Cook

CONSENT CALENDAR

REAPPOINTMENT OF COMMISSIONERS OF IRVINE RANCH WATER DISTRICT JOINT POWERS AGENCY

SUMMARY:

Commissioners of the Irvine Ranch Water District Joint Powers Agency (JPA) are to be appointed by the IRWD Board under the JPA agreement, acting both as the governing board of IRWD and as the governing body of Community Facilities District No. 1 of IRWD. Every three years, it is necessary to update these appointments under the JPA agreement.

BACKGROUND:

The Irvine Ranch Water District's Joint Powers Agency was established under a joint powers agreement on December 22, 1986 and consists of IRWD and Community Facilities District No. 1 of IRWD. The purpose of the JPA, which operates under the joint exercise of power statues in the California Government Code, is to make more efficient use of individual powers of IRWD and CFD#1 in providing water and sewer facilities. The JPA issued $900 million of revenue bonds in 1988 as a local agency pooled financing program. These 1988 bonds were subsequently refunded by the JPA's taxable refunding bonds under a 1996 indenture of trust; the two taxable issues were matched with guaranteed investment contracts.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

The recommended action does not constitute a project under the California Environmental Quality Act.

RECOMMENDATION:

ACTING AS THE GOVERNING BOARD OF IRVINE RANCH WATER DISTRICT AND AS THE GOVERNING BODY OF COMMUNITY FACILITIES DISTRICT NO. 1 OF IRVINE RANCH WATER DISTRICT, APPOINT STEVE LAMAR, MARY AILEEN MATHEIS, DOUGLAS REINHART, PEER SWAN AND JOHN WITHERS AS COMMISSIONERS OF THE IRVINE RANCH WATER DISTRICT JOINT POWERS AGENCY.

LIST OF EXHIBITS:

None.

June 11, 2012
Prepared By: F. Sanchez
Submitted by: G. Heiertz
Approved by: P. Cook

ACTION CALENDAR

NEWPORT BAY WATERSHED TMDL PROGRAM –
COOPERATIVE AGREEMENT D11-066

SUMMARY:

Staff recommends that IRWD execute a new Newport Bay Watershed TMDL Cooperative Agreement to Fund Nutrient, Fecal Coliform and Toxics Total Maximum Daily Load (TMDL) Programs in the Newport Bay Watershed. Staff also recommends approval of IRWD's cost share of approximately $150,000 for watershed TMDL programs for Fiscal Year 2012-13. The new County Agreement, D11-066, included as Exhibit "A" will replace the existing agreement which expires on June 30, 2012.

BACKGROUND:

The Newport Bay Watershed Committee (Committee) was established in 1978 to fund sediment dredging from Newport Bay. The Committee was composed of the County of Orange and cities in the Newport Bay watershed. With the establishment of TMDLs for Newport Bay and its watershed, the Committee expanded its responsibility to address TMDL requirements. In 1999, IRWD joined the Committee to fund ongoing nutrient, fecal coliform and toxics monitoring studies through County Agreement D99-128. The D99-128 agreement will expire on June 30, 2012. The parties to the agreement have met over the past 12 months to develop the new County Agreement, D11-066, which is included as Exhibit "A". The key changes which are highlighted in Exhibit "A" are as follows:

- The term of the agreement is three years instead of one year, with an option to extend for an additional three years if all the parties agree. The agreement becomes effective as soon as the last party has executed the agreement.

- The work plan and budget will no longer require approval from 100% of the parties to the agreement. The new agreement will require approval from enough of the parties that together represent 90% of the cost share and at least 12 of the 13 parties (for voting purposes the County of Orange and the County of Orange Flood Control District constitute one party).

- The revised cost share allocation is incorporated into the agreement. It is based on weighted net land area and population within the watershed, which was the least complex option upon which the parties were able to reach consensus. The Flood Control District, IRWD and the Irvine Company are each assigned a fixed cost-share of 10%. Lennar is assigned a fixed cost-share of 0.15%. This represents a reduction in cost share for IRWD from 12.15% in the existing agreement to 10% in the new agreement.

Based upon the overall TMDL draft budget of $1,494,912 for FY 2012-13, IRWD's 10% cost share would be approximately $150,000. A copy of the TMDL draft budget is attached as Exhibit "B". This funding was included in IRWD's FY 2012-13 Operating Budget. The new agreement, D11-066, will be on the agenda for the Board of Supervisors meeting on June 26, 2012, and has been circulated to the 13 parties to the agreement for approval.

FISCAL IMPACTS:

The workplan and budget for FY 2012-13 has not yet been finalized, although the initial projection including a 5% contingency is approximately $1.5 million. Therefore, IRWD's 10% cost share for FY 2012-13 would be approximately $150,000. Funding for the watershed TMDL program was included in the FY 2012-13 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

No CEQA or NEPA analysis is required for the cooperative agreement.

COMMITTEE STATUS:

This item was reviewed at the Water Resources Policy and Communications Committee on June 7, 2012.

RECOMMENDATION:

THAT THE BOARD APPROVE AGREEMENT D11-066 (AGREEMENT TO FUND NUTRIENT, FECAL COLIFORM AND TOXICS TOTAL MAXIMUM DAILY LOAD (TMDL) PROGRAMS IN THE NEWPORT BAY WATERSHED); AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE AGREEMENT SUBJECT TO NON-SUBSTANTIVE CHANGES; AND APPROVE IRWD'S FUNDING SHARE OF UP TO $150,000 FOR FISCAL YEAR 2012-13.

LIST OF EXHIBITS:

Exhibit "A" – Agreement D11-066 to Fund TMDL Programs in the Newport Bay Watershed
Exhibit "B" – FY 2012-13 Newport Bay Watershed TMDL Program Budget Forecast

AGREEMENT TO FUND NUTRIENT, FECAL COLIFORM AND TOXICS TOTAL MAXIMUM DAILY LOAD ("TMDL") PROGRAMS IN THE NEWPORT BAY WATERSHED

THIS AGREEMENT, for purposes of identification numbered D11-066, referred to hereinafter as "AGREEMENT", is made and entered into this _____ day of _____, 201_ , by and between the County of Orange ("COUNTY"), the Orange County Flood Control District ("DISTRICT"), the City of Costa Mesa ("COSTA MESA"), the City of Irvine ("IRVINE"), the City of Laguna Hills ("LAGUNA HILLS"), the City of Laguna Woods ("LAGUNA WOODS"), the City of Lake Forest ("LAKE FOREST"), the City of Newport Beach ("NEWPORT BEACH"), the City of Orange ("ORANGE"), the City of Santa Ana ("SANTA ANA"), the City of Tustin ("TUSTIN"), the Irvine Ranch Water District ("IRWD") and the Irvine Company ("TIC"), and Lennar Homes of California, Inc.("LENNAR"). The fourteen entities are hereinafter sometimes jointly referred to as the "PARTIES" and individually as "PARTY." The cities are hereinafter sometimes jointly referred to as the "CITIES." The CITIES, COUNTY and DISTRICT are hereinafter sometimes jointly referred to as the "MUNICIPAL PARTIES." Thirteen entities (all entities except for LENNAR) are sometimes jointly referred to as the "ORIGINAL PARTIES."

WITNESSETH

WHEREAS, the California Regional Water Quality Control Board, Santa Ana Region ("REGIONAL BOARD") has adopted Resolution No. 98-9, as amended by Resolution No. 98-100 amending the Water Quality Control Plan for the Santa Ana River Basin to incorporate a Nutrient TMDL for the Newport Bay/San Diego Creek Watershed on April 17, 1998 and Resolution 99-10 amending the Water Quality Control Plan for the Santa Ana River Basin to incorporate a TMDL for Fecal Coliform in Newport Bay on April 9, 1999 pursuant to the provisions of section 303(d) of the Clean Water Act; and,

WHEREAS, the United States Environmental Protection Agency (USEPA) has established TMDLs for toxic pollutants, for San Diego Creek and Newport Bay, California on June 14, 2002, and the REGIONAL BOARD is developing implementation plans for each of the toxic pollutants; and,

WHEREAS, the adopted TMDLs contain requirements for studies, monitoring, and the development of programs to attain TMDL reduction targets over a multi-year period; and,

WHEREAS, these TMDLs are included in the National Pollutant Discharge Elimination System ("NPDES") Municipal Permit Order No. R8-2009-0030 that require a cooperative watershed program; and,

WHEREAS, the ORIGINAL PARTIES entered into Agreement No. D99-128 on September 18, 2003 and subsequent amendments on July 5, 2006, March 29, 2008 and July 8, 2010 to provide funding for the Nutrient, Fecal Coliform, and Toxics Total Maximum Daily Load (TMDL) studies in the Newport Bay Watershed; and,

WHEREAS, the PARTIES intend this AGREEMENT as a successor to Agreement No. D99-128 to provide for the performance of studies, research, monitoring, development and/or revision of programs related to the adopted TMDLs for nutrients, fecal coliform and toxics and current and future Clean Water Act §303(d) listings, as well as planning, permitting, design, construction, and maintenance of TMDL pilot projects ("PILOT PROJECTS"); and

WHEREAS, the PARTIES have reached agreement on a funding formula which is shown in Exhibit A; and

WHEREAS, in the event that long-term watershed funding is secured prior to AGREEMENT expiration, the PARTIES intend to amend the AGREEMENT to incorporate this funding through revised cost share allocations; and,

WHEREAS, it is recognized that regulatory compliance gained through the activities herein apply to all PARTIES equally, and

WHEREAS, it is recognized that additional compliance efforts may be necessary and the PARTIES may choose to fund projects under separate agreements; and

NOW, THEREFORE, in consideration of the foregoing, the PARTIES agree as follows:

Section 1. PURPOSE. This AGREEMENT is entered into for the purpose of funding and performing program activities related to the adopted TMDLs for nutrients, fecal coliform, and toxics and current and future Clean Water Act §303(d) listings in the Newport Bay Watershed.

Section 2. TERM. The term of this AGREEMENT shall commence upon approval and execution of this AGREEMENT by all PARTIES or July 1, 2012, whichever is later, and shall continue until June 30, 2015. The AGREEMENT may be renewed for an additional three (3) year term running July 1, 2015 to June 30, 2018 with approval of the PARTIES.

Section 3. PROGRAM WORK PLAN. The COUNTY shall work in concert with all PARTIES to develop a work plan for the following fiscal year. The work plan for the upcoming fiscal year shall be submitted to each of the PARTIES by December 15 of each year. The work plan may designate a PARTY as a lead other than the COUNTY for a work plan task(s).

Section 4. BUDGET AND COSTS. The COUNTY shall work in concert with all the PARTIES to develop a budget for the following fiscal year. Budgeted amounts for PILOT PROJECT(S) shall not exceed $200,000 for all pilot projects in any one fiscal year. The budget for the upcoming fiscal year shall be submitted to each of the PARTIES by December 15 of each year. The budget shall contain an explanation of any recommended program changes, an estimate of all planned expenditures and an estimate of the payment required from each PARTY for the following fiscal year.

The COUNTY shall be entitled to charge to the program all costs for direct labor, materials, equipment, and outside contract services for costs associated with carrying out the approved scope of work. Recoverable costs will also include an overhead charge.

Section 5. WORK PLAN TASK LEAD REIMBURSEMENT. If a PARTY is designated as a task lead, upon written authorization from COUNTY, the PARTY shall invoice the COUNTY for authorized expenses up to the approved budget amount for the work plan task.

Section 6. APPROVALS AND ADJUSTMENTS. The PARTIES shall be permitted to review and approve the budget and program work plan for the forthcoming year, review work products, and provide direction for performance of the work plan. The PARTIES shall be notified of the intent to issue

contracts to perform the program work plan, shall be permitted to participate in the preparation and review of the scope of work for such contracts, and to serve on the committee evaluating consultant qualifications/proposals subject to the requirements of the County of Orange Contract Policy Manual. Criterion for approval of the work plan and budget shall be affirmative responses from PARTIES representing ninety percent (90%) of the Cost Share Percentage in Exhibit A and 12 of the 13 PARTIES. The COUNTY and DISTRICT will constitute one approving PARTY. Any PARTY not providing a response by July 15 of each year shall be considered as rendering an affirmative response.

Criterion for approval of adjustments to scopes of work shall be the same as for the approval of the work plan and budget.

Section 7. FUNDING COST SHARE ALLOCATIONS. Exhibit A, which is attached to this AGREEMENT and by this reference is made a part hereof, presents the funding formula and the fiscal year 2012-13 cost share percentages for the PARTIES. Land area calculations will be reviewed and revised as needed. A request for information documenting changes in land area will be made to the PARTIES each year by November 1.

Section 8. PAYMENTS. The COUNTY shall invoice each PARTY for its annual deposit at the beginning of each fiscal year. Each PARTY shall pay the deposit within 45 calendar days of the date of the invoice. Each PARTY'S deposit shall be based on its prorated share of the approved annual budget, reduced by the sum of (a) its prorated share of any surplus identified in the prior fiscal year end accounting, and (b) its prorated share of any funding provided for programs in the approved budget from entities not party to this AGREEMENT.

Interest earned on the PARTIES' deposits will not be paid to the PARTIES, but will be credited against the PARTIES' share of the program costs.

The COUNTY shall notify each of the PARTIES if it appears that costs may exceed the budget approved by the PARTIES in any fiscal year. The COUNTY shall prepare a fiscal year end accounting within 60 calendar days of the end of the fiscal year. If the fiscal year end accounting results in costs (net of interest earnings) exceeding the sum of the deposits, and the COUNTY has notified and obtained

approval from the PARTIES of potential cost overruns, the COUNTY shall seek approval of the excess cost from the PARTIES in the form of a revised budget and, upon approval, shall invoice each PARTY for its prorated share of the excess cost up to the amount of the revised approved budget. Each PARTY shall pay the billing within 45 calendar days of the date of the invoice. If the fiscal year end accounting results in the sum of the deposits exceeding costs (net of interest earnings), the excess deposits will carry forward to reduce the billings for the following year. The fiscal year end accounting results and associated invoices for each PARTY will take into consideration any outside funding provided for programs in the approved budget from entities not party to this AGREEMENT.

Upon termination of the program, a final accounting shall be performed by the COUNTY. If costs remaining after the deduction of interest costs exceed the sum of the deposits, the COUNTY shall invoice each PARTY for its prorated share of the deficit. Each PARTY shall pay the invoice within 45 calendar days of the date of the invoice. If the sum of the deposits, including interest, exceeds the costs, the COUNTY shall reimburse to each PARTY its prorated share of the excess, within 45 calendar days of the final accounting.

Section 9. ADDITIONAL PARTIES. It is recognized that there may be other parties who wish to participate in and provide funding for the activities described in this AGREEMENT. Nothing in this AGREEMENT is intended to preclude additional participants being added by written amendment as parties to this AGREEMENT pursuant to Section 10. Cost allocations for the additional parties and PARTIES will be revised based on the funding formula in Exhibit A.

Section 10. AMENDMENT. This AGREEMENT may be amended in writing only with the unanimous written approval of the parties.

Section 11. LIABILITY. It is mutually understood and agreed that, merely by the virtue of entering into this AGREEMENT, each PARTY neither relinquishes any rights nor assumes any liabilities for its own actions or the actions of other PARTIES. It is the intent of the PARTIES that the rights and liabilities of each Party shall remain the same, while this AGREEMENT is in force, as it was before this AGREEMENT was made, except as otherwise specifically provided in this agreement.

Section 12. TERMINATION. Any PARTY wishing to terminate its participation in this AGREEMENT shall so notify all other PARTIES in writing by March 1 of any year. Such termination shall be effective the following June 30. The terminating PARTY shall be responsible for financial obligations hereunder to the extent incurred in accordance with this agreement by the PARTY prior to the effective date of termination. The balance of the PARTIES may continue in the performance of the terms and conditions of this AGREEMENT on the basis of a revised allocation of cost based on the funding formula in Exhibit A.

Section 13. AVAILABILITY OF FUNDS. The obligation of each PARTY is subject to the availability of funds appropriated for this purpose, and nothing herein shall be construed as obligating the PARTIES to expend or as involving the PARTIES in any contract or other obligation for the future payment of money in excess of appropriations authorized by law.

Section 14. NO THIRD PARTY BENEFICIARIES. Nothing expressed or mentioned in this AGREEMENT is intended or shall be construed to give any person, other than the PARTIES hereto and any entity in which a PARTY has a legal interest (such as, but not limited to, a limited liability membership interest or a partnership interest), and any permitted successors or assigns of a PARTY, any legal or equitable right, remedy or claim under or in respect of this AGREEMENT or any provisions herein contained. This AGREEMENT and any conditions and provisions hereof is intended to be and is for the sole and exclusive benefit of the PARTIES and the entities in which they have a legal interest and their successors or assigns and for the benefit of no other person, agency or entity.

Section 15. REFERENCE TO CALENDAR DAYS. Any reference to the word "day" or "days" herein shall mean calendar day or calendar days, respectively, unless otherwise expressly provided.

Section 16. ATTORNEYS FEES. In any action or proceeding brought to enforce or interpret any provision of this AGREEMENT, or where any provision hereof is asserted as a defense, each PARTY shall bear its own attorneys' fees and costs.

Section 17. ENTIRE AGREEMENT. This AGREEMENT is intended by the PARTIES as a final expression of their agreement and intended to be a complete and exclusive statement of the agreement

and understanding of the PARTIES hereto in respect of the subject matter contained herein. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein. This AGREEMENT supersedes all prior agreements and understandings between the PARTIES with respect to such matter.

Section 18. SEVERABILITY. If any part of this AGREEMENT is held, determined or adjudicated to be illegal, void, or unenforceable by a court of competent jurisdiction, the remainder of this AGREEMENT shall be given effect to the fullest extent reasonably possible.

Section 19. SUCCESSORS AND ASSIGNS. The terms and provisions of this AGREEMENT shall be binding upon and inure to the benefit of the PARTIES hereto and their successors and assigns.

Section 20. NOTICES. All notices required or desired to be given under this AGREEMENT shall be in writing and (a) delivered personally, or (b) sent by certified mail, return receipt requested or (c) sent by electronic mail followed by a mailed copy, to the addresses specified below, provided each PARTY may change the address for notices by giving the other PARTIES at least ten (10) days written notice of the new address. Notices shall be deemed received when actually received in the office of the addressee or when delivery is refused, as shown on the receipt of the U.S. Postal service, or other person making the delivery, except that notices sent by electronic mail shall be deemed received on the first business day following transmission.

Director of Public Services
City of Costa Mesa
P.O. Box 1200
Costa Mesa, CA 92628-1200
Facsimile: (714) 754-5028

Director of Community Development
City of Irvine
P.O. Box 19578
Irvine, CA 92623-9578
Facsimile: (949) 724-6440

Director of Public Services
City of Laguna Hills
24035 El Toro Road
Laguna Hills, CA 92653
Facsimile: (949) 707-2633

Director of Community Development
City of Laguna Woods
24264 El Toro Road
Laguna Woods CA 92637
Facsimile: (949) 639-0591

Director of Public Works
City of Lake Forest
25550 Commercentre Dr. Suite 100
Lake Forest, CA 92630
Facsimile: (949) 461-3511

Director of Public Works
City of Newport Beach
3300 Newport Blvd.
Newport Beach, CA 92658
Facsimile: (949) 718-1840

Director of Public Works
City of Orange
300 E. Chapman Ave
Orange, CA 92866
Facsimile: (714) 744-5573

Director of Public Works
City of Santa Ana
101 W. 4th St.
Santa Ana, CA 92701
Facsimile: (714) 647-5635

Director of Public Works
City of Tustin
300 Centennial Way
Tustin, CA 92780
Facsimile: (714) 734-8991

Director, OC Public Works
County of Orange
300 N. Flower Street
Santa Ana, CA 92702-4048
Facsimile: (714) 834-2395

Director, Water Quality
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92712
Facsimile: (949) 453-1228

Vice President of Environmental Affairs
The Irvine Company
550 Newport Center

Newport Beach, CA 92658-8904
Facsimile: (949) 720-2448

Vice President of Community Development
Lennar
25 Enterprise, Ste 400
Aliso Viejo, CA 92656
Facsimile: (949) 349-0394

Section 21. EXECUTION OF AGREEMENT. This AGREEMENT may be executed in counterpart and the signed counterparts shall constitute a single instrument.

Section 22. GOVERNING LAW AND VENUE. This AGREEMENT has been negotiated and executed in the State of California and shall be governed by and construed under the laws of the State of California. In the event of any legal action to enforce or interpret this AGREEMENT, the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California, and the PARTIES hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure section 394. Furthermore, the PARTIES have specifically agreed, as part of the consideration given and received for entering into this AGREEMENT, to waive any and all rights to request that an action be transferred for trial to another county under Code of Civil Procedure Section 394 or any other provision of law.

IN WITNESS WHEREOF, the PARTIES hereto have executed this AGREEMENT the day and year first above written:

EXHIBIT A

FUNDING FORMULA AND FISCAL 2012-13 COST SHARE PERCENTAGES

JURISDICTION	TOTAL SQUARE MILES[1]	SQ. MILES WITHIN WATERSHED[1]	NET LAND AREA[2]	PERCENTAGE OF CITY LAND AREA IN WATERSHED[3]	TOTAL POPULATION[4]	ESTIMATED POPULATION IN WATERSHED[5]	WEIGHTED LAND AREA & POPULATION SHARE[6]	WEIGHTED NET LAND AREA SHARE[7]	FISCAL YEAR 2012-13 COST SHARE PERCENTAGES[8]
Costa Mesa	15.83	7.65	7.54	48.33	110,146	53,229	2.22	2.06	4.28
County of Orange	175.23	16.68	14.25	9.52	121,488	11,564	3.16	3.89	7.05
Irvine	65.98	65.80	50.82	99.73	219,156	218,558	12.58	13.89	26.46
Laguna Hills	6.64	1.18	1.16	17.77	30,410	5,404	0.27	0.32	0.59
Laguna Woods	3.31	1.88	1.88	56.80	16,224	9,215	0.45	0.51	0.96
Lake Forest	16.78	11.58	9.18	69.01	77,490	53,476	2.68	2.51	5.19
Newport Beach	24.74	17.63	14.58	71.26	85,376	60,840	3.56	3.98	7.55
Orange	25.78	1.88	1.73	7.29	136,995	9,990	0.47	0.47	0.94
Santa Ana	27.35	16.40	16.17	59.96	325,228	195,018	6.35	4.42	10.77
Tustin	11.14	11.14	10.49	100.00	75,781	75,781	3.19	2.87	6.06
OCFC District	---	---		---	---	---			10.00
IRWD									10.00
Irvine Co.									10.00
Lennar	---	---		---	---	---			0.15
	355.49	151.82	127.80	---	1,198,294	693,076	34.925	34.925	100.00

[1] Source: OC Public Works, OC Survey Section May 2011

[2] NET LAND AREA = Square miles within Watershed-Extractions for NPDES, Federal, State, County, IRWD, Irvine Company and Lennar

[3] PERCENTAGE OF CITY LAND AREA IN WATERSHED = Square miles within Watershed/Total Square Miles * 100

[4] Source: State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percentage Change (May 2011 as updated)

[5] ESTIMATED POPULATION IN WATERSHED = Total Population * Percentage of City Land Area in Watershed/100

[6] WEIGHTED LAND AREA & POPULATION SHARE = ((Square Miles within Watershed/Total Square Miles of Watershed)*0.5) + ((Estimated Population in Watershed/Total Estimated Population in Watershed)*0.5) x 34.925

[7] WEIGHTED NET LAND AREA SHARE = Net Land Area/Total Net Land Area * 34.925

[8] COST SHARE PERCENTAGE = Weighted Land Area & Population Share + Weighted Net Land Area Share

EXHIBIT "B"

Financial Forecast FY 2012-13
Agreement D11-066 Newport Bay/San Diego Creek Nutrient, Fecal Coliform Toxics TMDLs Program

TMDL Program	Forecast Line Item	2012-13 Forecast
All TMDLs	Salaries and Employee Benefits – Account 0100	$593,246
	Water Quality Planning (3.05 FTEs)	*$479,451*
	Monitoring Programs (0.39 FTE)	*$56,342*
	Data Management (0.08 FTE)	*$12,164*
	Administration (0.20 FTE)	*$45,289*
	Laboratory Supplies – Account 1500	$1,000
	Equipment Usage – Account 2150	$5,100
	Other Transport and Travel - Account 2700	$780
	Small Tools/Instruments (specialized OC sampler) - Account 1809	*$30,000*
	Professional Services – Account 1900	$0
	Long-term Funding Source Studies	*$0*
Nutrients TMDL	Professional Services – Account 1900	$101,300
	Nutrient RMP Analytical Costs	*$51,300*
	Nutrient TMDL Revision: Review/rebut Regional Board TMDL Revision	*$50,000*
Fecal Coliform TMDL	Professional Services – Account 1900	$294,300
	Fecal Coliform TMDL Revision: Basin Plan Amendment drafting and negotiation	*$50,000*
	Fecal Coliform TMDL Routine Monitoring Nov-March	*$69,300*
	Fecal Coliform TMDL Source Monitoring Program	*$25,000*
	Fecal Coliform TMDL Implementation Task(s)/Study	*$150,000*
Toxics TMDL		
Selenium	Professional Services – Account 1900	$175,000
	Groundwater/Surface water Model	*$50,000*
	Big Canyon Wash Characterization	*$0*
	Selenium TSO/TMDL - OC TMDL Tissue Monitoring (including Final Plan)	*$125,000*
	Placeholder for fish habitat and population survey	
	GEI Work to continue with TMDL alt compliance strategy til end of 1012	*$200,000*
	Capital Projects - Account 4200	$0
	*Cienega Pipeline Project Contribution**	*TBD*
Organochlorines/ TRIP	Professional Services – Account 1900	$23,000
	OC Analysis of Fish/Bird Tissue collected in Se TMDL + fluvial sediment	*$23,000*
	Develop Conceptual Model(s) of Toxicity/Tissue Contamination	*$0*
	Draft Toxicity Watershed Monitoring Plan	*$0*
	Sediment, Water & Tissue Toxicity Target Development per IAP~	*$0*
Cumulative Costs	*Cumulative Line Item Costs*	*$1,423,726*
Contingency	*Contingency Factor 5%*	*$71,186*
	FY12-13 Forecast Total	**$1,494,912**

June 11, 2012
Prepared By: K. Welch
Submitted By: P. Weghorst/G. Heiertz
Approved By: Paul Cook

ACTION CALENDAR

PASS THROUGH INDEMNIFICATION AGREEMENTS WITH
ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

SUMMARY:

The District has executed agreements for Pilot Exchange Programs with Antelope Valley-East Kern Water Agency (AVEK) and Carpinteria Valley Water District through the Central Coast Water Authority (CVWD/CCWA) that allow AVEK and CVWD/CCWA to store a portion of their unused State Water Project (SWP) Table A water in IRWD's Strand Ranch Integrated Banking Project (Water Bank) on an unbalanced exchange basis. The Department of Water Resources (DWR) has prepared two exchange agreements and one delivery agreement to implement the unbalanced exchanges (DWR agreements). These agreements are currently being executed by AVEK, Santa Barbara County Flood Control and Water Conservation District (on behalf of CVWD/CCWA), Metropolitan Water District of Southern California (Metropolitan), the Kern County Water Agency (KCWA) and DWR. KCWA is requiring that Rosedale-Rio Bravo Water Storage District (Rosedale) execute three indemnification agreements that correspond with each of the DWR agreements. Staff recommends the Board authorize the General Manager to execute three letter agreements with Rosedale that pass through the indemnification obligations from Rosedale to IRWD related to the DWR agreements for the AVEK and CVWD/CCWA Pilot Exchange Programs.

BACKGROUND:

In 2011, IRWD executed agreements for Pilot Exchange Programs with Antelope Valley-East Kern Water Agency (AVEK) and Carpinteria Valley Water District through its SWP Contractor Central Coast Water Authority (CVWD/CCWA). These agreements allow AVEK and CVWD/CCWA to store a portion of their unused State Water Project (SWP) Table A water in IRWD's Strand Ranch Integrated Banking Project (Water Bank) on an unbalanced exchange basis. The respective agreements provide AVEK the ability to store up to 5,000 AF of Table A water and CVWD/CCWA to store up to 1,500 AF of Table A water.

The DWR prepared two exchange agreements and one delivery agreement for the AVEK and CVWD/CCWA unbalanced exchange programs to be approved and executed by AVEK, Santa Barbara County Flood Control and Water Conservation District (Santa Barbara), Metropolitan and KCWA. Santa Barbara is required to execute an exchange agreement because they hold the rights to SWP Table A that is managed on its behalf by CCWA. KCWA is a party to the delivery agreement and exchange agreements to facilitate the delivery of the water in and out of the Water Bank and is required to indemnify DWR relative to the transactions in each of the agreements. These DWR agreements have been approved by each of the exchange program agencies and are currently being circulated for execution. For information purposes, the DWR delivery agreement is provided as Exhibit "A" and the two DWR exchange agreements with AVEK and Santa Barbara are provided as Exhibits "B" and "C", respectively.

Indemnification Pass-Through Agreements:

As a condition of KCWA executing the DWR agreements, KCWA is requiring that Rosedale enter into separate agreements with KCWA that correspond with the conditions of each of the three DWR agreements, in which Rosedale agrees to accept all obligations incurred by KCWA from the DWR agreements including claims of liability against the KCWA that arise as a result of the delivery of the CVWD/CCWA and AVEK water (KCWA/Rosedale agreements).

The long-term Water Banking and Exchange Agreement that Rosedale and IRWD executed on January 13, 2009 already provides for IRWD to pay all costs incurred by KCWA and Rosedale related to IRWD's water supply programs. District staff agrees that the other KCWA obligations included in the KCWA/Rosedale agreements should be passed through to IRWD.

IRWD legal counsel has prepared three draft template letter agreements between Rosedale and IRWD which will pass through KCWA's obligations from Rosedale to IRWD (Indemnification Agreements). The draft letter agreement that passes through obligations related to the DWR delivery agreement is attached as Exhibit "D". The letter agreements that pass through obligations related to the two DWR exchange agreements with AVEK and Santa Barbara are provided as Exhibits "E" and "F", respectively. Staff recommends the Board authorize the General Manager to execute the Indemnification Agreements with Rosedale.

FISCAL IMPACTS:

There are no fiscal impacts for the pass through of Rosedale's indemnification obligations to IRWD for the delivery of AVEK and CVWD/CCWA's SWP Table A pursuant to the respective Pilot Exchange Programs. The long-term Water Banking and Exchange Agreement that Rosedale and IRWD executed on January 13, 2009 already provides for IRWD to pay all costs incurred by the KCWA and Rosedale related to IRWD's water supply programs.

ENVIRONMENTAL COMPLIANCE:

A Final Environmental Impact Report (FEIR) for the Strand Ranch Integrated Water Banking Project has been prepared, certified and the project approved in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. The FEIR evaluates the delivery of SWP water to the Strand Ranch Integrated Water Banking Project and to IRWD's service area through Metropolitan facilities. AVEK and CCWA (on behalf of CVWD) have both filed a Notice of Exemption for their respective Exchange Programs with IRWD as required by Department of Water Resources.

COMMITTEE STATUS:

This item was not reviewed by a Committee due to time urgency related to getting the DWR agreements executed and the water scheduled for delivery to the Water Bank.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE THREE INDEMNIFICATION LETTER AGREEMENTS WITH ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT SUBJECT TO NON-SUBSTANTIVE CHANGES BY THE GENERAL MANAGER AND LEGAL COUNSEL TO THE LETTER AGREEMENTS AND SUBJECT TO NON-SUBSTANTIVE CHANGES TO THE THREE KERN COUNTY WATER DISTRICT / ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT AGREEMENTS.

EXHIBITS:

Exhibit "A" – Change in Point of Delivery Agreement Among the Department of Water Resources of the State of California, Metropolitan Water District of Southern California, and Kern County Water Agency for the Rosedale-Rio Bravo Water Storage District/Irvine Ranch Water Storage District Water Banking and Exchange Program – SWPAO #11022

Exhibit "B" – DWR Exchange Agreement with Antelope Valley-East Kern Water Agency – SWPAO #11023

Exhibit "C" – DWR Exchange Agreement with Santa Barbara County Flood Control and Water Conservation District - SWPAO #11021

Exhibit "D" – Draft Template Indemnification Letter Agreement Related to DWR Delivery Agreement – SWPAO #11022.

Exhibit "E" – Draft Template Indemnification Letter Agreement Related to DWR Exchange With AVEK – SWPAO #11023.

Exhibit "F" – Draft Template Indemnification Letter Agreement Related to DWR Exchange With Santa Barbara – SWPAO #11021.

EXHIBIT "A"

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

CHANGE IN POINT OF DELIVERY AGREEMENT AMONG
THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA,
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA,
AND
KERN COUNTY WATER AGENCY
FOR THE
ROSEDALE–RIO BRAVO WATER STORAGE DISTRICT/
IRVINE RANCH WATER DISTRICT
WATER BANKING AND EXCHANGE PROGRAM

SWPAO #11022

THIS AGREEMENT is made this _____ day of _____, 20____, pursuant to the provisions of the California Water Resources Development Bond Act, and other applicable laws of the State of California, among the Department of Water Resources of the State of California, herein referred to as "DWR," the Metropolitan Water District of Southern California, herein referred to as "MWDSC," a public agency incorporated pursuant to an Act of the California State Legislature (Statutes 1969, Chapter 209 as amended), and Kern County Water Agency, herein referred to as "KCWA," a political subdivision of the State of California created by an Act of the California State Legislature (Statutes 1961, Chapter 1003 or as amended). DWR, MWDSC, and KCWA may be referred to individually by name as "Party" or collectively as "Parties."

RECITALS

A. DWR and MWDSC have entered into a water supply contract, dated November 4, 1960, providing that DWR shall supply certain quantities of water to MWDSC, and providing that MWDSC shall make certain payments to DWR, and setting forth the terms and conditions of such payment (hereafter the "MWDSC Water Supply Contract").

B. DWR and KCWA have entered into a water supply contract, dated November 15, 1963, providing that DWR shall supply certain quantities of water to KCWA, and providing that KCWA shall make certain payments to DWR, and setting forth the terms and conditions of such payment (hereafter the "KCWA Water Supply Contract").

C. Irvine Ranch Water District (IRWD) is a California water district located in Orange County, California. IRWD receives State Water Project (SWP) water supplies from Municipal Water District of Orange County (MWDOC), a member agency of MWDSC.

D. IRWD has entered into an agreement with Rosedale-Rio Bravo Water Storage District (RRBWSD), a member unit of KCWA, entitled "Agreement Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District for a Water Banking and Exchange Program" in January 2009. The agreement, hereafter referred to as the "RRBWSD/IRWD Agreement," provides for, among other things, terms and conditions between IRWD and RRBWSD for the development and operations of a water banking project." This water banking project consists of recharge, storage and recovery facilities that are located on IRWD property in Kern County known as "Strand Ranch" and integrated into RRBWSD's water banking program, hereafter referred to as the "RRBWSD/IRWD Water Banking and Exchange Program."

E. MWDSC, IRWD, and MWDOC have entered into an agreement entitled "Coordinated Operating, Water Storage, Exchange and Delivery Agreement," executed in April 2011. Such agreement, hereafter referred to as the "MWDSC/IRWD Agreement," provides for, among other things, terms and conditions for IRWD to secure SWP water supplies for the joint benefits of increased water supply reliability and diversification to MWDSC and IRWD.

F. DWR, MWDSC, KCWA, and Santa Barbara County Flood Control and Water Conservation District (Santa Barbara) have entered into an unbalanced water exchange agreement (SWPAO #11021). SWPAO #11021 allows for delivery of up to 1,500 acre-feet of Santa Barbara's approved SWP water supplies to MWDSC in exchange for the return of MWDSC's future approved SWP water supplies equal to 50 percent, less losses, of the total amount delivered to MWDSC.

G. DWR, MWDSC, KCWA and Antelope Valley-East Kern Water Agency (AVEK) have entered into an unbalanced water exchange agreement (SWPAO #11023). SWPAO #11023 allows for delivery of up to 5,000 acre-feet of AVEK's approved SWP water supplies to MWDSC in exchange for the return of MWDSC's future approved SWP water supplies equal to 50 percent, less losses, of the total amount delivered to MWDSC.

H. MWDSC hereby is requesting DWR to deliver a combined total of up to 6,500 acre-feet of SWP water acquired by IRWD pursuant to SWPAO #11021 and SWPAO #11023, hereafter referred to as "MWDSC's approved SWP water," to KCWA's turnouts in Reach 12E of the California Aqueduct for storage in, and future return to MWDSC under the RRBWSD/IRWD Water Banking and Exchange Program.

I. In compliance with the California Environmental Quality Act (CEQA), RRBWSD, as lead agency, prepared the "Strand Ranch Integrated Banking Project - Final Environment Impact Report," hereafter referred to as the "Strand Ranch FEIR," dated May 2008 (SCH #2007041080). RRBWSD adopted "Findings and Facts in Support of Findings" and a "Mitigation Monitoring and Reporting Program" (MMRP) for the Strand Ranch Integrated Banking Project on May 27, 2008. IRWD, as a responsible agency, adopted the Strand Ranch FEIR, the findings, and the MMRP on May 27, 2008. In addition, RRBWSD and IRWD filed a Notice of Determination (NOD) with the State Office of Planning and Research (OPR) on May 29, 2008. RRBWSD also completed Addendum No. 1 to the Strand Ranch FEIR which evaluated the impacts for the proposed modifications to the project description in the Strand Ranch FEIR and found the modifications would not change the conclusions of the previously-certified EIR.

J. DWR, as a responsible agency, has considered all of these environmental documents prior to entering into this Agreement, and will file an NOD upon execution of this Agreement.

AGREEMENT

DWR approves the delivery of up to 6,500 acre-feet of MWDSC's approved SWP water to KCWA for storage in the RRBWSD/IRWD Water Banking and Exchange Program, and for the future return of such water to MWDSC, under the following terms and conditions:

1. TERM

This Agreement shall become effective upon execution by all parties, and shall provide for the delivery of MWDSC's approved SWP water to the RRBWSD/IRWD Water Banking and Exchange Program through December 31, 2012.

Notwithstanding the terms of the RRBWSD/IRWD Agreement, water delivered pursuant to this Agreement shall be returned to MWDSC by December 31, 2017. This Agreement shall remain in effect until all water less losses is returned, or upon final payment to DWR of all costs attributable to this Agreement, whichever occurs later. However, the liability, hold, harmless and indemnification obligations in this Agreement shall remain in effect until December 31, 2021, or until any claim or litigation concerning this Agreement asserted to DWR, MWDSC, or KCWA as of December 31, 2021 is finally resolved, whichever occurs later.

2. USE OF STORED WATER

a. MWDSC's approved SWP water delivered to KCWA pursuant to this Agreement will not be sold to KCWA, but will be temporarily stored for future delivery and use in MWDSC's service area. Provisions for storage and recovery of MWDSC's approved SWP water within KCWA are governed by the RRBWSD/IRWD Agreement and the MWDSC/IRWD Agreement. The RRBWSC/IRWD Agreement specifies the losses for the banked water as up to 15 percent.

b. When MWDSC's stored water is returned to MWDSC by exchange for KCWA's approved Table A water, the Parties acknowledge that RRBWSD shall be entitled to a like amount of MWDSC's approved SWP water stored in the RRBWSD/IRWD Water Banking and Exchange Program.

3. USE OF CALIFORNIA AQUEDUCT CAPACITY

Conveyance of the water in the California Aqueduct under this Agreement shall be in accordance with a schedule which has been reviewed and approved by DWR pursuant to applicable provisions of MWDSC's and KCWA's Water Supply Contracts. Article 12(f) of MWDSC's Water Supply Contract shall govern the priority for delivery of water for storage and return.

4. WATER DELIVERY TO KCWA

a. DWR will deliver up to 6,500 acre-feet of MWDSC's approved SWP water, normally scheduled for delivery to MWDSC's turnouts in its service area, to KCWA's turnouts in Reach 12E of the California Aqueduct.

b. The delivery of MWDSC's approved SWP water to KCWA shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver the water at times when such delivery would adversely impact SWP operations or facilities, or other SWP contractors.

c. In coordination with and upon approval of MWDSC, KCWA shall be responsible for scheduling with DWR the delivery of MWDSC's approved SWP water to KCWA's turnouts in Reach 12E of the California Aqueduct.

d. As part of coordinating delivery schedules between MWDSC and KCWA, MWDSC will submit a delivery schedule to KCWA and RRBWSD for review and approval. KCWA and RRBWSD shall review the proposed schedule with MWDSC, and after consultation with RRBWSD, KCWA agrees to inform MWDSC of its decision to either approve, propose modifications, or withhold approval as promptly as possible. KCWA agrees that it shall not arbitrarily withhold approval or propose modifications. KCWA may withhold approval of, or propose modification to MWDSC's deliveries to storage under this Agreement if, on the basis of a with and without analysis, KCWA determines that such deliveries would adversely impact KCWA's water management activities, finances, water supply or operations, and MWDSC or RRBWSD do not agree to mitigate for such impacts. The base case (without analysis) shall be those conditions estimated to occur in the absence of deliveries to the RRBWSD/IRWD Water Banking and Exchange Program. The KCWA analysis is a matter involving KCWA and MWDSC, not DWR. DWR is not liable to MWDSC for the determinations KCWA makes under this paragraph. DWR is not asserting the validity of KCWA's analysis, nor is it to be held liable by MWDSC for any actions resulting from KCWA's analysis.

e. The sum of deliveries scheduled to KCWA under this Agreement, plus scheduled KCWA SWP deliveries, plus deliveries to KCWA pursuant to any other agreements, shall not exceed the quantities on which the proportionate Use-of-Facilities factors are based pursuant to KCWA's and/or MWDSC's Water Supply Contract, unless DWR determines that deliveries will not adversely impact SWP operations or facilities, or other SWP contractors' Table A deliveries.

5. RETURN WATER DELIVERY BY EXCHANGE OF KCWA's TABLE A WATER

a. KCWA may return water to MWDSC by exchange of a portion of its future approved Table A water allocated to RRBWSD in the year that water is returned. DWR shall deliver the return water to MWDSC's turnouts for use in its service area.

b. The delivery of return water to MWDSC shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver the water at times when such delivery would adversely impact SWP operations or facilities, or other SWP contractors.

c. In coordination with KCWA, MWDSC shall be responsible for scheduling with DWR the delivery of its return water to MWDSC's service area.

d. KCWA may propose modifications to the proposed schedule for the return of MWDSC's previously stored water under this Agreement if, on the basis of a with and without analysis, KCWA determines that such deliveries would adversely impact KCWA's finances, water supply or operations, and MWDSC or RRBWSD do not agree to mitigate for such impacts. The base case (without analysis) shall be those conditions estimated to occur in the absence of deliveries to the RRBWSD/IRWD Water Banking and Exchange Program. The KCWA analysis is a matter involving KCWA and MWDSC, not DWR. DWR is not liable to MWDSC for the determinations KCWA makes under this paragraph. DWR is not asserting the validity of KCWA's analysis, nor is it to be held liable by MWDSC for any actions resulting from KCWA's analysis.

e. The sum of return water deliveries scheduled to MWDSC under this Agreement, plus scheduled MWDSC SWP deliveries, plus deliveries to MWDSC pursuant to any other agreements, shall not exceed the quantities on which the proportionate Use-of-Facilities factors are based pursuant to KCWA's and/or MWDSC's Water Supply Contract, unless DWR determines that deliveries will not adversely impact SWP operations or facilities, or other SWP contractors' Table A deliveries.

6. RETURN OF WATER BY PUMP-IN TO THE CALIFORNIA AQUEDUCT

a. Return water may be pumped and introduced into Reach 12E of the California Aqueduct for delivery by DWR to MWDSC. Such return water shall meet DWR's water quality standards in effect when the water is returned.

b. The turnin facility used to return water to the California Aqueduct must have an executed agreement with DWR for introduction of local water into the California Aqueduct.

c. KCWA shall collect water quality data for wells from which local water will be pumped, pursuant to the "Interim Department of Water Resources Water Quality Criteria for Acceptance of Non-Project Water into the State Water Project, March 1, 2001," or other document that supersedes this interim document. KCWA shall submit such data to the Division of Operations and Maintenance, Environmental Assessment Branch, Water Quality Section, Post Office Box 942836, Sacramento, California 94236-0001, or as otherwise directed by DWR.

7. WATER DELIVERY SCHEDULES

a. All water delivery schedules and revisions shall be in accordance with Article 12 of MWDSC's and KCWA's Water Supply Contracts.

b. MWDSC and KCWA shall submit revised monthly water delivery schedules for approval to the State Water Project Analysis Office, Water Deliveries Section, indicating timing and point of delivery requested pursuant to this Agreement with reference to SWPAO#11022. Revised schedules shall be sent by electronic mail to SWPDeliveries@water.ca.gov or by FAX to (916) 653-9628, Attention: Chief, Water Deliveries Section.

c. KCWA shall submit weekly schedules for the delivery of water to its service area pursuant to this Agreement to the San Joaquin Field Division, Water Operations Section, indicating timing and point of delivery requested with reference to SWPAO #11022. Schedules shall be sent by electronic mail to SJFDwaterschedule@water.ca.gov or by FAX to (661) 858-0203, Attention: Chief, Water Operations Section.

d. MWDSC shall submit weekly water schedules for the delivery of water to its service area pursuant to this Agreement to the Southern Field Division, Water Operations Section, indicating timing and point of delivery requested with reference to SWPAO #11022. Schedules shall be sent by electronic mail to SFDwaterschedule@water.ca.gov or by FAX to (661) 294-3651, Attention: Chief, Water Operations Section.

e. All weekly water schedules described above shall be submitted by 10:00 a.m. Wednesday, for the following week, Monday through Sunday, to the appropriate field division Water Operations Section for the SWP contractor.

f. Weekly water schedules shall also be concurrently sent by electronic mail or faxed to the State Water Project Operations Control Office:

1. Water Management Branch
Water_deliv_sched@water.ca.gov
FAX to (916) 574-2785,
Attention: Chief, Water Management Branch

2. Power Management and Optimization Branch
Water_deliv_sched@water.ca.gov
FAX to (916) 574-2785
Attention: Chief, Power Management and Optimization Branch

3. Pre-Scheduling Section
Presched@water.ca.gov
FAX to (916) 574-2782
Attention: Chief, Pre-Scheduling Section

8. SALE OF MWDSC'S SWP SUPPLIES

KCWA and RRBWSD attest that the portion of water retained by RRBWSD will not be sold or used outside KCWA's service area which is within the SWP place of use.

9. EFFECT ON APPROVED TABLE A

Water returned to MWDSC under this Agreement shall not be considered by DWR in the determination of approved annual Table A water deliveries or allocation of other SWP water supplies to MWDSC under Article 18 of MWDSC's Water Supply Contract.

10. NO IMPACT

This Agreement shall not be administered or interpreted in any way that would cause adverse impacts to SWP approved Table A water or to any other SWP approved water allocations, water deliveries, or SWP operations or facilities. MWDSC and KCWA shall be responsible, as determined by DWR, for any adverse impacts that may result from water deliveries pursuant to this Agreement.

11. WATER DELIVERY RECORDS

DWR will maintain monthly records accounting for MWDSC's approved SWP water delivered pursuant to this Agreement for storage in, and later return from, the RRBWSD/IRWD Water Banking and Exchange Program. MWDSC shall certify to DWR's State Water Project Analysis Office by January 31 of each year the following monthly information for the previous calendar year:

a. the quantity of water delivered to RRBWSD;

b. the quantity of stored water that will be available for return to MWDSC;

c. the actual losses of stored water; and

d. the quantity of water returned to MWDSC.

12. CHARGES AND CREDITS

MWDSC and KCWA shall pay the following charges including all future adjustments, which shall be calculated in the same manner as charges and credits are calculated for Table A deliveries and shall be in accordance with the provisions of MWDSC's and KCWA's Water Supply Contracts. Charges shall be determined for the year the water is stored, as well as the year the water is returned.

a. Water Delivered to Storage in KCWA

DWR will deliver MWDSC's approved SWP water from the Delta to KCWA's turnouts located in Reach 12E of the California Aqueduct for storage in the RRBWSD/IRWD Water Banking and Exchange Program. MWDSC shall pay to DWR the Variable Operation, Maintenance, Power and Replacement Component of the Transportation Charge and the Off-Aqueduct Power Facility costs for each acre-foot of water delivered from the Delta to the point of delivery at KCWA's turnout in Reach 12E.

b. Return Water Delivered to MWDSC

(1) When KCWA provides return water by exchange for a portion of its future approved Table A water, RRBWSD shall be entitled to a like amount of MWDSC's stored water. KCWA shall release a like amount of KCWA's Table A water on behalf of RRBWSD, which DWR delivers to MWDSC's turnouts for use in its service area. KCWA shall pay to DWR the Variable Operation, Maintenance, Power and Replacement Component of the Transportation Charge and Off-Aqueduct Power Facility costs for each acre-foot of Table A water released on behalf of RRBWSD, as if the released Table A water were conveyed to KCWA from the Delta to Reach 12E. MWDSC shall pay to DWR the Variable Operation, Maintenance, Power and Replacement Component of the Transportation Charge and Off-Aqueduct Power Facility costs for each acre-foot of Table A water conveyed from Reach 12E to MWDSC's turnouts in its service area.

(2) When KCWA returns MWDSC's approved SWP water from storage on behalf of RRBWSD by direct delivery into Reach 12E of the California Aqueduct, such water will be conveyed by DWR to MWDSC's turnouts. MWDSC shall pay to DWR the Variable Operation, Maintenance, Power and Replacement Component of the Transportation Charge and Off-Aqueduct Power Facility costs for each acre-foot of water from Reach 12E to MWDSC's turnouts

in its service area. KCWA shall not be charged for SWP power resources for replacing return water by direct delivery into the California Aqueduct.

c. In addition to the charges identified above, MWDSC agrees to pay to DWR any additional identified demonstrable increase in cost that would otherwise be borne by DWR or by the SWP contractors not signatory to this Agreement as a result of DWR providing service under this Agreement.

d. Payment terms shall be in accordance with MWDSC's and KCWA's Water Supply Contracts, in their current forms and as amended in the future.

13. APPROVALS

The delivery of water under this Agreement shall be contingent on and subject to any necessary approvals and shall be governed by the terms and conditions of such approvals and any other applicable regulations in effect at the time of delivery or return. MWDSC and KCWA shall be responsible for complying with all applicable laws and regulations and for securing any required approvals, permits, or orders. MWDSC and KCWA shall furnish to DWR copies of all approvals acquired for the delivery and storage of water under this Agreement.

14. LIABILITY

a. Responsibility for water delivered pursuant to this Agreement shall be governed by Article 13 of MWDSC's and KCWA's long-term Water Supply Contracts with DWR, with responsibilities under the terms of that article shifting from DWR to MWDSC or KCWA when the water passes through their respective delivery points.

b. MWDSC and KCWA agree to defend and hold DWR, its officers and employees, jointly or severally, harmless from any direct or indirect loss, liability, lawsuit, cause of action, judgment or claim, and shall indemnify DWR, its officers and employees, jointly or severally, for all lawsuits, costs, damages, judgments, attorneys fees, and liabilities that DWR, its officers and employees incur as result of DWR providing services under this Agreement, except to the extent resulting from the sole negligence or willful misconduct of DWR.

c. If uncontrollable forces preclude DWR from delivery water pursuant to this Agreement, either partially or completely, then DWR is relieved from the obligation to deliver the water under this Agreement to the extent that DWR is reasonably unable to complete the obligation due to the uncontrollable force. Uncontrollable forces shall include, but are not limited to

earthquakes, fires, tornadoes, floods, and other natural or human caused disasters. MWDSC and KCWA shall not be entitled to recover any administrative costs or costs paid for delivery of water pursuant to this Agreement if uncontrollable forces preclude DWR from delivering the water.

15. NO MODIFICATION OF WATER SUPPLY CONTRACTS

This Agreement shall not be interpreted to modify the terms or conditions of MWDSC's Water Supply Contract, as amended, or KCWA's Water Supply Contract, as amended. Unless expressly provided herein, the terms and conditions of MWDSC's and KCWA's Water Supply Contracts and future amendments apply to this Agreement.

16. DISPUTE RESOLUTION

In the event of dispute regarding interpretation or implementation of this Agreement, the Director of DWR and general managers of MWDSC and KCWA shall endeavor to resolve the dispute by meeting within 30 days after the request of a Party. If the dispute is unresolved, the Parties shall use the service of a mutually acceptable consultant in an effort to resolve the dispute. Parties involved in the dispute shall share the fees and expenses of the consultant equally. If a consultant cannot be agreed upon, or if the consultant's recommendations are not acceptable to the Parties, and unless the Parties otherwise agree, the matter may be resolved by litigation and any Party may, at its option, pursue any available legal remedy including, but not limited to, injunctive and other equitable relief.

17. ASSIGNMENT OF AGREEMENT

Without the prior written consent of DWR, KCWA, and MWDSC, this Agreement is not assignable by KCWA or by MWDSC in whole or in part.

18. PARAGRAPH HEADINGS

The paragraph headings of this Agreement are for the convenience of the Parties and shall not be considered to limit, expand, or define the contents of the respective paragraphs.

19. TERMS TO BE REASONABLE

Where the terms of this Agreement provide for actions to be based upon the opinion, judgment, approval, review, or determination of any party, such terms are to be construed as providing that such opinion, judgment, approval, review, or determination be reasonable.

20. MODIFICATION OF AGREEMENT

No modification of the terms and conditions of this Agreement shall be valid unless made in writing and signed by the Parties to this Agreement.

21. UNIQUENESS OF AGREEMENT

This Agreement is unique and shall not be considered a precedent for any future agreements.

22. SIGNATURE CLAUSE

The signatories represent that they have been appropriately authorized to enter into this Agreement on behalf of the Party for whom they sign. A copy of any resolution or other documentation authorizing MWDSC and KCWA to enter into this Agreement, if such resolution or authorization is required, shall be provided to DWR.

IN WITNESS WHEREOF, the Parties hereto have entered into this Agreement.

Approved as to legal form
and sufficiency

_____
Chief Counsel
Department Of Water Resources

_____
Date

State Of California
Department Of Water Resources

_____
Chief
State Water Project Analysis Office

_____
Date

METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

_____
Name

_____
Title

_____
Date

KERN COUNTY WATER AGENCY

_____
Name

_____
Title

_____
Date

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

APR 18 2012

Mr. Dan Flory, General Manager
Antelope Valley East Kern Water Agency
6500 West Avenue N
Palmdale, California 93551-2855

Mr. James M. Beck, General Manager
Kern County Water Agency
Post Office Box 58
Bakersfield, California 93302-0058

Mr. Jeffrey Kightlinger, General Manager
The Metropolitan Water District of Southern California
Post Office Box 54153
Los Angeles, California 90054-0153

This Agreement is in response to Antelope Valley East Kern Water Agency's (AVEK) letter dated November 30, 2011, requesting the Department of Water Resources (DWR) of the State of California approval for the delivery of up to 5,000 acre-feet of AVEK's approved State Water Project (SWP) water supplies to Metropolitan Water District of Southern California (MWDSC) on behalf of Irvine Ranch Water District (IRWD). IRWD receives SWP supplies through MWDSC's member agency, Municipal Water District of Orange County. IRWD owns the IRWD Strand Ranch Integrated Banking Project (Strand Ranch) located in Kern County and is operated by Rosedale-Rio Bravo Water Storage District (RRBWSD), a member agency of Kern County Water Agency (KCWA). The delivery of up to 5,000 acre-feet of AVEK's SWP water supplies to Strand Ranch shall be completed by December 31, 2012. In exchange, MWDSC, will return one-half, less up to 15 percent losses, of the total amount delivered to Strand Ranch of its future approved SWP water supplies. DWR, AVEK, MWDSC, and KCWA may be referred to individually by name or collectively as "Parties." This Agreement may be referred to as SWPAO #11023.

AVEK and IRWD entered into a six-year pilot exchange program (Pilot Program) on June 6, 2011. The Pilot Program agreement provides the terms and conditions for the delivery of up to 5,000 acre-feet AVEK's approved SWP supplies to Strand Ranch on behalf of MWDSC. To accommodate this exchange, MWDSC's ability to store water in IRWD's Strand Ranch is addressed in SWPAO #11022.

DWR, as a responsible agency, will file an NOD based on the determination that DWR's execution of this Agreement is within the scope of the RRBWSD's "Strand Ranch Integrated Banking Project-Final Environmental Impact Report," (SCH#2007041080) and no further environmental documentation is required.

DWR is willing to approve the delivery of up to 5,000 acre-feet of AVEK's approved SWP water supplies to Strand Ranch via KCWA's turnouts, in exchange for the return of MWDSC's future approved SWP water supplies equal to one-half, less losses, to AVEK, under the following terms and conditions:

GENERAL PROVISIONS

1. DWR's approval under this Agreement is unique and shall not be considered a precedent for future agreements.

2. This Agreement shall take effect upon execution by all Parties. Notwithstanding the terms of the Pilot Program, the return of MWDSC's approved SWP water supplies to AVEK shall be completed by December 31, 2017. This Agreement shall remain in effect until all the water is returned, or upon final payment to DWR by AVEK and MWDSC of all costs attributable to this Agreement, whichever occurs later. However, the liability, hold harmless and indemnification obligations in this Agreement shall remain in effect until December 31, 2021, or until any claim or litigation concerning this Agreement asserted to DWR, AVEK or MWDSC as of December 31, 2021 is finally resolved, whichever occurs later.

3. The delivery and return of water pursuant to this Agreement shall be contingent on, and subject to, any necessary approvals and shall be governed by the terms and conditions of such approval(s) and any other applicable regulations. AVEK and MWDSC shall be responsible for complying with all applicable laws and regulations and for securing any required consent, permit, or order. AVEK and MWDSC shall furnish to DWR copies of all approvals and agreements required for the delivery of water under this Agreement.

WATER DELIVERY FROM AVEK TO MWDSC

4. DWR will deliver up to 5,000 acre-feet of AVEK's approved SWP water supplies to KCWA's turnouts in Reach 12E of the California Aqueduct which will be subsequently conveyed to IRWD's Strand Ranch on behalf of MWDSC. The water held in Strand Ranch in storage on behalf of MWDSC is subject to the terms and conditions of the "Change In Point of Delivery Agreement Among Department of Water Resources of the State of California, Metropolitan Water District of Southern California and Kern County Water Agency For The Rosedale-Rio Bravo Water Storage District/Irvine Ranch Water District Water Banking and Exchange Program" (SWPAO #11022).

5. The delivery of a portion of AVEK's approved SWP water supplies to Strand Ranch on behalf of MWDSC shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver the water at times and locations when such delivery would adversely impact SWP operations, facilities, or other SWP contractors.

6. In coordination with and upon approval of KCWA, AVEK shall be responsible for scheduling delivery of AVEK's approved SWP water supplies to IRWD's Strand Ranch.

7. As part of coordinating delivery schedules between AVEK and KCWA, AVEK will submit a delivery schedule to KCWA and MWDSC for review and approval. KCWA and MWDSC shall review the proposed schedule with AVEK, and, after consultation with MWDSC, KCWA agrees to inform AVEK of its decision to either approve, propose modifications, or withhold approval as promptly as possible. KCWA agrees that it shall not arbitrarily withhold approval or propose modifications. KCWA may withhold approval of, or propose modifications to, AVEK's deliveries to storage under this Agreement if, on the basis of a with and without analysis, KCWA determines that such deliveries would adversely impact KCWA's water management activities, finances, water supply or operations, and AVEK or MWDSC do not agree to mitigate for such impacts. The base case (without analysis) shall be those conditions estimated to occur in the absence of the AVEK/IRWD Strand Ranch Integrated Banking Project. The KCWA analysis is a matter involving KCWA and AVEK, not DWR. DWR is not liable to AVEK for the determinations KCWA makes under this paragraph. DWR is not asserting the validity of KCWA's analysis, nor is it to be held liable by AVEK for any actions resulting from KCWA's analysis.

8. The sum of deliveries of water scheduled to MWDSC and/or AVEK under this Agreement, plus scheduled MWDSC and/or AVEK SWP water deliveries, plus deliveries to MWDSC and/or AVEK pursuant to any other agreements, shall not exceed the quantities on which the Proportionate Use-of-Facilities factors are based pursuant to MWDSC's and/or AVEK's long-term Water Supply Contract with DWR unless DWR determines that these deliveries will not adversely impact SWP operation, facilities, or other SWP contractors.

RETURN WATER DELIVERY FROM MWDSC TO AVEK

9. The return water shall be from MWDSC's future approved SWP water supplies allocated to MWDSC in the year that water is returned and shall be equal to one-half, less losses, of the total amount of AVEK's water delivered to Strand Ranch on behalf of MWDSC. Notwithstanding the terms of the Pilot Program, the return of water to AVEK shall be completed by December 31, 2017.

10. The delivery of a portion of MWDSC's approved SWP water supplies to AVEK under this Agreement shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver water at times and locations when such delivery would adversely impact SWP operations, facilities, or other SWP contractors.

11. In coordination with and upon approval of KCWA, MWDSC shall be responsible for scheduling with DWR the delivery of its return water to AVEK's service area.

12. KCWA may propose modifications to the proposed schedule for the return of MWDSC's previously stored water under this Agreement if, on the basis of a "with and without analysis", KCWA determines that such deliveries would adversely impact KCWA's finances, water supply or operations, and AVEK or MWDSC do not agree to mitigate for such impacts. The base case (without analysis) shall be those conditions estimated to occur in the absence of the AVEK/IRWD Strand Ranch Integrated Banking Project. The KCWA analysis is a matter involving KCWA and MWDSC, not DWR. DWR is not liable to MWDSC for the determinations KCWA makes under this paragraph. DWR is not asserting the validity of KCWA's analysis, nor is it to be held liable by MWDSC for any actions resulting from KCWA's analysis.

13. The sum of deliveries of return water scheduled to MWDSC and/or AVEK under this Agreement, plus scheduled MWDSC and/or AVEK SWP water deliveries, plus deliveries to MWDSC and/or AVEK pursuant to any other agreements, shall not exceed the quantities on which the Proportionate Use-of-Facilities factors are based pursuant to MWDSDC's and/or AVEK's long-term Water Supply Contract with DWR unless DWR determines that these deliveries will not adversely impact SWP operations, facilities, or other SWP contractors.

WATER DELIVERY SCHEDULES

14. All water delivery schedules and revisions will be in accordance with Article 12 of AVEK's and MWDSC's long-term Water Supply Contracts with DWR.

15. AVEK and MWDSC shall be responsible for coordinating and scheduling the water delivery with DWR as described in this Agreement. After all approvals have been obtained and before water is delivered under this Agreement, AVEK and MWDSC shall submit for DWR's approval a revised water delivery schedule showing the anticipated change to the monthly delivery pattern to accommodate the water delivery under this Agreement.

16. AVEK and MWDSC shall submit revised monthly water delivery schedules for approval to the State Water Project Water Analysis Office (SWPAO), Water Deliveries Section, indicating timing and point of delivery requested with reference to SWPAO #11023. Revised schedules shall be sent by electronic mail to SWPDeliveries@water.ca.gov or by FAX to (916) 653-9628, Attention: Chief, Water Deliveries Section.

17. AVEK shall submit weekly water schedules for the delivery of water pursuant to this Agreement to the San Joaquin Field Division, Water Operations Section, indicating timing and point of delivery requested with reference to SWPAO #11023. Schedules shall be sent by electronic mail to SJFDwaterschedule@water.ca.gov or by FAX to (661) 858-0203, Attention: Chief, Water Operations Section. MWDSC shall submit weekly water schedules for the delivery of the return water pursuant to this Agreement to the Southern Field Division, Water Operations Section, indicating timing and point of delivery requested with reference to SWPAO #11023. Schedules shall be sent by electronic mail to SFDwaterschedule@water.ca.gov or by FAX to (661) 294-3651, Attention: Chief, Water Operations Section.

18. All weekly water delivery schedules described above shall be submitted by 10:00 a.m. Wednesday, for the following week, Monday through Sunday, to the appropriate field division Water Operations Section.

19. Weekly water delivery schedules shall also be concurrently sent by electronic mail or faxed to the State Water Project Operations Control Office:

    a. Water Management Branch
    Water_deliv_sched@water.ca.gov
    FAX (916) 574-2785
    Attention: Chief, Water Management Branch

    b. Power Management and Optimization Branch
    Water_deliv_sched@water.ca.gov
    FAX (916) 574-2785
    Attention: Chief, Power Management and Optimization Branch

    c. Pre-Scheduling Section
    Presched@water.ca.gov
    FAX (916) 574-2782
    Attention: Chief, Pre-Scheduling Section

WATER DELIVERY RECORDS

20. DWR will maintain monthly records documenting the delivery of AVEK's approved SWP water supplies to MWDSC pursuant to this Agreement, and the return of such water to AVEK by MWDSC in future years. AVEK and MWDSC shall certify to SWPAO the quantity of water delivered to MWDSC, the quantity of the return water to AVEK, and the quantity of applicable losses under this Agreement by January 31st of the year following the actual delivery.

SWP ALLOCATION

21. Water delivered to MWDSC, KCWA, or AVEK under this Agreement shall not be considered by DWR in the determination of approved annual Table A deliveries or allocation of other SWP water to MWDSC, KCWA, or AVEK under Article 18 of MWDSC's, KCWA's, or AVEK's long-term Water Supply Contracts with DWR.

NO IMPACT

22. This Agreement shall not be administered or interpreted in any way that would cause adverse impacts to SWP approved Table A water or to any other SWP approved water allocations, water deliveries, or SWP operations or facilities. AVEK, MWDSC, and KCWA shall be responsible, as determined by DWR, for any adverse impacts that may result from the exchange of water.

CHARGES

23. AVEK and MWDSC shall pay the following charges, including all future adjustments, which shall be calculated in the same manner as charges are calculated for SWP Table A deliveries, and shall be in accordance with the provisions of AVEK's and MWDSC's long-term Water Supply Contracts with DWR. Charges shall be determined for the year the water is delivered, as well as the year the water is returned.

    a. When a portion of AVEK's approved SWP water is provided to MWDSC for subsequent delivery to KCWA's turnouts, MWDSC shall pay to DWR the charges associated with the delivery of the water from the Delta to KCWA's turnouts in Reach 12E of the California Aqueduct pursuant to the terms in SWPAO #11022.

b. In any year that a portion of MWDSC's future approved SWP water supplies is returned to AVEK pursuant to this Agreement, AVEK shall pay to DWR the charges associated with the delivery of the return water from the Delta to AVEK's turnouts in Reaches 19, 20A, 20B, 22A, and 22B of the California Aqueduct. AVEK shall pay the Variable Operation, Maintenance, Power, and Replacement Component of the Transportation Charge and the Off-Aqueduct Power Facilities costs for each acre-foot of water delivered in effect for the year in which water is returned to AVEK.

24. In addition to the charges identified above, AVEK and MWDSC agree to pay to DWR any identified demonstrable increase in costs that would otherwise be borne by the SWP contractors not signatory to this Agreement or by DWR as a result of activities pursuant to this Agreement.

25. Payment terms shall be in accordance with AVEK's and MWDSC's long-term Water Supply Contracts with DWR, in their current forms and as amended in the future.

LIABILITY

26. Responsibility for water delivered under this Agreement shall be governed by Article 13 of AVEK's, MWDSC's, and KCWA's long-term Water Supply Contracts with DWR, with responsibilities under the terms of that article shifting from DWR to KCWA, MWDSC, or AVEK when the water passes through their respective delivery points.

27. AVEK, MWDSC, and KCWA agree to defend and hold DWR, its officers and employees, jointly or severally, harmless from any direct or indirect loss, liability, lawsuit, cause of action, judgment or claim, and shall indemnify DWR, its officers and employees, jointly or severally, for all lawsuits, costs, damages, judgments, attorney fees, and liabilities that DWR, its officers and employees incur as a result of DWR providing services under this Agreement, except to the extent resulting from the sole negligence or willful misconduct of DWR.

28. If uncontrollable forces preclude DWR from delivering water pursuant to this Agreement, either partially or completely, then DWR is relieved from the obligation to deliver the water to the extent that DWR is reasonably unable to complete the obligation due to the uncontrollable force. Uncontrollable forces shall include, but are not limited to earthquakes, fires, tornadoes, floods, and other natural or human caused disasters. AVEK, MWDSC, and KCWA will not be entitled to recover any administrative costs, or costs paid for delivery of water pursuant to this Agreement if uncontrollable forces preclude DWR from completing the delivery of the water.

EXECUTION

29. This Agreement may be executed in counterpart. The Parties agree to accept facsimile or electronically scanned signatures as original signatures. The Agreement shall take effect as soon as all parties have signed. Immediately after execution, AVEK, MWDSC, and KCWA shall transmit a copy of the executed

    Agreement by facsimile or electronic file to Robert Cooke, Chief, State Water Project Analysis Office at (916) 653-9628 or cooke@water.ca.gov and to each other at:

    MWDSC: (213) 217-6890 or jkightlinger@mwdh2o.com
    AVEK: (661) 943-3204 or dflory@avek.org
    KCWA: (661) 634-1438 or jbeck@kcwa.com

30. If AVEK, MWDSC, or KCWA require a Board of Directors' approval of this Agreement, that Party shall send a facsimile or electronic file of the board approval to the other Parties.

If you have any questions or need additional information, please contact me at (916) 653-4313 and refer to SWPAO #11023.

Sincerely,

Robert B. Cooke

Robert B. Cooke, Chief
State Water Project Analysis Office

cc: (See attached list.)

ACCEPTED:

ANTELOPE VALLEY EAST KERN WATER AGENCY

Signature

Title

Date

KERN COUNTY WATER AGENCY

Signature

Title

Date

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Signature

Title

Date

cc: Mr. Terry Erlewine, General Manager
State Water Contractors
1121 L Street, Suite 1050
Sacramento, California 95814

STATE OF CALIFORNIA -- CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR, Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791

APR 18 2012

Mr. Matt Naftaly
Water Resources Planning Manager
Santa Barbara County Flood Control
and Water Conservation District
123 East Anapamu Street
Santa Barbara, California 93101-2058

Mr. Jeffrey Kightlinger
General Manager
The Metropolitan Water District of
Southern California
Post Office Box 54153
Los Angeles, California 90054-0153

Mr. James M. Beck
General Manager
Kern County Water Agency
Post Office Box 58
Bakersfield, California 93302-0058

This Agreement is in response to Central Coast Water Authority's (CCWA) letter request dated November 7, 2011 for approval of the delivery of up to 1,500 acre-feet of Santa Barbara County Flood Control and Water Conservation District's (Santa Barbara) approved State Water Project (SWP) water supplies to the Metropolitan Water District of Southern California (MWDSC), for Irvine Ranch Water District (IRWD). Delivery of Santa Barbara's water to MWDSC shall be completed by December 31, 2012.

IRWD receives SWP supplies through MWDSC's member agency, Municipal Water District of Orange County (MWDOC). IRWD owns the IRWD Integrated Strand Ranch Water Banking Project (Strand Ranch) located in Kern County and operated by Rosedale-Rio Bravo Water Storage District (RRBWSD), a member agency of Kern County Water Agency (KCWA).

In exchange, MWDSC will return one-half, less up to 15 percent losses, of the total amount delivered to Strand Ranch of its future approved SWP water supplies. CCWA is requesting this exchange on behalf of one of Santa Barbara's member agencies, Carpinteria Valley Water District (CVWD). DWR, Santa Barbara, MWDSC and KCWA may be referred to individually by name or collectively as "Parties". This Agreement may be referred to as SWPAO #11021.

CVWD and IRWD entered into a six-year Pilot Exchange Program on October 4, 2011, hereafter referred to as "Pilot Program". The Pilot Program provides the terms and conditions for the delivery of up to 1,500 acre-feet of Santa Barbara's approved SWP water supplies to Strand Ranch. Storage at Strand Ranch for this Pilot Program is addressed in Agreement #11022.

In compliance with the California Environmental Quality Act (CEQA), CCWA, as lead agency, filed a Notice of Exemption (NOE) with the State Office of Planning and Research (OPR) (SCH #2011118086) on November 9, 2011. DWR, as a responsible agency, will file an NOD base on the determination that DWR's execution of this Agreement is within the scope of RRBWSD's Final Environmental Impact Report for the Strand Ranch Integrated Banking Project dated May 2008 (SCH #2007041080) and no new environmental documentation is required.

DWR is willing to approve the delivery of up to 1,500 acre-feet of Santa Barbara's approved SWP water supplies to Strand Ranch for subsequent delivery to KCWA's turnouts in exchange for the return of Santa Barbara's future approved SWP water supplies equal to one-half, less losses, of the total amount delivered to MWDSC under the following terms and conditions:

GENERAL PROVISIONS

1. DWR's approval under this Agreement is unique and shall not be considered a precedent for future agreements.

2. This Agreement shall take effect upon execution by all parties. Notwithstanding the terms of the Pilot Program, the return of MWDSC's approved SWP water supplies to Santa Barbara shall be completed by December 31, 2017. This Agreement shall remain in effect until all the water is returned, or upon final payment to DWR by Santa Barbara and MWDSC of all costs attributable to this Agreement, whichever occurs later. However, the liability, hold harmless and indemnification obligations in this Agreement shall remain in effect until December 31, 2021, or until any claim or litigation concerning this Agreement asserted to DWR, Santa Barbara, or MWDSC as of December 31, 2021 is finally resolved, whichever occurs later.

3. The delivery and return of water pursuant to this Agreement shall be contingent on, and subject to, any necessary approvals and shall be governed by the terms and conditions of such approval(s) and any other applicable regulations. Santa Barbara and MWDSC shall be responsible for complying with all applicable laws and regulations and for securing any required consent, permit, or order. Santa Barbara and MWDSC shall furnish to DWR copies of all approvals and agreements required for the delivery of water under this Agreement.

WATER DELIVERY FROM SANTA BARBARA TO MWDSC

4. DWR will deliver up to 1,500 acre-feet of Santa Barbara's approved SWP water supplies, to KCWA's turnouts in Reach 12E of the California Aqueduct which will be subsequently delivered to IRWD's Strand Ranch on behalf of MWDSC. The water held in Strand Ranch in storage on behalf of MWDSC is subject to the terms and conditions of the "Change in Point of Delivery Agreement Among Department of

Water Resources of the State of California, Metropolitan Water District of Southern California, and Kern County Water Agency for the Rosedale-Rio Bravo Water Storage District/Irvine Ranch Water District Water Banking and Exchange Program" SWPAO #11022.

5. The delivery of a portion of Santa Barbara's approved SWP water supplies to Strand Ranch on behalf of MWDSC shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver the water at times and locations when such delivery would adversely impact SWP operations, facilities, or other SWP contractors.

6. In coordination with and upon approval of KCWA, Santa Barbara shall be responsible for scheduling delivery of Santa Barbara's approved SWP water supplies to IRWD's Strand Ranch.

7. As part of coordinating delivery schedules between Santa Barbara and KCWA, Santa Barbara shall submit a delivery schedule to KCWA and MWDSC for review and approval. KCWA and MWDSC shall review the proposed schedule with Santa Barbara, and after consultation with MWDSC, KCWA agrees to inform Santa Barbara as promptly as possible of its decision to either approve, propose modifications, or withhold approval as promptly as possible. KCWA agrees that it shall not arbitrarily withhold approval or propose modifications. KCWA may withhold approval of, or propose modifications to Santa Barbara's deliveries to storage under this Agreement if, on the basis of a with and without analysis, KCWA determines that such deliveries would adversely impact KCWA's water management activities, finances, water supply or operations, and Santa Barbara or MWDSC do not agree to mitigate for such impacts. The base case (without analysis) shall be those conditions estimated to occur in the absence of the Santa Barbara/IRWD Integrated Strand Ranch Water Banking Project. The KCWA analysis is a matter involving KCWA and Santa Barbara, not DWR. DWR is not liable to Santa Barbara for the determinations KCWA makes under this paragraph. DWR is not asserting the validity of KCWA's analysis, nor is it to be held liable by Santa Barbara for any actions resulting from KCWA's analysis.

8. The sum of deliveries scheduled to MWDSC and/or Santa Barbara under this Agreement, plus scheduled MWDSC and/or Santa Barbara and SWP water deliveries, plus deliveries to MWDSC and/or Santa Barbara and pursuant to any other agreements, shall not exceed the quantities on which the Proportionate Use-of-Facilities factors are based pursuant to MWDSC's and/or Santa Barbara's long-term Water Supply Contract with DWR unless DWR determines that deliveries will not adversely impact SWP operations, facilities, or other SWP contractors.

RETURN WATER DELIVERY FROM MWDSC TO SANTA BARBARA

9. The return water shall be from MWDSC's future approved SWP water supplies allocated to IRWD in the year that water is returned and shall be equal to one-half, less losses, of the total amount of Santa Barbara's water delivered to Strand Ranch on behalf of MWDSC. Notwithstanding the terms of the Pilot Program, the return of water to Santa Barbara shall be completed by December 31, 2017.

10. The delivery of a portion of MWDSC's approved SWP water supplies to Santa Barbara under this Agreement shall be in accordance with a schedule approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver water at times and locations when such delivery would adversely impact SWP operations, facilities, or other SWP contractors.

11. In coordination with and approval of KCWA, MWDSC shall be responsible for scheduling with DWR the delivery of its return water to Santa Barbara's service area.

12. KCWA may propose modifications to the proposed schedule for the return of Santa Barbara's water under this Agreement if, on the basis of a "with and without" analysis, KCWA determines that such deliveries would adversely impact KCWA's finances, water supply or operations, and Santa Barbara and MWDSC do not agree to mitigate for such impacts. The base case (without analysis) shall be those conditions estimated to occur in the absence of the IRWD Strand Ranch Water Banking Project. The KCWA analysis is a matter involving KCWA and MWDSC, not DWR. DWR is not liable to MWDSC for the determinations KCWA makes under this paragraph. DWR is not asserting the validity of KCWA's analysis, nor is it to be held liable by MWDSC for any actions resulting from KCWA's analysis.

13. The sum of deliveries of return water scheduled to MWDSC and/or Santa Barbara under this Agreement, plus scheduled MWDSC and/or Santa Barbara SWP water deliveries, plus deliveries to MWDSC and/or Santa Barbara pursuant to any other agreements, shall not exceed the quantities on which the Proportionate Use-of-Facilities factors are based pursuant to Santa Barbara's and/or MWDSC's long-term Water Supply Contract with DWR unless DWR determines that these deliveries will not adversely impact SWP operations, facilities, or other SWP contractors.

WATER DELIVERY SCHEDULES

14. All water delivery schedules and revisions shall be in accordance with Article 12 of Santa Barbara's and MWDSC's long-term Water Supply Contracts with DWR.

15. Santa Barbara and MWDSC shall be responsible for coordinating and scheduling the water delivery with DWR as described in this Agreement. After all approvals have been obtained and before water is delivered under this Agreement, Santa Barbara and MWDSC shall submit for DWR's approval a revised water delivery schedule showing the anticipated change to the monthly delivery pattern to accommodate the water delivery under this Agreement.

16. Santa Barbara and MWDSC shall submit revised monthly water delivery schedules for approval to the State Water Project Water Analysis Office (SWPAO), Water Deliveries Section, indicating timing and point of delivery requested pursuant to this Agreement with reference to SWPAO #11021. Revised schedules shall be sent by electronic mail to SWPDeliveries@water.ca.gov or by FAX to (916) 653-9628, Attention: Chief, Water Deliveries Section.

17. Santa Barbara and MWDSC shall submit weekly water schedules for the delivery of water pursuant to this Agreement to the San Joaquin Field Division, indicating timing and point of delivery requested with reference to SWPAO #11021. Schedules shall be sent by electronic mail to SJFDwaterschedule@water.ca.gov or by FAX to (661) 858-0203, Attention: Chief, Water Operations Section.

18. All weekly water delivery schedules described above shall be submitted by 10:00 a.m. Wednesday, for the following week, Monday through Sunday, to the appropriate field division Water Operations Section for the SWP contractor.

19. Weekly water schedules shall also be concurrently sent by electronic mail or faxed to the State Water Project Operations Control Office:

    a. Water Management Branch
    Water_deliv_sched@water.ca.gov
    FAX (916) 574-2785
    Attention: Chief, Water Management Branch

    b. Power Management and Optimization Branch
    Water_deliv_sched@water.ca.gov
    FAX (916) 574-2785
    Attention: Chief, Power Management and Optimization Branch

c. Pre-Scheduling Section
Presched@water.ca.gov
FAX (916) 574-2782
Attention: Chief, Pre-Scheduling Section

WATER DELIVERY RECORDS

20. DWR will maintain monthly records documenting the delivery of Santa Barbara's approved SWP water supplies to MWDSC pursuant to this Agreement, and the return of such water to Santa Barbara by MWDSC in future years. Santa Barbara and MWDSC shall certify to SWPAO the quantity of water delivered to MWDSC, the quantity of the return water to Santa Barbara, and the quantity of applicable losses under this Agreement by January 31st of the year following the actual delivery.

SWP ALLOCATION

21. Water delivered to Santa Barbara, MWDSC or KCWA under this Agreement shall not be considered by DWR in the determination of approved annual Table A deliveries or allocation of other SWP water to Santa Barbara, MWDSC and KCWA under Article 18 of Santa Barbara's, MWDSC's and KCWA's long-term Water Supply Contracts with DWR.

NO IMPACT

22. This Agreement shall not be administered or interpreted in any way that would cause adverse impacts to SWP approved Table A water or to any other SWP approved water allocations, water deliveries, or SWP operations or facilities. Santa Barbara, MWDSC, and KCWA shall be responsible, jointly and severally, as determined by DWR, for any adverse impacts that may result from the exchange of water.

CHARGES

23. Santa Barbara and MWDSC shall pay the following charges, including all future adjustments, which shall be calculated in the same manner as charges are calculated for SWP Table A deliveries, and shall be in accordance with the provisions of Santa Barbara's and MWDSC's long-term Water Supply Contracts with DWR. Charges shall be determined for the year the water is delivered, as well as the year the water is returned.

a. When a portion of Santa Barbara's approved SWP water is provided to MWDSC for subsequent delivery to KCWA's turnouts, MWDSC shall pay to DWR the charges associated with the delivery of the water from the Delta to KCWA's turnouts in Reach 12E of the California Aqueduct pursuant to the terms in SWPAO #11022.

b. In any year that a portion of MWDSC's future approved SWP water supplies is returned to Santa Barbara pursuant to this Agreement, Santa Barbara shall pay to DWR the charges associated with the delivery of the return water from the Delta to Santa Barbara's turnouts in Reaches 33A through 38 in the Coastal Branch of the California Aqueduct. Santa Barbara shall pay the Variable Operation, Maintenance, Power, and Replacement Component of the Transportation Charge and the Off-Aqueduct Power Facilities costs for each acre-foot of water delivered in effect for the year in which water is returned to Santa Barbara.

24. In addition to the charges identified above, Santa Barbara and MWDSC agree to pay to DWR any identified demonstrable increase in costs that would otherwise be borne by the SWP contractors not signatory to this Agreement or by DWR as a result of activities pursuant to this Agreement.

25. Payment terms shall be in accordance with Santa Barbara's and MWDSC's long-term Water Supply Contracts with DWR, in their current forms and as amended in the future.

LIABILITY

26. Responsibility for water delivered under this Agreement shall be governed by Article 13 of Santa Barbara's, MWDSC's, and KCWA's long-term Water Supply Contracts with DWR, with responsibilities under the terms of that article shifting from DWR to Santa Barbara, MWDSC or KCWA when the water passes through their respective delivery points.

27. Santa Barbara, MWDSC and KCWA agree to defend and hold DWR, its officers and employees, jointly or severally, harmless from any direct or indirect loss, liability, lawsuit, cause of action, judgment or claim, and shall indemnify DWR, its officers and employees, jointly or severally, for all lawsuits, costs, damages, judgments, attorney fees, and liabilities that DWR, its officers and employees incur as a result of DWR providing services under this Agreement, except to the extent resulting from the sole negligence or willful misconduct of DWR.

28. If uncontrollable forces preclude DWR from delivering water pursuant to this Agreement, either partially or completely, then DWR is relieved from the obligation to deliver the water to the extent that DWR is reasonably unable to complete the obligation due to the uncontrollable force. Uncontrollable forces shall include, but are not limited to earthquakes, fires, tornadoes, floods, and other natural or human caused disasters. Santa Barbara, MWDSC and KCWA will not be entitled to recover any administrative costs, or costs paid for delivery of water pursuant to this Agreement if uncontrollable forces preclude DWR from completing the delivery of the water.

EXECUTION

29. This Agreement may be executed in counterpart. The Parties agree to accept facsimile or electronically scanned signatures as original signatures. The Agreement shall take effect as soon as all parties have signed.

30. Immediately after execution, Santa Barbara, MWDSC and KCWA shall transmit a copy of the executed Agreement by facsimile or electronic file to Robert Cooke, Chief, State Water Project Analysis Office at (916) 653-9628, or cooke@water.ca.gov and to each other at:

    Santa Barbara: (805) 568-3434 or mnaftal@cosbpw.net
    KCWA: (661) 634-1438 or jbeck@kcwa.com
    MWDSC: (213) 217-6211 or jkightlinger@mwdh2o.com

31. If Santa Barbara, MWDSC and KCWA require a Board of Directors' approval of this Agreement, that Party shall send a facsimile or electronic file of the board approval to the other Parties.

If you have any questions or need additional information, please contact me at (916) 653-4313 and refer to SWPAO #11021.

Sincerely,

Robert B. Cooke, Chief
State Water Project Analysis Office

cc: (See attached list.)

ACCEPTED:

KERN COUNTY WATER AGENCY

_____
Signature

_____
Title

_____
Date

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

_____
Signature

_____
Title

_____
Date

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

_____
Signature

_____
Title

_____
Date

cc: Mr. Terry Erlewine, General Manager
State Water Contractors
1121 L Street, Suite 1050
Sacramento, California 95814

EXHIBIT "D"

DRAFT

IRVINE RANCH WATER DISTRICT 15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92619-7000 (949) 453-5300

[date]

Honorable Board of Directors [General Manager?]
Rosedale Rio Bravo Water Storage District

_____

_____

Re: DWR Agreement [SWPAO #11022]

Dear [Board Members]:

Pursuant to Section 2(B) of the January 13, 2009 Agreement "Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District For A Water Banking and Exchange Program," Rosedale-Rio Bravo Water Storage District ("RRB") proposes to enter into an agreement, in the form attached hereto (upon execution and delivery thereof, the "RRB-KCWA Agreement"), with Kern County Water Agency ("KCWA") as a condition of KCWA's entering into that certain agreement with Metropolitan Water District of Southern California and California Department of Water Resources identified in the RRB-KCWA Agreement. Irvine Ranch Water District ("IRWD") agrees that RRB's indemnification obligations as set forth in numbered paragraphs 8 and 9 of the RRB-KCWA Agreement shall be passed through to and be performed by IRWD, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent act or acts of RRB, its Board of Directors, officers, representatives, consultants, contractors, agents or employees.

The Parties intend that this Letter Agreement is consistent with, and is entered into by IRWD and RRB pursuant to, the above-referenced January 13, 2009 Agreement.

Very truly yours,

IRVINE RANCH WATER DISTRICT

By:_____
General Manager

By:_____
Secretary

DRAFT

READ, APPROVED AND ACCEPTED:

ROSEDALE RIO-BRAVO WATER STORAGE DISTRICT

By:_____
Title:

By:_____
Secretary

Date 5-29-12
File Name
File Location
Original
Copy
Scan 110.1
Email

May 25, 2012

Mr. Eric Averett
Rosedale-Rio Bravo Water Storage District
P.O. Box 867
Bakersfield, CA 93302-0867

Re: Agreement Among Department of Water Resources, Metropolitan Water District of Southern California and the Kern County Water Agency the Rosedale-Rio Bravo Water Storage District/Irvine Ranch Water District Water Banking and Exchange Program

Dear Mr. Averett:

Rosedale-Rio Bravo Water Storage District (Rosedale) has requested that the Kern County Water Agency (Agency) facilitate the delivery of up to 1,500 acre-feet (af) of Santa Barbara County Flood Control and Water Conservation District's (Santa Barbara) State Water Project (SWP) water supplies and up to 5,000 af of Antelope Valley East Kern Water Agency's (AVEK) SWP water supplies to the Strand Ranch Water Banking Project (Strand Ranch) on behalf of the Irvine Ranch Water District who receives SWP supplies through Metropolitan Water District of Southern California (MWDSC). In exchange, of the total amounts delivered on behalf of Santa Barbara and AVEK individually, MWDSC will return one-half, less losses, of the total amount delivered to Strand Ranch of its future approved SWP water supplies. To facilitate the delivery of Santa Barbara's and AVEK's SWP water, the Agency must enter into an agreement with MWDSC and the California Department of Water Resources (DWR) (Agreement). DWR has drafted the Agreement and provided it to the Agency for execution.

Pursuant to Paragraph 4 of the Agreement, the Agency is responsible for scheduling the delivery of MWDSC's SWP water to the Agency. Pursuant to Paragraph 4 of the Agreement, the sum of deliveries pursuant to the Agreement, plus the Agency's scheduled SWP deliveries, plus deliveries to the Agency pursuant to any other agreements, shall not exceed the quantities on which the Proportionate Use-of-Facilities factors are based. Pursuant to Paragraphs 4 and 5 of the Agreement, the Agency may withhold approval of deliveries of MWDSC's SWP water and return of water to MWDSC pursuant to the Agreement should such deliveries would impact the Agency's water management activities, finances, water supply or operations. Pursuant to Paragraph 6 of the Agreement, the Agency shall collect water quality data from wells which local water will be pumped and shall submit such data to DWR. Paragraph 7 of the Agreement, the Agency must submit monthly and weekly water delivery schedules to DWR.

(661) 634-1400

Mailing Address
P.O. Box 58
Bakersfield, CA 93302-0058

Street Address
3200 Rio Mirada Dr.
Bakersfield, CA 93308

In addition, pursuant to Paragraph 8 of the Agreement, the Agency and Rosedale shall attest that the portion of water retained by Rosedale will not be sold or used outside of the Agency's service area. Pursuant to Paragraph 10 of the Agreement, MWDSC and the Agency are responsible for any adverse impacts that may result from water deliveries pursuant to the Agreement. Pursuant to Paragraph 12 of the Agreement, the Agency must pay charges, including all future adjustments, for delivery of MWDSC's SWP water to Reach 12E of the California Aqueduct for storage in the Rosedale-Rio Bravo Water Storage District/Irvine Ranch Water District Water Banking and Exchange Program. Pursuant to Article 13 of the Agreement, the Agency and MWDSC shall be responsible for complying with all applicable laws and regulations and for securing any required approvals, permits or orders. Pursuant to Paragraph 14, responsibility for delivery of water shifts from DWR to the Agency when the water passes through the Agency's delivery points. Pursuant to Paragraph 14, MWDSC and the Agency must agree to hold DWR harmless and be jointly and severally liable for any claim or liability against DWR. Paragraph 16 of the Agreement, in the event there is a dispute regarding interpretation or implementation of the Agreement, Agency must pay its share of consultant fees and expenses to resolve the dispute.

The Agency will execute the Agreement provided that Rosedale agrees to the following:

1. Rosedale shall submit monthly and weekly schedules to the Agency for deliveries of water pursuant to the Agreement.

2. Deliveries of SWP water pursuant to the Agreement cannot cause the Agency to exceed the quantities on which the Proportionate Use-of-Facilities factors are based.

3. The delivery of water to Rosedale pursuant to the Agreement shall occur after deliveries of water pursuant to all agreements that benefit the Agency Member Units. The Agency may withhold approval of deliveries of water to Rosedale and return of water pursuant to the Agreement should the Agency determine that such delivery would impact the Agency's water management activities, finances, water supply or operations.

4. Rosedale shall collect and submit to the Agency water quality data from wells from which local water will be pumped, pursuant to the Interim Department of Water Resources Water Quality Criteria for Acceptance of Non-Project Water Into the State Water Project, March 1, 2001, or any other superseding document.

5. Rosedale shall use the portion of water retained by Rosedale within the Agency's service area.

6. Rosedale shall reimburse the Agency for any costs incurred under Paragraphs 10, 12, 13, 14 and 16 of the Agreement.

7. Rosedale shall be responsible for complying with all applicable laws and regulations and for securing any required approvals, permits or orders.

8. Rosedale shall agree to hold the Agency harmless and be jointly and severally liable for any claim or liability against DWR pursuant to the Agreement

9. In the event of claim of liability against the Agency that arises as a result of the Agreement, Rosedale shall defend, indemnify and hold the Agency and any of its Directors, officers, or employees harmless from any such claim.

10. The Agency's approval and execution of this Agreement is unique and shall not be considered a precedent for further Programs or Agreements.

If the above is acceptable, please sign and date both copies of this letter and return both copies to the Agency. A fully executed original will be returned to Rosedale.

Sincerely,

James M. Beck
General Manager

The forgoing constitutes the agreement between the Agency and Rosedale as a condition of the Agency executing the Agreement with DWR.

Accepted:

Kern County Water Agency	Rosedale Rio-Bravo Water Storage District
By:_____	By:_____
Title:_____	Title:_____
Date:_____	Date:_____

EXHIBIT "E"

DRAFT

IRVINE RANCH WATER DISTRICT *15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92619-7000 (949) 453-5300*

[date]

Honorable Board of Directors [General Manager?]
Rosedale Rio Bravo Water Storage District

_____

_____

Re: DWR Agreement [SWPAO #11023]

Dear [Board Members]:

Pursuant to Section 2(B) of the January 13, 2009 Agreement "Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District For A Water Banking and Exchange Program," Rosedale-Rio Bravo Water Storage District ("RRB") proposes to enter into an agreement, in the form attached hereto (upon execution and delivery thereof, the "RRB-KCWA Agreement"), with Kern County Water Agency ("KCWA") as a condition of KCWA's entering into that certain agreement with Antelope Valley-East Kern Water Agency, Metropolitan Water District of Southern California and California Department of Water Resources identified in the RRB-KCWA Agreement. Irvine Ranch Water District ("IRWD") agrees that RRB's indemnification obligations as set forth in numbered paragraphs 3 and 4 of the RRB-KCWA Agreement shall be passed through to and be performed by IRWD, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent act or acts of RRB, its Board of Directors, officers, representatives, consultants, contractors, agents or employees.

The Parties intend that this Letter Agreement is consistent with, and is entered into by IRWD and RRB pursuant to, the above-referenced January 13, 2009 Agreement.

Very truly yours,

IRVINE RANCH WATER DISTRICT

By:_____
General Manager

By:_____
Secretary

READ, APPROVED AND ACCEPTED:

ROSEDALE RIO-BRAVO WATER STORAGE DISTRICT

By:_____
Title:

By:_____
Secretary

Date 5-29-12 JH
File Name
File Location
Original
Copy
Scan
Email 110.1

May 25, 2012

Mr. Eric Averett
Rosedale-Rio Bravo Water Storage District
P.O. Box 867
Bakersfield, CA 93302-0867

Re: Agreement for Delivery of Antelope Valley East Kern Water Agency District State Water Project Water Supplies to Irvine Ranch Water District

Dear Mr. Averett:

Rosedale-Rio Bravo Water Storage District (Rosedale) has requested that the Kern County Water Agency (Agency) facilitate the delivery of up to 5,000 acre-feet (af) of Antelope Valley East Kern Water Agency's (AVEK) State Water Project (SWP) water supplies to the Strand Ranch Water Banking Project (Strand Ranch) on behalf of the Irvine Ranch Water District who receives SWP supplies through Metropolitan Water District of Southern California (MWDSC). In exchange, MWDSC will return one-half, less losses, of the total amount delivered to Strand Ranch of its future approved SWP water supplies to AVEK. To facilitate the delivery of AVEK SWP water, the Agency must enter into an agreement with the AVEK, MWDSC and California Department of Water Resources (DWR) (Agreement). DWR has drafted the Agreement and provided it to the Agency for execution.

Pursuant to Paragraphs 7 and 12 of the Agreement, the Agency may withhold approval of deliveries of AVEK's SWP water and return of water to AVEK pursuant to the Agreement should such deliveries would impact the Agency's water management activities, finances, water supply or operations. Pursuant to Paragraph 11, the Agency shall approve scheduling with DWR of the return water to AVEK. Pursuant to Paragraph 22, AVEK, MWDSC and the Agency are responsible for any adverse impacts that may result from the exchange of water. Pursuant to Paragraph 26, responsibility for delivery of water shifts from DWR to the Agency when the water passes through the Agency's delivery points. Pursuant to Paragraph 27, AVEK, MWDSC and the Agency must agree to hold DWR harmless and be jointly and severally liable for any claim or liability against DWR.

The Agency will execute the Agreement provided that Rosedale agrees to the following:

(661) 634-1400

Mailing Address
P.O. Box 58
Bakersfield, CA 93302-0058

Street Address
3200 Rio Mirada Dr.
Bakersfield, CA 93308

1. The delivery of AVEK's water to District shall occur after deliveries of water pursuant to all agreements that benefit the Agency Member Units. The Agency may withhold approval of deliveries of AVEK's water to Rosedale and return of water to AVEK should the Agency determine that such delivery would impact the Agency's water management activities, finances, water supply or operations.

2. Rosedale shall reimburse the Agency for any costs incurred under Paragraphs 22 and 26 of the Agreement.

3. Rosedale shall agree to hold the Agency harmless and be jointly and severally liable for any claim or liability against DWR pursuant to the Agreement

4. In the event of claim of liability against the Agency that arises as a result of the Agreement, Rosedale shall defend, indemnify and hold the Agency and any of its Directors, officers, or employees harmless from any such claim.

5. The Agency's approval and execution of this Agreement is unique and shall not be considered a precedent for further Programs or Agreements.

If the above is acceptable, please sign and date both copies of this letter and return both copies to the Agency. A fully executed original will be returned to Rosedale.

Sincerely,

James M. Beck
General Manager

The forgoing constitutes the agreement between the Agency and Rosedale as a condition of the Agency executing the Agreement with DWR.

Accepted:

Kern County Water Agency	Rosedale Rio-Bravo Water Storage District
By:_____	By:_____
Title:_____	Title:_____
Date:_____	Date:_____

EXHIBIT "F"

DRAFT

IRVINE RANCH WATER DISTRICT *15600 Sand Canyon Ave., P.O. Box 57000, Irvine, CA 92619-7000 (949) 453-5300*

[date]

Honorable Board of Directors [General Manager?]
Rosedale Rio Bravo Water Storage District

_____

_____

Re: DWR Agreement [SWPAO #11021]

Dear [Board Members]:

Pursuant to Section 2(B) of the January 13, 2009 Agreement "Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District For A Water Banking and Exchange Program," Rosedale-Rio Bravo Water Storage District ("RRB") proposes to enter into an agreement, in the form attached hereto (upon execution and delivery thereof, the "RRB-KCWA Agreement"), with Kern County Water Agency ("KCWA") as a condition of KCWA's entering into that certain agreement with Santa Barbara County Flood Control and Water Conservation District, Metropolitan Water District of Southern California and California Department of Water Resources identified in the RRB-KCWA Agreement. Irvine Ranch Water District ("IRWD") agrees that RRB's indemnification obligations as set forth in numbered paragraphs 3 and 4 of the RRB-KCWA Agreement shall be passed through to and be performed by IRWD, excepting any loss, damage or expense and claims for loss, damage or expense resulting in any manner from the negligent act or acts of RRB, its Board of Directors, officers, representatives, consultants, contractors, agents or employees.

The Parties intend that this Letter Agreement is consistent with, and is entered into by IRWD and RRB pursuant to, the above-referenced January 13, 2009 Agreement.

Very truly yours,

IRVINE RANCH WATER DISTRICT

By:_____
General Manager

By:_____
Secretary

READ, APPROVED AND ACCEPTED:

ROSEDALE RIO-BRAVO WATER STORAGE DISTRICT

By:_____
Title:

By:_____
Secretary

Date 5-29-12 JH
File Name
File Location
Original
Copy
Scan
Email

110.1

May 25, 2012

Mr. Eric Averett
Rosedale-Rio Bravo Water Storage District
P.O. Box 867
Bakersfield, CA 93302-0867

Re: Agreement for Delivery of Santa Barbara County Flood Control and Water Conservation District State Water Project Water Supplies to Irvine Ranch Water District

Dear Mr. Averett:

Rosedale-Rio Bravo Water Storage District (Rosedale) has requested that the Kern County Water Agency (Agency) facilitate the delivery of up to 1,500 acre-feet (af) of Santa Barbara County Flood Control and Water Conservation District's (Santa Barbara) State Water Project (SWP) water supplies to the Strand Ranch Water Banking Project (Strand Ranch) on behalf of the Irvine Ranch Water District who receives SWP supplies through Metropolitan Water District of Southern California (MWDSC). In exchange, MWDSC will return one-half, less losses, of the total amount delivered to Strand Ranch of its future approved SWP water supplies to Santa Barbara. To facilitate the delivery of Santa Barbara's SWP water, the Agency must enter into an agreement with the Santa Barbara, MWDSC and California Department of Water Resources (DWR) (Agreement). DWR has drafted the Agreement and provided it to the Agency for execution.

Pursuant to Paragraphs 7 and 12 of the Agreement, the Agency may withhold approval of deliveries of Santa Barbara's SWP water and return of water to Santa Barbara pursuant to the Agreement should such deliveries would impact the Agency's water management activities, finances, water supply or operations. Pursuant to Paragraph 11, the Agency shall approve scheduling with DWR of the return water to Santa Barbara. Pursuant to Paragraph 22, Santa Barbara, MWDSC and the Agency are responsible for any adverse impacts that may result from the exchange of water. Pursuant to Paragraph 26, responsibility for delivery of water shifts from DWR to the Agency when the water passes through the Agency's delivery points. Pursuant to Paragraph 27, Santa Barbara, MWDSC and the Agency must agree to hold DWR harmless and be jointly and severally liable for any claim or liability against DWR.

The Agency will execute the Agreement provided that Rosedale agrees to the following:

(661) 634-1400

Mailing Address
P.O. Box 58
Bakersfield, CA 93302-0058

Street Address
3200 Rio Mirada Dr.
Bakersfield, CA 93308

1. The delivery of Santa Barbara's water to District shall occur after deliveries of water pursuant to all agreements that benefit the Agency Member Units. The Agency may withhold approval of deliveries of Santa Barbara's water to Rosedale and return of water to Santa Barbara should the Agency determine that such delivery would impact the Agency's water management activities, finances, water supply or operations.

2. Rosedale shall reimburse the Agency for any costs incurred under Paragraphs 22 and 26 of the Agreement.

3. Rosedale shall agree to hold the Agency harmless and be jointly and severally liable for any claim or liability against DWR pursuant to the Agreement

4. In the event of claim of liability against the Agency that arises as a result of the Agreement, Rosedale shall defend, indemnify and hold the Agency and any of its Directors, officers, or employees harmless from any such claim.

5. The Agency's approval and execution of this Agreement is unique and shall not be considered a precedent for further Programs or Agreements.

If the above is acceptable, please sign and date both copies of this letter and return both copies to the Agency. A fully executed original will be returned to Rosedale.

Sincerely,

James M. Beck
General Manager

The forgoing constitutes the agreement between the Agency and Rosedale as a condition of the Agency executing the Agreement with DWR.

Accepted:

Kern County Water Agency	Rosedale Rio-Bravo Water Storage District
By:_____	By:_____
Title:_____	Title:_____
Date:_____	Date:_____