

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

June 8, 2015

PLEDGE OF ALLEGIANCE

CALL TO ORDER

5:00 p.m., Board Room, District Office
15600 Sand Canyon Avenue, Irvine, California

ROLL CALL

Directors Matheis, Reinhart, Swan, Withers and President LaMar

Douglas Reinhart will participate via conference call.
Agenda posted at: 100 Nohea Kai Drive, Marriott Vacation
Club-Lahaina - Maui, Hawaii

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:

2. **ITEMS RECEIVED TOO LATE TO BE AGENDIZED**

Recommendation: Determine that the need to discuss and/or take immediate action on item(s)

PRESENTATIONS

Resolution No. 2015-13

3. **SCIENCE FAIR WINNERS**

Each year, IRWD presents awards to local students for their water-related projects entered in the Irvine Unified School District Science Fair.

4. **MID-BASIN INJECTION DEMONSTRATION PROJECT OVERVIEW**

The Orange County Water District staff will provide an overview of the Mid-Basin Injection Demonstration Project.

WORKSHOP

5. FISCAL YEAR 2015-16 CAPITAL BUDGET

Recommendation: That the Board adopt a resolution approving the District's Capital Budget for Fiscal Year 2015-16.

Reso. No. 2015-

CONSENT CALENDAR

Items 6-12

6. MINUTES OF REGULAR BOARD MEETING

Recommendation: That the minutes of the May 26, 2015 Regular Board meeting be approved as presented.

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

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

8. PROPOSED SALARY GRADE CHANGES FOR FY 2015-16

Recommendation: That the Board adopt a resolution rescinding Resolution No. 2015-8 and establishing a Revised Schedule of Positions and Salary Rate Changes.

Reso. No. 2015-

9. BAKER PIPELINE CATHODIC PROTECTION SYSTEM UPGRADES PROJECT FINAL ACCEPTANCE

Recommendation: That the Board accept construction of the Baker Pipeline Cathodic Protection System Upgrades, project 11802 (5530); authorize the General Manager to file a Notice of Completion; and authorize the payment of the retention 35 days after the date of recording the Notice of Completion.

10. BUREAU OF RECLAMATION WATERSMART DROUGHT RESILIENCY PROJECT GRANT APPLICATION

Recommendation: That the Board adopt a resolution authorizing submission of a grant application for the Irvine Lake North Pipeline Conversion project to the Department of the Interior, Bureau of Reclamation, Policy and Administration.

Reso. No. 2015-

CONSENT CALENDAR - Continued	Items 6-12
11. <u>2015 LEGISLATIVE UPDATE</u> Recommendation: That the Board adopt a “CONCERNED” position on AB 1390 (Alejo) and SB 225 (Pavley) and authorize staff to engage with stakeholders to protect IRWD's interests related to groundwater adjudications. 12. <u>2014-2015 ORANGE COUNTY GRAND JURY REPORT RESPONSE</u> Recommendation: That the Board agree with Finding F.4 contained in the 2014-2015 Orange County Grand Jury Report—“<i>Increasing Water Recycling: A Win-Win for Orange County</i>” and authorize the General Manager to notify the presiding judge in writing of the Board’s agreement.	
ACTION CALENDAR	
13. <u>COST OF SERVICE STUDY AND POLICY CONSIDERATIONS</u> Recommendation: That the Board adopt a resolution receiving the District’s Cost of Service Study subject to nonsubstantive changes. 14. <u>WATERSMART SOFTWARE VARIANCE NO. 2</u> Recommendation: That the Board authorize the General Manager to execute Variance No. 2 to the Professional Services Agreement between IRWD and WaterSmart Software Inc. in the amount of \$215,693. 15. <u>WATER CONSERVATION PARTICIPATION AGREEMENT</u> Recommendation: That the Board authorize the General Manager to execute the Water Conservation Participation Agreement between the Municipal Water District of Orange County and Irvine Ranch Water District, subject to non-substantive changes, for specified rebate programs with \$1,060,000 in funding for FY 2015-16.	Reso. No. 2015-
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.

OTHER BUSINESS - Continued

16. A. General Manager's Report

B. Directors' Comments

C. CLOSED SESSION:

- 1) CONFERENCE with Labor Negotiators relative to Government Code
Section 54957.6:
Agency Designated Representatives: Paul Cook and Jenny Roney
Employees' Organization: Irvine Ranch Water District Employees Association
- 2) CONFERENCE with Real Property Negotiator relative to Government Code
Section 54956.8:
Property: OCSD Service Area 7 Sewer Infrastructure
Agency Negotiator: Paul Cook, General Manager
Purpose of Negotiations: Proposed Acquisition of Property - Price and Terms, and

D. Open Session

E. 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 8, 2015

Prepared by: E. Akiyoshi/M. Hoolihan

Submitted by: K. Burton

Approved by: Paul Cook

WORKSHOP

FISCAL YEAR 2015-16 CAPITAL BUDGET

SUMMARY:

The projected expenditures for the FY 2015-16 Capital Budget are \$150.2 million. Staff recommends that the Board adopt a resolution approving the FY 2015-16 Capital Budget. A final Capital Budget notebook will be distributed following adoption.

BACKGROUND:

The projected capital expenditures for the upcoming fiscal year are presented annually to the Engineering and Operations Committee and Board for review. The presentation, attached as Exhibit "A", includes an update on FY 2014-15 budget-to-actual capital expenditures and projected FY 2015-16 capital expenditures.

In the current fiscal year, FY 2014-15, budgeted expenditures were originally estimated at \$153.7 million. Actual expenditures are projected at approximately \$141.4 million (equating to 92% of projected expenditures) through the end of the current fiscal year.

Staff estimates that capital expenditures for FY 2015-16 will be approximately \$150.2 million; three projects (the MWRP Biosolids and Energy Recovery Facility, Baker Water Treatment Plant, and OCSD CORF / Equity) make up 70% of the projected expenditures.

FISCAL IMPACTS:

The following table shows the major projects for FY 2015-16. The FY 2015-16 Capital Budget, attached as Exhibit "B", provides details on all the capital projects projected to have expenditures in FY 2015-16.

Project	FY 2015-16 (\$ Million)
Solids Handling	53.9
Baker Water Treatment Plant	38.9
OCSD Capital Outlay Revolving Fund and Equity Adjustment	12.2
Water Banking	7.1
Planning Area 51 (Great Park Neighborhoods)	6.9
Peters Canyon Channel Water Capture and Reuse Pipeline	5.4
Annual Distribution System Repair and Rehabilitation	3.7
Replacement - Business Software	2.1
ILP North Conversion	1.4
Rattlesnake Sodium Hypochlorite Storage and Feed	1.4
Subtotal	\$133.0
Total All Projects	\$150.2

ENVIRONMENTAL COMPLIANCE:

Not required.

COMMITTEE STATUS:

This item was reviewed at the Engineering and Operations Committee on May 19, 2015. The draft FY 2015-16 Capital Budget summary presented to the Committee was \$149.2 million. Three projects have changed:

- Project 11812 – Rosedale Drought Relief Project Facilities: An overall \$1.9 million budget increase was approved at the May 26 Board of Directors Meeting. This increased the projected FY 2015-16 expenditures by approximately \$1.0 million;
- Project 30573 – Lake Forest RW Opportunity Area Zone “C” Conversion: This project was added in the amount of \$997,800; and
- Project 31562 – Lake Forest RW Opportunity Areas: This project was reduced by \$997,600 to offset Project 30573.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2015 –

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT, ORANGE COUNTY
CALIFORNIA, APPROVING THE DISTRICT’S CAPITAL
BUDGET FOR FISCAL YEAR 2015-16

LIST OF EXHIBITS:

Exhibit “A” – FY 2015-16 Capital Budget Presentation
Exhibit “B” – FY 2015-16 Capital Budget Book
Exhibit “C” – Resolution

Fiscal Year 2015-16 Capital Budget

**Board of Directors Workshop
June 8, 2015**



Capital Budget Presentation Outline

- Review Fiscal Year (FY) 2014-15 budget
 - Update on expenditures for FY 2014-15
- Review changes since the E&O Committee
- Present proposed FY 2015-16 budget
 - FY 2015-16 Capital Budget Summary
 - Review Long-Term Capital Program
 - Review Flagged Projects

FY14-15 Budgeted vs. Actual Expenditures

Description	Budgeted Expenditures (\$ Million)	Projected Actual Expenditures (\$ Million)
Top 10 project groups	\$126.2	\$122.6
Other projects	\$27.5	\$18.8
FY 2014-15 Total	\$153.7	\$141.4

Irvine Ranch Water District

FY 2014-15 Top 10 Budgeted vs Projected Expenditures

No.	Description	Budgeted Expenditures (\$ Million)*	Projected Expenditures (\$ Million)*
1	MWRP - Solids Handling	53.8	48.8
2	Baker WTP	38.8	38.7
3	Development - PA51 (Great Park Neighborhoods)	8.6	12.7
4	Business Software (CC&B, Enterprise Asset Mgmt)	7.4	3.8
5	Development - PA18 (Hidden Canyon)	4.3	5.1
6	OPA Well	3.5	6.2
7	OCSD / CORF	2.7	2.7
8	Peters Canyon Water Capture	2.6	0.9
9	Water Banking	2.4	1.2
10	Santiago Canyon DW Improvements	2.1	2.4
	Subtotal	\$126.2	\$122.6
	Other Projects	\$27.5	\$18.8
	Total	\$153.7	\$141.4

* Excludes capital offsets

Development Projects

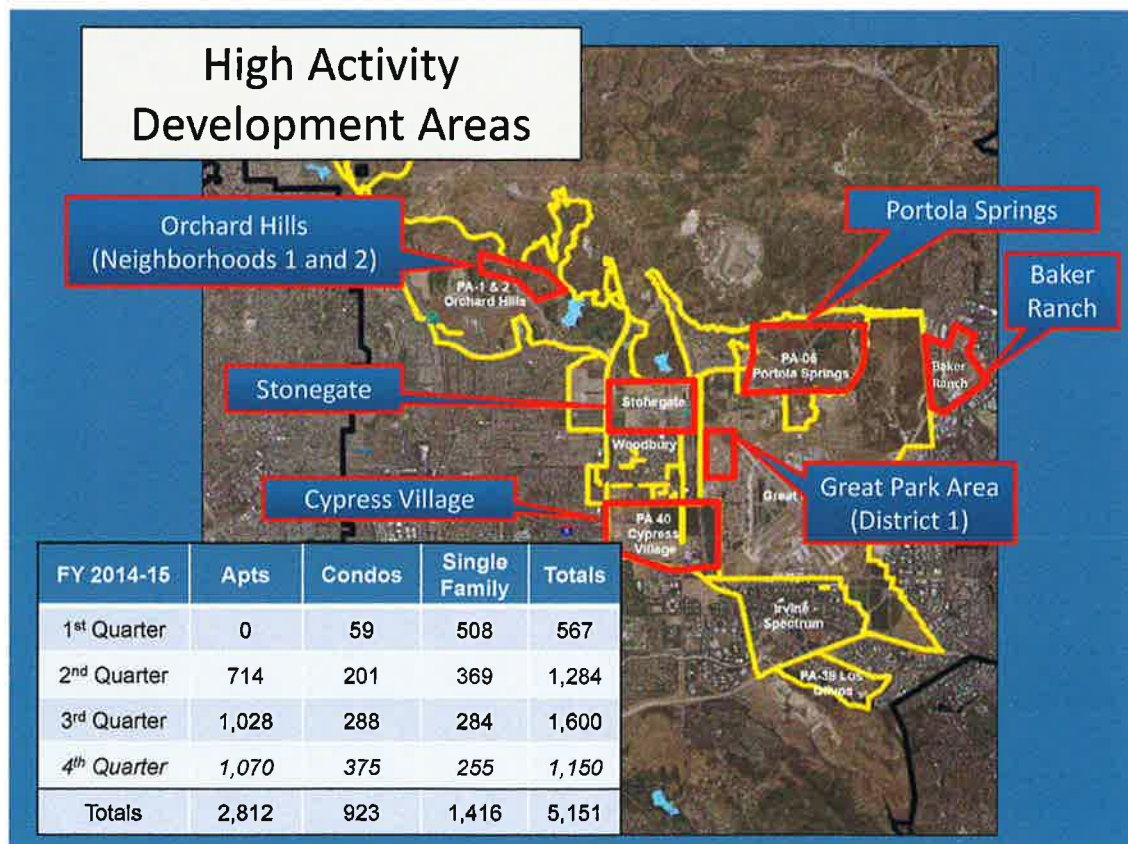
• FY 2014-15 Development Activity

- Estimated FY 2014-15 releases (based on data through May) are 5,500 dwelling units
- Focused on multi-family units in areas with existing infrastructure
 - Baker Ranch
 - Orchard Hills and Portola Springs
 - Great Park Neighborhoods (District 8)
 - Cypress Village and Stonegate

• FY 2015-16 Development Activity

- Projected releases = Similar to 2014-15
- Multi-family and single family dwelling units continue to be developed in: Orchard Hills, Portola Springs, Stonegate, Cypress Village, Great Park Neighborhoods (District 1), Baker Ranch, and Hidden Canyon.

Irvine Ranch Water District



Changes from Engineering and Operations Committee Meeting

- Project 11812 – Rosedale Drought Relief Project Facilities
 - May 26, 2015 Board approved \$1.9 million budget increase
- Project 30573 – Lake Forest RW Opportunity Area Zone C Conversion
 - Added project and reduced Project 31562 LF RW Opportunity Areas (onsite project) by equal amount.

Irvine Ranch Water District

Fiscal Year 2015-16 Projected Expenditure

- FY 2015-16 projected expenditures = \$150.2 M
 - Domestic water expenditures = \$58.2 M
 - Sewer expenditures = \$92.0 M
- Top 10 Project Groups = \$133.0 M
- Other Projects = \$17.2 M

Irvine Ranch Water District

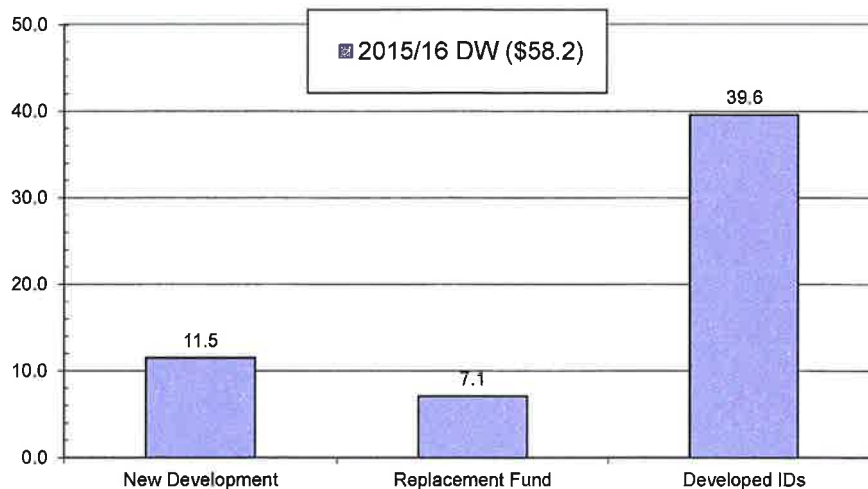
FY 2015-16 Top 10 Projects Groups

Rank	Description	Est. FY15-16 Exp. (\$ Million)*
1	Solids Handling	53.9
2	Baker Water Treatment Plant	38.9
3	OCSD Capital Outlay Revolving Fund and Equity	12.2
4	Water Banking	7.1
5	Planning Area 51 (Great Park Neighborhoods)	6.9
6	Peters Canyon Channel Water Capture and Reuse Pipeline	5.4
7	Annual Distribution System Repair and Rehabilitation	3.7
8	Replacement - Business Software	2.1
9	ILP North Conversion	1.4
10	Rattlesnake Sodium Hypochlorite Storage and Feed	1.4
	Subtotal	\$133.0
	Other Projects	\$17.2
	Total	\$150.2

* Excludes capital offsets

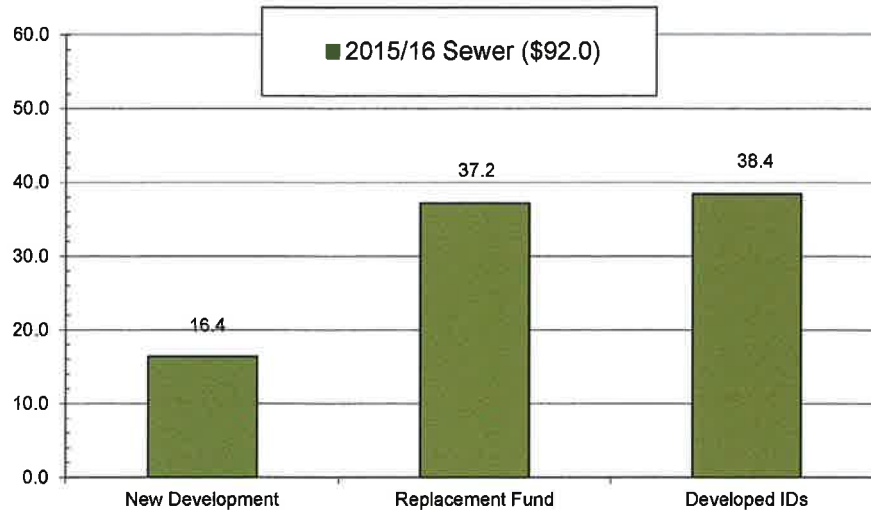
Capital Budget Funding Sources

Domestic Water Projects (\$ Million)



Capital Budget Funding Sources

Sewer/Recycled Water Projects (\$ Million)



Irvine Ranch Water District

Capital Program Summary (\$ Million)

- The Long-Term Capital Program (LTCP) includes every active, and proposed project, beyond 7/1/15
- Estimated remaining LTCP expenditures = \$666.9
- Proposed increase to the LTCP is \$117.7
 - ≈ \$3.0 to Replacement IDs
 - ≈ \$75.2 to Developed IDs
 - ≈ \$39.5 to Developing IDs

Irvine Ranch Water District

Proposed Increases to the Long-Term Capital Program

Project Groups	Increases Including Offsets (\$Million)
OCSD CORF / Equity	\$117.4
EOLV / EOAI Reduced Development	(\$38.6)
Future DATS Well Lease Payments	\$10.8
Repair and Rehabilitation Projects	\$13.0
Development Projects	\$4.7
Water Banking	\$6.8
Other Increases / Decreases	\$3.6
Total	\$117.7

Irvine Ranch Water District

LTCP Summary (\$ Million)

Funding Source	Estimated Unexpended LTCP (07/01/14)		Mid-Year Approved Increases		Estimated FY 14-15 Expenditures		Proposed LTCP Increases		Estimated Remaining Unexpended LTCP (07/01/15)
Replacement IDs (101/201)*	\$137.0	+	\$0.2	-	\$27.7	+	\$3.0	=	\$112.5
Developed IDs	\$285.0	+	\$11.0	-	\$25.4	+	\$75.2	=	\$345.8
Developing IDs	\$179.3	+	\$3.3	-	\$13.5	+	\$39.5	=	\$208.6
Total	\$601.3	+	\$14.5	-	\$66.6	+	\$117.7	=	\$666.9

*Excludes Replacement Planning Model expenditures

Irvine Ranch Water District

Fiscal Year 2015-16 Flagged Projects*

11881 – Tustin Legacy Redhill Well Acquisition

15051 – Wells 51/52/53 Treatment Alternatives Study

30382 – Syphon Reservoir Expansion

*All projects with start dates beyond the fiscal year 2015-16 are presented to the board prior to any expenditures

Irvine Ranch Water District

Questions

Irvine Ranch Water District

CAPITAL BUDGET

FISCAL YEAR 2015/16

DRAFT
June 8, 2015



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

06/08/15 DRAFT

FISCAL YEAR 2015/16 CAPITAL BUDGET

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7.	REFERENCE MAPS ▪ WATER IMPROVEMENT DISTRICTS ▪ SEWER IMPROVEMENT DISTRICTS

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
10394	1437	DATS & WELL 77 LEASE PAYMENT 16/17	37,100	37,100	487,200	487,200	No
10517	1798	LAKE FOREST CONTROL AND TELEMTRY SYS REPLACEMENT	66,300	84,800	319,000	430,000	No
11057	1804	ENG PLANNING STUDY RESERVE 15/16 DW	198,000	346,000	198,000	346,000	No
11116	1264	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	887,300	887,300	6,500,000	6,685,000	No
11275	1363	OCWD ANNEXATION FEE 15/16	439,400	439,400	439,400	439,400	No
11378	1038	TUSTIN LEGACY MASTER DW FACILITIES	500	1,400	1,495,200	1,676,500	No
11379	1047	TUSTIN LEGACY TUSTIN RANCH ROAD	1,400	1,400	990,900	1,083,200	No
11434	1414	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	1,700	4,300	243,100	308,000	No
11469	1520	GREAT PARK COORDINATION AND SAMP UPDATE	11,200	17,400	99,000	154,500	No
11560	1181	LAKE FOREST DW OFFSITE IMPROVEMENTS	700	1,800	962,500	1,094,000	No
11562	1189	LAKE FOREST DW OPPORTUNITY AREAS	2,400	6,600	3,686,600	4,278,600	No
11598	1336	HQ LIGHTING RETROFIT & CEILING REPLACE	45,400	66,800	225,000	331,500	No
11605	1346	PA40 PH2 DW FACILITIES	300	300	238,700	285,000	No
11613	1354	PA1 16" Z5 PIPE, 5-4 PRVS NEIGHBORHOOD 3	11,000	29,400	1,237,500	1,367,100	No
11619	3566	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	473,300	683,200	2,432,100	3,264,700	No
11645	3766	STOCKDALE WEST WELLHEAD EQUIPPING	1,377,600	1,438,300	4,744,900	5,179,700	No
11660	3977	PA51 TRABUCO RD, SR133 TO LY ST DW	3,300	3,300	156,200	207,200	No
11665	4130	SJM BUILDING CAMPUS MOLD REMEDIATION	1,000	1,000	369,600	395,600	No
11668	4153	PA51 MARINE WAY DW ZN3	192,200	223,200	332,200	415,600	No
11671	4261	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - DW	35,400	39,800	723,800	890,300	No
11672	4327	DRWF WELL NO. 3 REHAB	387,400	451,000	401,500	475,600	No
11673	4268	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - DW	39,500	43,800	486,200	560,300	No
11679	4401	WELL REHAB NO. 2 (DW)	228,700	284,100	401,500	475,600	No
11687	4409	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	1,089,500	1,144,700	2,501,200	2,695,500	No
11692	4441	WELL MAINTENANCE AND REHABILITATION 15/16	165,000	165,000	165,000	165,000	No
11694	5493	1" TO 2" METER REPLACEMENT-DW 15/16	139,000	163,800	139,000	163,800	No
11696	5494	CSR METER REPLACEMENT-DW 15/16	213,200	222,500	213,200	222,500	No
11697	4387	GEN SYS MODS-DW 15/16	190,300	231,100	190,300	231,100	No
11698	5297	RAISE DW SYSTEM VALVES 15/16 UNDER RA	115,500	124,800	115,500	124,800	No
11699	5484	RESIDENTIAL METER REPLACEMENT-DW 15/16	336,600	360,700	336,600	360,700	No
11702	5468	SERVICE LINE, VALVE & MAIN REPLACEMENT-DW 15/16	1,246,900	1,265,400	1,246,900	1,265,400	No
11704	4423	MECH & ELEC SYS REPLACEMENT - DW 15/16	660,000	660,000	660,000	660,000	No
11711	4394	ID CONSOLIDATION PROJECT ACCOUNTING IMPLEMENTATION	501,600	723,600	1,254,000	1,809,000	No

5/29/2015

Project Expenditures by Number - 1

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
11714	4366	TUSTIN LEGACY TUSTIN RANCH, BARRANCA, ARMSTRONG	800	800	343,200	417,300	No
11716	4510	TUSTIN LEGACY WARNER - LEGACY TO TUSTIN RANCH DW	400	400	196,900	252,500	No
11717	4512	PA5B PHASE 1A 12" ZONE 3 DW	27,900	33,600	132,000	174,600	No
11719	4620	PA51 LN ST FROM C ST TO LY ST DW	11,800	13,900	172,700	219,100	No
11721	4645	PA51 C ST FROM LQ ST TO O ST DW	10,500	13,400	161,700	217,400	No
11723	4650	PA51 LY ST FROM LQ ST TO IRVINE BLVD DW	3,100	4,900	51,700	88,900	No
11739	4680	PA18S HIDDEN CANYON 12" DW	900	900	315,700	399,100	No
11746	4988	TUSTIN LEGACY WARNER FROM ARMSTRONG TO LEGACY I	10,700	13,000	60,500	77,300	No
11747	5027	BAKER WATER TREATMENT PLANT	38,868,400	39,863,300	96,852,000	99,331,000	No
11752	5453	WELLS 12 AND 13 ROOF HATCHES REPLACEMENT	282,200	329,800	340,500	400,700	No
11754	5473	WELLS 11 AND 15 SURGE TANK REPLACEMENT	304,300	345,600	627,600	716,400	No
11755	5410	COASTAL ZN2 PRV MODIFICATION (DPR16)	2,000	4,700	187,100	228,500	No
11764	5500	WATER BANKING AGREEMENTS 14/16	242,400	612,900	484,000	1,224,000	No
11765	5499	STOCKDALE STORAGE FOR RECOVERY CAPACITY	10,500	29,000	1,590,800	1,609,300	No
11779	5406	EL MODENA INLET MODIFICATION	1,000	2,300	156,200	184,100	No
11781	5443	PORTABLE DIESEL GENERATOR REPLACEMENT - DW	293,900	293,900	880,000	880,000	No
11785	5405	EL MODENA NTS POND INFILTRATION	1,000	2,300	321,200	349,100	No
11787	5411	COMPRESSED NATURAL GAS MOTOR FUEL	34,700	36,600	68,800	72,500	No
11789	5433	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	60,000	94,200	60,000	94,200	No
11791	5404	LAKE FOREST Z2-2RA PRV AT COMMERCE CENTRE	59,200	63,900	337,700	374,800	No
11796	5436	HYDRAULIC MODELING 15/16 DW	44,000	62,500	44,000	62,500	No
11797	5338	MARSH MITIGATION CREDIT INVENTORY	17,000	21,300	36,300	45,600	No
11801	5519	EAST IRVINE ZONE 1 TO 3 BPS PIPE/METER	168,200	211,500	198,600	250,400	No
11804	5756	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV 12" ZN 4	125,000	151,900	176,000	235,300	No
11805	5761	ZONE 1 RESERVOIR INTERIOR RECOATING	500	1,300	2,748,500	2,833,700	No
11806	5816	PA51 ALTON, TECHNOLOGY TO MUIRLANDS 12" DW	103,300	120,500	177,100	225,200	No
11808	6013	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	228,200	270,700	496,900	589,400	No
11809	6016	PA51 IRVINE BLV LAMBERT TO Z ST 12" DW	19,000	22,800	34,100	45,300	No
11812	6023	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	3,407,800	3,682,700	6,133,600	6,568,400	No
11814	6049	2015 IRVINE ANNUAL ST REHAB, DW	431,200	468,200	431,200	468,200	No
11819	6171	WELLS 76 & 77 PUMP/MOTOR REPLACEMENT	275,400	275,400	550,000	550,000	No
11838	6213	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	166,400	217,100	1,905,900	2,137,200	No
11839	6214	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	4,200	11,200	2,430,900	2,662,200	No

5/29/2015

Project Expenditures by Number - 2

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
11842	6086	PA51 MARINE WAY FROM ALTON TO BARRANCA 12" DW ZN	187,100	220,400	238,700	301,600	No
11849	6160	CENTRALIZED CONTROL ROOM AT MWRP	1,800	4,400	170,000	211,600	No
11866	6109	TUSTIN LEGACY PARK AVE & MOFFETT DR 12" DW	58,700	82,200	162,800	214,700	No
11867	6246	WATER BANKING PLANNING 15/16	115,500	208,000	115,500	208,000	No
11874	6249	STOCKDALE WEST WELL CONSTRUCTION PROJECT	1,804,500	1,866,100	2,711,500	2,804,000	No
11875	6145	STOCKDALE WEST TURNOUT FACILITIES	126,300	163,300	2,557,500	2,650,100	No
11876	6212	NTS INFILTRATION STUDY	64,900	77,900	64,900	77,900	No
11877	6166	NTS SEDIMENT REMOVAL	7,300	11,200	365,200	411,600	No
11878	6168	SAN JOAQUIN MARSH IMPROVEMENTS	13,200	19,700	541,200	633,900	No
11879	6121	VAULT LID REPLACEMENT - DW	3,300	8,500	315,200	409,700	No
11881	6215	TUSTIN LEGACY REDHILL WELL ACQUISITION	269,500	306,500	269,500	306,500	Yes
11882	6165	DRWF SURGE TANKS	1,700	4,300	198,600	250,400	No
11884	6158	TURTLE ROCK ZONE 3-4 BOOSTER PUMP STATION RETROFIT	189,200	234,300	2,747,900	2,960,700	No
11885	6210	ASSET OPTIMIZATION - SAND CANYON PROFESSIONAL CTR	59,600	64,200	17,624,300	17,670,600	No
11886	6398	NEWPORT COAST JOINT BONDING PHASE 2	148,300	166,900	148,300	166,900	No
11887	6208	PA-51 MARINE WAY: SR133 TO RIDGE VALLEY 12" ZONE 3	113,100	149,000	162,800	214,700	No
11889	6181	BUSINESS INTELLIGENCE SOFTWARE UPGRADE	84,200	127,300	126,500	191,300	No
11890	6304	PA 51 BENCHMARK, BOSQUE TO 550'E/O BOSQUE 12" Z4R	113,100	149,000	162,800	214,700	No
11891	6401	ZONE 1 RESERVOIR	210,700	244,600	316,300	367,200	No
15051	1402	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	10,600	13,500	133,100	170,100	Yes
19411	1466	PA51 MASTER DW FACILITIES	1,800	4,800	5,680,500	6,568,500	No
20115	1552	OCSD CORF 14/15	705,000	705,000	3,502,000	3,502,000	No
20116	1554	OCSD CORF 15/16	4,785,200	4,785,200	5,988,000	5,988,000	No
20374	1642	PA51 MASTER SS FACILITIES	300	800	1,028,500	1,195,100	No
20589	1508	OCSD EQUITY 14/15	2,194,000	2,194,000	6,546,000	6,546,000	No
20593	1516	OCSD EQUITY 15/16	4,561,100	4,561,100	6,854,000	6,854,000	No
20813	1420	OCSD SOLIDS HANDLING 15/16	1,391,000	1,391,000	1,391,000	1,391,000	No
20915	4439	MWRP SYS REPLACEMENTS 15/16	332,200	335,900	332,200	335,900	No
21011	4418	LAWRP SYSTEM REPLACEMENTS 15/16	132,000	132,000	132,000	132,000	No
21057	1377	ENG PLANNING STUDY RESERVE 15/16 SEWER	171,600	312,200	171,600	312,200	No
21119	3750	SOCWA ETM PROTECTION - TRAIL BRIDGE CROSSING	87,600	96,800	951,500	979,300	No
21141	4267	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - SEWER	50,000	50,000	1,064,800	1,277,600	No
21142	4467	MWRP MISCELLANEOUS REPAIR AND REPLACEMENT	170,000	281,000	3,076,600	3,307,900	No

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
21146	4286	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	52,512,700	54,043,700	196,465,500	202,200,500	No
21151	5491	SEWER LATERAL & MAIN REPLACEMENT 15/16	218,900	237,400	218,900	237,400	No
21156	4648	PA51 LQ ST FROM O ST TO LY ST SEWER	17,000	19,100	255,200	310,800	No
21158	4653	PA51 C ST FROM TRABUCO RD TO LQ ST SEWER	16,500	16,500	403,700	524,000	No
21159	4824	PA51 LV ST FROM RIDGE VALLEY TO LY ST 18" SEWER	20,100	24,400	310,200	421,200	No
21163	4985	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	5,438,200	5,565,200	10,959,800	11,446,400	No
21165	5016	PA51 C ST FROM LV ST TO TRABUCO SEWER	24,400	30,100	370,700	491,000	No
21167	5469	MWRP FPS 2 ROOF REPLACEMENT	210,200	250,400	256,000	306,900	No
21168	5470	NEWPORT COAST SLS AND FM RECOATING	244,200	304,300	552,200	691,100	No
21169	5450	CULVER DRIVE SMH IMPROVEMENTS	328,700	373,800	368,000	437,200	No
21170	5186	SJM SLS UPGRADE	1,200	3,100	153,500	194,900	No
21171	5456	SEWER GEN SYS MODS 15/16	330,000	330,000	330,000	330,000	No
21181	5174	MAIN ST DIVERSION STRUCTURE GROUND SETTLING	1,800	4,400	191,400	241,400	No
21182	5448	PLANO LIFT STATION FORCE MAIN RELOCATION (SMWD)	291,900	291,900	583,000	583,000	No
21183	5301	RAISE MANHOLES TO GRADE 15/16 UNDER RA	110,000	110,000	110,000	110,000	No
21188	5427	WATER RECYCLING PLANT MASTER PLAN UPDATE	202,800	271,000	550,000	735,000	No
21191	5409	OPS DATABASE MANAGEMENT SYSTEM	173,700	187,600	346,500	374,300	No
21205	5520	MAINTENANCE ACCESS FOR FOUR SEWER REACHES	1,400	3,300	368,000	409,400	No
21213	5535	PA51 LQ ST FROM BOSQUE TO Z ST 12" SEWER	647,000	739,000	1,510,300	1,880,300	No
21216	5788	PA51 ALTON PKWY SS RELOCATION 12" AND 18"	1,321,800	1,623,900	1,832,300	2,461,300	No
21217	6010	TUSTIN LEGACY PARK AVE FROM JAMBOREE TO VICTORY S	36,700	42,900	64,900	83,500	No
21219	6048	PA51 MARINE WAY, ALTON TO BARRANCA 18" SS	911,200	1,050,000	1,424,500	1,776,000	No
21234	6167	OPS CENTER PERMANENT GENERATOR	3,400	8,600	618,800	729,900	No
21235	6067	WOODHOLLOW SEWER REPLACEMENT	3,400	8,600	398,200	490,800	No
21287	6400	NEWPORT COAST SLS IMPROVEMENTS	291,100	353,300	574,200	731,600	No
21288	6402	MBR BLOWER ROOM SAFETY PLATFORM	11,100	12,100	144,000	157,000	No
21378	1062	TUSTIN LEGACY MASTER SEWER FACILITIES	400	1,000	1,115,400	1,208,000	No
21379	1066	TUSTIN LEGACY TUSTIN RANCH ROAD	1,600	1,600	1,090,400	1,180,600	No
21469	1167	GREAT PARK COORDINATION AND SAMP UPDATE	11,200	17,400	99,000	154,500	No
21560	1436	LAKE FOREST SEWER OFFSITE IMPROVEMENTS	1,400	3,700	3,280,200	3,905,500	No
21562	1445	LAKE FOREST SEWER OPPORTUNITY AREAS	900	2,500	1,647,800	1,903,300	No
21598	1549	HQ LIGHTING RETROFIT & CEILING REPLACE	45,400	66,800	225,000	331,500	No
21619	3567	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	473,300	683,200	2,432,100	3,264,700	No

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Project Expenditures by Number - 4

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
21660	3980	PA51 TRABUCO RD, SR133 TO LY ST SEWER	3,600	3,600	161,700	212,700	No
21671	4263	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - SS	21,300	24,600	436,700	557,000	No
21704	4433	MECH & ELEC SYS REPLACEMENT - SEWER 15/16	440,000	440,000	440,000	440,000	No
21711	4395	ID CONSOLIDATION PROJECT ACCOUNTING IMPLEMENTAT	501,600	723,600	1,254,000	1,809,000	No
21723	4651	PA51 LY ST FROM LQ ST TO IRVINE BLVD SEWER	134,900	148,600	1,662,200	1,958,200	No
21748	5412	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	578,400	763,700	1,155,000	1,525,000	No
21781	5445	PORTABLE DIESEL GENERATOR REPLACEMENT - SEWER	293,900	293,900	880,000	880,000	No
21789	5435	GIS SUPPORT APPLICATIONS 15/16 - SEWER	60,000	94,200	60,000	94,200	No
21796	5438	HYDRAULIC MODELING 15/16 SEWER	44,000	62,500	44,000	62,500	No
21806	5817	PA51 ALTON, TECHNOLOGY TO MUIRLANDS SS RELOCATIO	819,100	880,600	1,326,300	1,474,300	No
21809	6017	PA51 IRVINE BLV LAMBERT TO Z ST 16" SS	15,300	19,100	28,600	39,800	No
21814	6053	2015 IRVINE ANNUAL ST REHAB, SEWER	233,200	251,700	233,200	251,700	No
21826	6204	GIS SUPPORT APPLICATIONS 16/17 - SEWER	60,000	94,200	60,000	94,200	No
21849	6161	CENTRALIZED CONTROL ROOM AT MWRP	1,800	4,400	170,000	211,600	No
21866	6110	TUSTIN LEGACY PARK AVE & MOFFETT DR 16" & 15" SS	58,700	82,200	162,800	214,700	No
21879	6122	VAULT LID REPLACEMENT - SEWER	1,700	4,300	96,300	146,300	No
21889	6184	BUSINESS INTELLIGENCE SOFTWARE UPGRADE	84,200	127,300	126,500	191,300	No
30245	1716	PA1 ORCHARD HILLS NEIGHBORHOOD 3	2,700	7,300	326,700	391,600	No
30246	1722	PA1 ORCHARD HILLS NEIGHBORHOOD 4	16,400	16,400	566,500	640,600	No
30280	1762	PA9B PHASE 5 GATEWAY PARK RW PIPES	6,400	8,200	506,100	620,900	No
30331	1813	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	86,400	110,600	282,700	384,500	No
30366	1015	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	3,400	3,400	3,223,500	3,556,500	No
30381	3780	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	35,000	96,400	2,625,000	2,717,500	No
30382	3808	SYPHON RESERVOIR EXPANSION	88,100	140,300	60,169,200	61,020,200	Yes
30388	4147	PA51 MARINE WAY RW ZNB	206,900	244,100	365,200	467,100	No
30394	4278	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - RW	38,600	42,900	464,200	538,300	No
30402	4328	WELL REHAB PROGRAM RW 13/14 THRU 15/16	11,500	13,100	930,300	1,070,900	No
30403	4402	WELL REHAB NO. 1 (RW)	228,700	284,100	401,500	475,600	No
30406	5498	1" TO 2" METER REPLACEMENT-RW 15/16	140,300	154,200	140,300	154,200	No
30408	4388	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	90,100	186,700	2,989,500	3,285,600	No
30409	4457	REG RW - MULTI-ZONE BPS - ZONE B	38,900	87,300	2,532,700	2,791,800	No
30410	4400	REG RW - MULTI-ZONE BPS - ZONE C	98,100	194,700	3,624,700	3,920,800	No
30415	4396	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	58,800	72,800	352,000	413,100	No

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Project Expenditures by Number - 5

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
30416	4318	PA40 PH3B RW CAPITAL FACILITIES	300	300	165,000	200,200	No
30420	4514	PA5B PHASE 1A AND 1B 36" RW	414,900	445,200	1,769,400	1,936,000	No
30421	4515	PA5B IRVINE BLVD 8" ZONE B RW	83,300	100,000	100,100	131,700	No
30424	4528	PA40 NEIGHBORHOOD 2G BACKBONE RW FACILITIES	200	200	108,900	144,100	No
30426	4557	PA6 PHASE 1 NEIGHBORHOOD 3 ZONE C RW	133,800	152,500	315,700	380,600	No
30427	4647	PA51 LY ST FROM TRABUCO RD TO LQ ST RW	15,600	19,900	205,700	289,000	No
30428	4717	PA1 ORCHARD HILLS NH 2 - 6" ZNB & 6" ZNC RW	800	800	238,700	322,000	No
30430	4753	PA5B PHASE 2 6" RW	38,600	42,800	57,200	68,400	No
30435	4959	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEE	1,403,800	1,490,500	2,430,900	2,662,200	No
30445	1056	PA39 PHASE 1 RW PIPELINES	200	200	180,400	221,200	No
30447	4984	TUSTIN LEGACY ARMSTRONG ZONE A & WARNER ZONE A R	133,500	155,800	773,300	976,800	No
30449	4990	PA1 ORCHARD HILLS NEIGHBORHOOD 2, 6" ZNC RW	500	500	84,700	95,900	No
30453	5156	LAGUNA CANYON RD RW PIPELINE CORROSION REPLACE	2,000	4,600	588,500	644,100	No
30455	5153	SJR ACTUATOR REPAIR/REPLACEMENT	23,900	29,000	254,700	310,200	No
30461	5154	SJR SEISMIC EVALUATION (DSOD)	1,100	2,800	150,700	215,500	No
30482	5503	WELL 78 SPARE PUMP AND MOTOR PURCHASE	138,300	138,300	276,100	276,100	No
30487	5168	PA18S HIDDEN CANYON 36" RW PIPELINE	6,200	6,200	2,103,200	2,380,700	No
30495	5476	REG RW - RATTLESNAKE BPS PUMP UPGRADE	40,500	58,900	990,000	1,054,900	No
30496	5407	ILP NORTH CONVERSION - RESERVOIR	703,800	798,600	6,108,500	6,487,800	No
30501	5243	PA6 NEIGHBORHOOD 4B 6" RW ZONE D	288,700	347,700	526,900	649,100	No
30502	5522	WEIR CANYON VALVE VAULT PLC UPGRADE	2,200	3,400	108,900	127,500	No
30503	5758	PA51 SOCIABLE ST FROM Z TO B ST 12" & 16" ZONE B	137,400	155,900	240,900	296,500	No
30508	5763	PA6 NEIGHBORHOOD 5A RW ZONE D	76,700	88,500	132,000	159,800	No
30512	5785	TUSTIN LEGACY BARRANCA FROM ARMSTRONG TO ASTON	247,000	297,800	344,300	455,500	No
30513	5823	ILP NORTH CONVERSION - PIPELINES	724,900	850,600	7,494,600	8,096,000	No
30516	5919	PA1 ORCHARD HILLS, NEIGHBORHOOD 1, 16" ZONE C	185,200	222,600	294,800	389,300	No
30517	1096	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	22,900	41,400	168,300	297,800	No
30530	6055	SYPHON RESERVOIR SLIDE GATE REPLACEMENT	114,500	125,100	238,700	286,900	No
30534	6056	PA40 8TH ST RIDGE VALLEY TO C ST CAPITAL 6" RW	109,100	122,700	136,400	164,200	No
30552	6216	REG RW - NORTHWOOD ZONE B BPS UPGRADE	64,900	92,500	2,588,500	2,681,200	No
30560	6242	RW IMPROVEMENTS FOR OFF-SITE 15/16	82,500	99,500	82,500	99,500	No
30561	6243	RW IMPROVEMENTS FOR OFF-SITE 16/17	82,500	99,500	82,500	99,500	No
30569	6244	RW IMPROVEMENTS FOR OFF-SITE 17/18	82,500	99,500	82,500	99,500	No

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Project Expenditures by Number - 6

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
30570	6198	REG RW - IIC ZONE B BPS UPGRADES	69,500	80,500	1,606,100	1,650,500	No
30571	6197	REG RW - 20"ZN B PIPE CONSTRUCTION & CONVERSION	49,500	75,300	3,152,600	3,238,600	No
30572	6298	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND C	4,400	11,500	242,100	297,700	No
30573	6470	LAKE FOREST RW OPP AREA ZONE C CONVERSION.	800	2,100	997,800	1,164,500	No
30797	1308	PA6 RW PIPELINES	300	300	620,500	697,300	No
31057	1611	ENG PLANNING STUDY RESERVE 15/16 RW	176,000	287,000	176,000	287,000	No
31156	4649	PA51 LQ ST FROM O ST TO LY ST RW	5,100	6,100	78,100	104,100	No
31159	4825	PA51 LV ST FROM RIDGE VALLEY TO LY ST 12" RW	20,900	25,200	321,200	423,000	No
31213	5536	PA51 LQ ST FROM BOSQUE TO Z ST 12" RW	226,700	275,900	383,900	485,700	No
31378	1101	TUSTIN LEGACY MASTER RW FACILITIES	600	1,600	1,544,900	1,733,600	No
31379	3435	TUSTIN LEGACY TUSTIN RANCH ROAD	1,800	1,800	1,210,700	1,331,000	No
31562	1517	LAKE FOREST RW OPPORTUNITY AREAS	1,400	3,600	2,137,900	2,459,900	No
31598	1257	HQ LIGHTING RETROFIT & CEILING REPLACE	10,400	16,200	50,000	78,700	No
31605	1229	PA40 PH2 RW FACILITIES	300	300	216,700	263,000	No
31640	3735	PA39 PH2 RW FACILITIES	3,600	5,400	226,600	261,800	No
31660	3983	PA51 TRABUCO RD, SR133 TO LY ST RW	12,100	12,100	480,700	591,200	No
31671	4264	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - RW	9,400	11,100	194,700	250,300	No
31696	5496	CSR METER REPLACEMENT-RW 15/16	112,200	115,900	112,200	115,900	No
31697	5486	GEN SYS MODS-RW 15/16	101,800	124,100	101,800	124,100	No
31698	5304	RAISE RW SYSTEM VALVES 15/16 UNDER RA	38,500	47,800	38,500	47,800	No
31702	5477	SERVICE LINE, VALVE & MAIN REPLACEMENT-RW 15/16	515,800	534,300	515,800	534,300	No
31704	4430	MECH & ELEC SYS REPLACEMENT - RW 15/16	484,000	484,000	484,000	484,000	No
31714	4368	TUSTIN LEGACY TUSTIN RANCH, BARRANCA, ARMSTRONG	1,600	1,600	689,700	800,700	No
31716	4511	TUSTIN LEGACY WARNER - LEGACY TO TUSTIN RANCH RW	500	500	207,900	263,500	No
31717	4513	PA5B PHASE 1A AND 1B 6" & 8" RW	156,500	178,800	298,200	363,100	No
31719	4621	PA51 LN ST FROM C ST TO LY ST RW	6,900	8,600	105,600	140,800	No
31721	4646	PA51 C ST FROM LQ ST TO O ST RW	18,300	21,200	266,200	331,100	No
31723	4652	PA51 LY ST FROM LQ ST TO IRVINE BLVD RW	73,000	88,500	938,300	1,252,800	No
31739	4681	PA18S HIDDEN CANYON 6" & 8" RW	900	900	315,700	399,100	No
31746	4989	TUSTIN LEGACY WARNER FROM ARMSTRONG TO LEGACY I	47,100	56,400	282,700	375,300	No
31781	5444	PORTABLE DIESEL GENERATOR REPLACEMENT - RW	293,900	293,900	880,000	880,000	No
31789	5434	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	60,000	94,200	60,000	94,200	No
31796	5437	HYDRAULIC MODELING 15/16 RW	44,000	62,500	44,000	62,500	No

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Project Expenditures by Project Number

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>	<u>FY Direct</u>	<u>FY Dir + GA</u>	<u>Total Direct</u>	<u>Total Dir + GA</u>	<u>Flag</u>
31804	5757	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV 16" ZN C	176,300	200,100	240,900	296,500	No
31806	5818	PA51 ALTON, TECHNOLOGY TO MUIRLANDS 16" RW	207,000	238,200	344,300	418,300	No
31809	6018	PA51 IRVINE BLV LAMBERT TO Z ST 20" RW	346,600	395,800	609,400	757,400	No
31814	6054	2015 IRVINE ANNUAL ST REHAB, RW	97,400	111,300	97,400	111,300	No
31842	6087	PA51 MARINE WAY, ALTON TO BARRANCA 16" RW ZN B	223,300	260,400	281,600	352,100	No
31866	6111	TUSTIN LEGACY PARK AVE & MOFFETT DR 16" & 6" RW	58,700	82,200	162,800	214,700	No
31879	6123	VAULT LID REPLACEMENT - RW	1,700	4,300	195,300	245,300	No
31886	6399	NEWPORT COAST JOINT BONDING PHASE 2	80,500	99,100	80,500	99,100	No
31887	6209	PA-51 MARINE WAY: SR133 TO RIDGE VALLEY 6" ZONE B	113,100	149,000	162,800	214,700	No
31890	6306	PA 51 BENCHMARK, BOSQUE TO 550'E/O BOSQUE 6" ZC	113,100	149,000	162,800	214,700	No
39410	1103	PA51 MASTER RW FACILITIES	1,500	3,900	4,893,000	5,633,000	No
Grand Total:			<u>\$150,213,900</u>	<u>\$159,479,000</u>	<u>\$591,229,000</u>	<u>\$627,096,900</u>	

IRVINE RANCH WATER DISTRICT
2015/16 Capital Budget
Flagged Projects

<u>EPMS No.</u>	<u>EBS No.</u>	<u>Project Title</u>
11881	6215	TUSTIN LEGACY REDHILL WELL ACQUISITION
15051	1402	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY
30382	3808	SYPHON RESERVOIR EXPANSION

IRVINE RANCH WATER DISTRICT
FY 2015/16 Capital Budget
Top 10 Project Groups

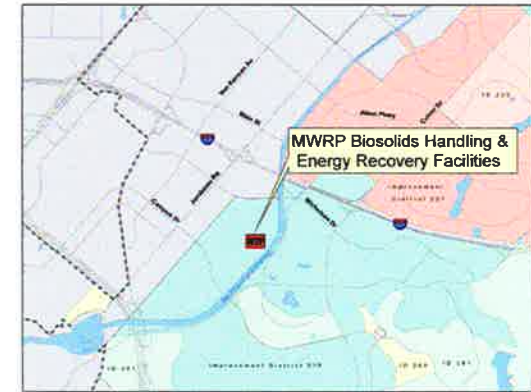
Rank by FY 15/16 Expenditure	Name of Group	FY15/16 Projected Expenditures (\$ Millions)	Expended to Date (\$ Millions)	Projected Future Expenditures (\$ Millions)	Project Total (\$ Millions)
1	Solids Handling	53.9	68.6	75.4	197.9
2	Baker Water Treatment Plant	38.9	30.0	28.0	96.9
3	OCSD / CORF	12.2	0.0	10.7	22.9
4	Water Banking	7.1	0.5	10.7	18.3
5	Planning Area 51 (Great Park Neighborhoods)	6.9	4.4	20.1	31.4
6	Peters Canyon Channel Water Capture and Reuse	5.4	0.9	4.7	11.0
7	Annual Distribution System Repair and Rehabilitation	3.7	0.0	0.0	3.7
8	Replacement - Business Software	2.1	0.3	5.2	7.6
9	ILP North Conversion	1.4	0.1	12.1	13.6
10	Rattlesnake Sodium Hypochlorite Storage and Feed	1.4	0.3	0.7	2.4
	Subtotal for Top 10 Project Groups	\$133.0	\$105.1	\$167.6	\$405.7
	Total All Projects	\$150.2			

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: MWRP Biosolids and Energy Recovery Facilities

Project Description

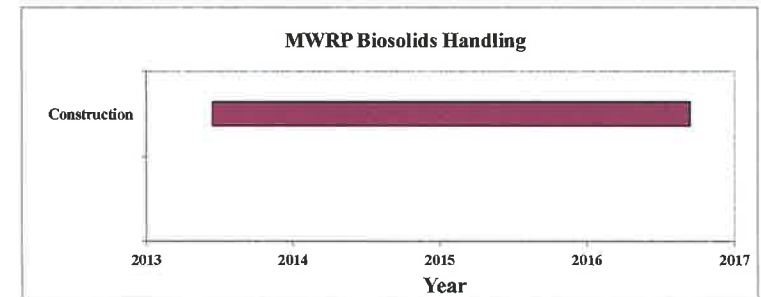
The project includes the construction of facilities for sludge thickening, acid-phase anaerobic digestion, dewatering, drying and pelletization, energy generation using micro-turbines, and use of pellets as a fertilizer or e-fuel. It will also include a solids receiving station to allow processing of dewatered sludge from the Los Alisos Water Recycled Water Plant (LAWRP). A FOG receiving station is included to increase methane production by the digesters and energy production capabilities. IRWD will cease conveyance of MWRP residuals to the OCSD system by December 2016.



FY 2015/16 Key Milestones:

Continue MWRP Biosolids and Energy Recovery Facilities Construction
Start-up sludge thickening, digestion, and dewatering facilities.

Date
Dec-16
Dec-16



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 15,030,286	\$ 113,024,549	\$ 69,801,665	\$ 197,856,500	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 15,030,286	\$ 113,024,549	\$ 69,801,665	\$ 197,856,500	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
4286	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	\$ 196,465,500	\$ 52,512,700	\$ 75,392,690	\$ 68,560,110
1420	OCSD SOLIDS HANDLING 15/16	\$ 1,391,000	\$ 1,391,000	\$ -	\$ -
TOTAL		\$ 197,856,500	\$ 53,903,700	\$ 75,392,690	\$ 68,560,110

Project Status

In March, 2013, the Board of Directors awarded the construction contract to Filance Balfour Beatty Joint Venture. Construction is ongoing with the MWRP Biosolids Facilities in operation by December 2016.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: Baker Water Treatment Plant

Project Description

The Baker Water Treatment Plant (Baker WTP) will treat up to 28 mgd of imported untreated water 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 also 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 (for Irvine Lake water), 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 receive its share of treated water directly from the 16 MG reservoirs through the existing distribution system. The project is being constructed under two separate contracts - one for the water treatment plant and one for the raw water pump station.

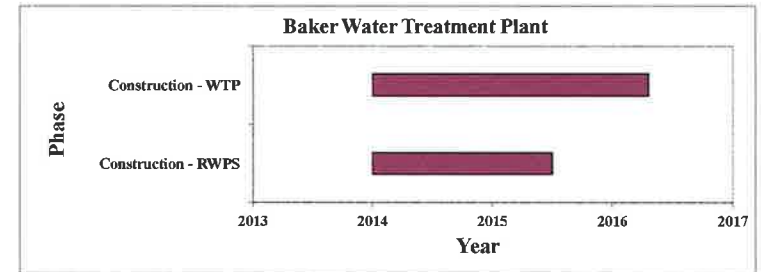


FY 2015/16 Key Milestones:

Construction award - Raw Water Pump Station and WTP
Construction complete - RWPS
Construction complete - WTP

Date

January 6, 2014
June 30, 2015
April 5, 2016



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 18,789,288	\$ -	\$ 78,062,712	\$ 96,852,000	
Existing Offsets	\$ (14,091,966)	\$ -	\$ (58,547,034)	\$ (72,639,000)	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 4,697,322	\$ -	\$ 19,515,678	\$ 24,213,000	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
5027	BAKER WATER TREATMENT PLANT	\$ 96,852,000	\$ 38,868,400	\$ 27,967,110	\$ 30,016,490
TOTAL		\$ 96,852,000	\$ 38,868,400	\$ 27,967,110	\$ 30,016,490

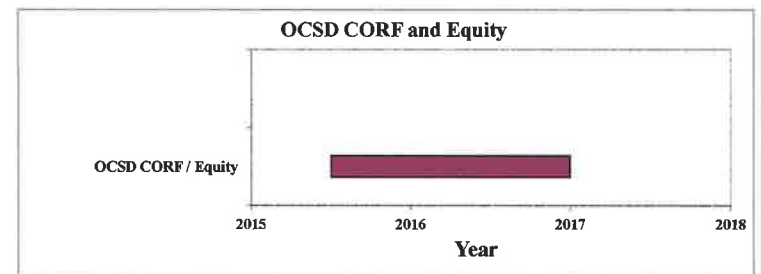
Project Status

Construction contracts were awarded for the Baker WTP and the Raw Water Pump Station in January 2014. Completion of the raw water pump station is anticipated in June 2015 and completion of the WTP is anticipated for April 2016.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: OCSD CORF and Equity

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



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 4,055,586	\$ -	\$ 18,834,414	\$ 22,890,000	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 4,055,586	\$ -	\$ 18,834,414	\$ 22,890,000	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
1552	OCSD CORF 14/15	\$ 3,502,000	\$ 705,000	\$ 2,797,000	\$ -
1508	OCSD EQUITY 14/15	\$ 6,546,000	\$ 2,194,000	\$ 4,352,000	\$ -
1554	OCSD CORF 15/16	\$ 5,988,000	\$ 4,785,200	\$ 1,202,800	\$ -
1516	OCSD EQUITY 15/16	\$ 6,854,000	\$ 4,561,100	\$ 2,292,900	\$ -
TOTAL		\$ 22,890,000	\$ 12,245,300	\$ 10,644,700	\$ -

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 14/15 CORF payments, staff expects to pay 80% in FY14/15 and 20% in FY 15/16. For FY 15/16 CORF payments, staff expects to pay 80% in FY 15/16 and will carryover 20% to FY 16/17.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

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 up to 40 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 (323 acres)

Jackson Ranch - 884 acres, 1749 AF Table A State Water Project entitlement, 9,495 AF minimum storage and 6,330 AF annual recovery in Kern Water Bank

Stockdale West - 269 acres of recharge facilities constructed; CEQA, design and construct 3 future recovery wells, pipelines and turn-in facilities

Strand Ranch Well Optimization & Monitoring Project - Lowering of pumps in Strand Ranch wells to increase pumping at lower groundwater levels and install wellhead monitoring and remote telemetry equipment for monitoring

Stockdale West Turnout Facilities Project - Design and construct one future 100 cfs turnout from Cross Valley Canal to Stockdale West and Strand Ranch recharge basins

Rosedale Drought Relief Project Design and Well Const - Cost Share in the design and construction of six joint use wells and conveyance facilities to increase recovery capacity by up to 16 cfs

Stockdale Storage for Recovery Capacity - Future long term lease of 50,000 AF of storage capacity



FY 2015/16 Key Milestones

Design Stockdale West wellhead equipping and conveyance facilities

Design Stockdale West Turnout facilities

Stockdale Storage for Recovery Capacity

Rosedale Drought Relief Project Facilities wellhead design and construction

Begin construction of three Stockdale West wells

Begin construction of wellhead equipping and conveyance facilities

Construct Stockdale West Turnout facilities

Date

Jul-15

Aug-15

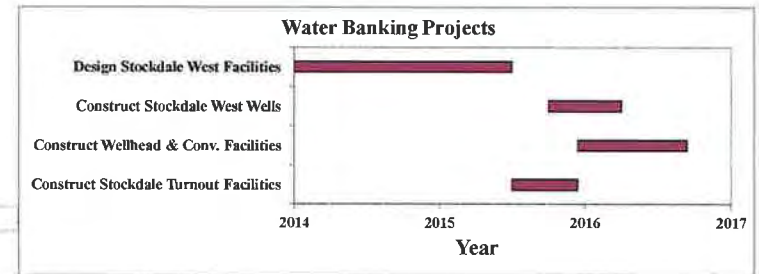
Aug-15

Aug-15

Sep-15

Nov-15

Nov-15



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 3,557,533	\$ -	\$ 14,780,267	\$ 18,337,800	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 3,557,533	\$ -	\$ 14,780,267	\$ 18,337,800	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
5499	STOCKDALE STORAGE FOR RECOVERY CAPACITY	\$ 1,590,800	\$ 10,500	\$ 1,580,300	\$ -
6246	WATER BANKING PLANNING 15/16	\$ 115,500	\$ 115,500	\$ -	\$ -
6145	STOCKDALE WEST TURNOUT FACILITIES	\$ 2,557,500	\$ 126,300	\$ 2,431,200	\$ -
5500	WATER BANKING AGREEMENTS 14/16	\$ 484,000	\$ 242,400	\$ 209,796	\$ 31,804
3766	STOCKDALE WEST WELLHEAD EQUIPPING	\$ 4,744,900	\$ 1,377,600	\$ 2,860,413	\$ 506,887
6249	STOCKDALE WEST WELL CONSTRUCTION PROJECT	\$ 2,711,500	\$ 1,804,500	\$ 907,000	\$ -
6023	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	\$ 6,133,600	\$ 3,407,800	\$ 2,725,800	\$ -
TOTAL \$		18,337,800	\$ 7,084,600	\$ 10,714,508	\$ 538,692

Project Status

Certify EIR for Stockdale Integrated Banking Project (Stockdale West Wellhead Equipping)
Construct three wells on Stockdale West property (Stockdale West Well Construction Project)
Design equipping for three wells, pipelines and turn-ins and begin construction on Stockdale West property (Stockdale West Wellhead Equipping)
Complete lease of 50,000 AF storage from Rosedale-Rio Bravo Water Storage District and construct two wells as part of storage lease (Stockdale Storage for Recovery Capacity)
Participate in the Rosedale Drought Relief Project by completing design review to construct and equip six recovery wells and conveyance pipelines (Rosedale Drought Relief Project Facilities)
Design and construct turnout facilities to Stockdale and Strand Ranch recharge basins (Stockdale West Turnout Facilities)
Complete long term program agreements with water banking partners (Water Banking Agreements)
Investigate potential water supply/exchange opportunities, expand of Water Rights Inventory and additional property search (Water Banking Planning)

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: Planning Area 51 (Great Park Neighborhoods) Development

Project Description

The Fiscal Year 2015/16 development activities for the Planning Areas 30 and 51 include the infrastructure required to support the Great Park Neighborhoods "District 1", "District 3", and "District 4". The primary capital facilities planned for this year include:

"District 1" Pipelines: 12-inch domestic water pipelines, 12-inch and 18-inch sewer, and 6-inch to 16-inch recycled water pipelines throughout various "District 1" backbone streets.

"District 3" Pipelines: 12-inch domestic water pipelines, 18-inch sewer, and 10-inch to 16-inch recycled water pipelines in future Marine Way and Alton Parkway.

"District 4" Pipelines: 12-inch domestic water pipelines, 12-inch sewer, and 6-inch to 12-inch recycled water pipelines throughout "District 4".



FY 2015/16 Key Milestones

"District 1" Pipelines

"District 3" Pipelines

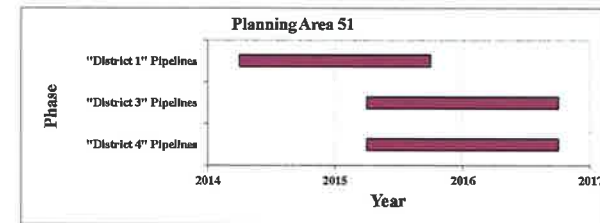
"District 4" Pipelines

Date

Sep-15

Sep-16

Sep-16



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 31,370,700	\$ -	\$ -	\$ 31,370,700	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 31,370,700	\$ -	\$ -	\$ 31,370,700	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
1103	PA51 MASTER RW FACILITIES	\$ 4,893,000	\$ 1,500	\$ 4,891,500	\$ -
1167	GREAT PARK COORDINATION AND SAMP UPDATE	\$ 99,000	\$ 11,200	\$ 77,945	\$ 9,855
1466	PA51 MASTER DW FACILITIES	\$ 5,680,500	\$ 1,800	\$ 5,678,700	\$ -
1642	PA51 MASTER SS FACILITIES	\$ 1,028,500	\$ 300	\$ 1,028,200	\$ -
3977	PA51 TRABUCO RD. SR133 TO LY ST DW	\$ 156,200	\$ 3,300	\$ 49,361	\$ 103,539
3980	PA51 TRABUCO RD. SR133 TO LY ST SEWER	\$ 161,700	\$ 3,600	\$ 39,041	\$ 119,059
3983	PA51 TRABUCO RD. SR133 TO LY ST RW	\$ 480,700	\$ 12,100	\$ 154,238	\$ 314,362
4147	PA51 MARINE WAY RW ZN3	\$ 365,200	\$ 206,900	\$ 158,300	\$ -
4153	PA51 MARINE WAY DW ZN3	\$ 332,200	\$ 192,200	\$ 140,000	\$ -
4261	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - DW	\$ 723,800	\$ 35,400	\$ 92,717	\$ 595,683
4263	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - SS	\$ 436,700	\$ 21,300	\$ 106,709	\$ 308,691
4264	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - RW	\$ 194,700	\$ 9,400	\$ 181,891	\$ 3,409
4267	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - SEWER	\$ 1,064,800	\$ 50,000	\$ 311,981	\$ 702,819
4268	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - DW	\$ 486,200	\$ 39,500	\$ 192,089	\$ 254,611
4278	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - RW	\$ 464,200	\$ 38,600	\$ 425,600	\$ -
4620	PA51 LN ST FROM C ST TO LY ST DW	\$ 172,700	\$ 11,800	\$ 30,117	\$ 130,783
4621	PA51 LN ST FROM C ST TO LY ST RW	\$ 105,600	\$ 6,900	\$ 96,468	\$ 2,232
4645	PA51 C ST FROM LQ ST TO O ST DW	\$ 161,700	\$ 10,500	\$ 45,515	\$ 105,685
4646	PA51 C ST FROM LQ ST TO O ST RW	\$ 266,200	\$ 18,300	\$ 145,458	\$ 102,442
4647	PA51 LY ST FROM TRABUCO RD TO LQ ST RW	\$ 205,700	\$ 15,600	\$ 190,100	\$ -
4648	PA51 LQ ST FROM O ST TO LY ST SEWER	\$ 255,200	\$ 17,000	\$ 51,486	\$ 186,714
4649	PA51 LQ ST FROM O ST TO LY ST RW	\$ 78,100	\$ 5,100	\$ 72,657	\$ 343
4650	PA51 LY ST FROM LQ ST TO IRVINE BLVD DW	\$ 51,700	\$ 3,100	\$ 20,967	\$ 27,633
4651	PA51 LY ST FROM LQ ST TO IRVINE BLVD SEWER	\$ 1,662,200	\$ 134,900	\$ 710,227	\$ 817,073
4652	PA51 LY ST FROM LQ ST TO IRVINE BLVD RW	\$ 938,300	\$ 73,000	\$ 865,300	\$ -
4653	PA51 C ST FROM TRABUCO RD TO LQ ST SEWER	\$ 403,700	\$ 16,500	\$ 198,833	\$ 188,367
4824	PA51 LV ST FROM RIDGE VALLEY TO LY ST 18" SEWER	\$ 310,200	\$ 20,100	\$ 88,854	\$ 201,246
4825	PA51 LV ST FROM RIDGE VALLEY TO LY ST 12" RW	\$ 321,200	\$ 20,900	\$ 111,336	\$ 188,965
5016	PA51 C ST FROM LV ST TO TRABUCO SEWER	\$ 370,700	\$ 24,400	\$ 345,874	\$ 426
5535	PA51 LQ ST FROM BOSQUE TO Z ST 12" SEWER	\$ 1,510,300	\$ 647,000	\$ 863,300	\$ -
5536	PA51 LQ ST FROM BOSQUE TO Z ST 12" RW	\$ 383,900	\$ 226,700	\$ 157,200	\$ -
5756	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV 12" ZN 4	\$ 176,000	\$ 125,000	\$ 51,000	\$ -
5757	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV 16" ZN C	\$ 240,900	\$ 176,300	\$ 64,600	\$ -
5758	PA51 SOCIABLE ST FROM Z TO B ST 12" & 16" ZONE B	\$ 240,900	\$ 137,400	\$ 103,500	\$ -
5788	PA51 ALTON PKWY SS RELOCATION 12" AND 18"	\$ 1,832,300	\$ 1,321,800	\$ 510,500	\$ -
5816	PA51 ALTON, TECHNOLOGY TO MUIRLANDS 12" DW	\$ 177,100	\$ 103,300	\$ 73,800	\$ -
5817	PA51 ALTON, TECHNOLOGY TO MUIRLANDS SS RELOCATION	\$ 1,326,300	\$ 819,100	\$ 507,200	\$ -
5818	PA51 ALTON, TECHNOLOGY TO MUIRLANDS 16" RW	\$ 344,300	\$ 207,000	\$ 137,300	\$ -
6016	PA51 IRVINE BLV LAMBERT TO Z ST 12" DW	\$ 34,100	\$ 19,000	\$ 15,100	\$ -
6017	PA51 IRVINE BLV LAMBERT TO Z ST 16" SS	\$ 28,600	\$ 15,300	\$ 13,300	\$ -
6018	PA51 IRVINE BLV LAMBERT TO Z ST 20" RW	\$ 609,400	\$ 346,600	\$ 262,800	\$ -
6048	PA51 MARINE WAY, ALTON TO BARRANCA 18" SS	\$ 1,424,500	\$ 911,200	\$ 513,300	\$ -
6086	PA51 MARINE WAY FROM ALTON TO BARRANCA 12" DW ZN 3	\$ 238,700	\$ 187,100	\$ 51,600	\$ -
6087	PA51 MARINE WAY, ALTON TO BARRANCA 16" RW ZN B	\$ 281,600	\$ 223,300	\$ 58,300	\$ -
6208	PA-51 MARINE WAY; SR133 TO RIDGE VALLEY 12" ZONE 3	\$ 162,800	\$ 113,100	\$ 49,700	\$ -
6209	PA-51 MARINE WAY; SR133 TO RIDGE VALLEY 6" ZONE B	\$ 162,800	\$ 113,100	\$ 49,700	\$ -
6304	PA 51 BENCHMARK, BOSQUE TO 550'E/O BOSQUE 12" ZAR	\$ 162,800	\$ 113,100	\$ 49,700	\$ -
6306	PA 51 BENCHMARK, BOSQUE TO 550'E/O BOSQUE 6" ZC	\$ 162,800	\$ 113,100	\$ 49,700	\$ -
		\$ 31,370,700	\$ 6,923,700	\$ 20,083,063	\$ 4,363,937

Project Status

Construction of "District1" pipelines in backbone streets is scheduled to be complete in September 2015. Construction of "District 3" and "District 4" pipelines and facilities is scheduled to be complete in September 2016.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: Peters Canyon Channel Water Capture and Reuse Pipeline

Project Description

The County of Orange, Orange County Flood Control District (OC Flood), City of Irvine, City of Tustin, California Department of Transportation (Caltrans), and Irvine Ranch Water District (IRWD) are collectively proceeding with the Peters Canyon Channel Wash Water Capture and Reuse Pipeline Project for the disposal of Peters Canyon Channel flows that contain high nitrate and selenium concentrations. The purpose of the project is to divert these high selenium nuisance flows from specific locations within the Cities of Irvine and Tustin and to deliver these flows to the Orange County Sanitation District's (OCSD) sewer system for treatment and reuse. The project begins at the existing Caltrans Groundwater Treatment Facility on Walnut, with three diversion structures along the pipeline alignment at Como Channel, Edinger, and Moffett Ave., ultimately connecting to the existing IRWD sewer that discharges to an OCSD trunk sewer in Main Street. Per the cooperative agreement among the project partners executed on December 12, 2013, IRWD will be reimbursed for all capital costs during design and construction. IRWD will have responsibility for operation and maintenance of the completed project for the term of the agreement and will contribute annual operations and maintenance costs up to a maximum amount of \$60,000 per year.

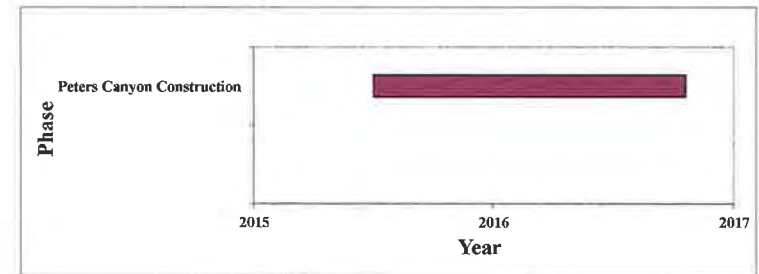


FY 2015/16 Key Milestones

Notice to Proceed - Construction
Construction Complete

Date

Jun-15
Aug-16



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 1,941,826	\$ -	\$ 9,017,974	\$ 10,959,800	
Existing Offsets	\$ (1,941,826)	\$ -	\$ (9,017,974)	\$ (10,959,800)	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 0	\$ -	\$ -	\$ -	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
4985	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	\$ 10,959,800	\$ 5,438,200	\$ 4,604,271	\$ 917,330
TOTAL		\$ 10,959,800	\$ 5,438,200	\$ 4,604,271	\$ 917,330

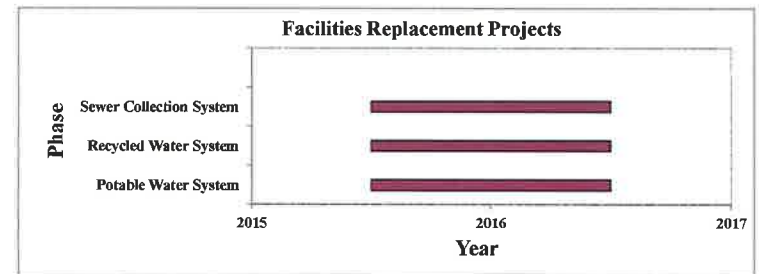
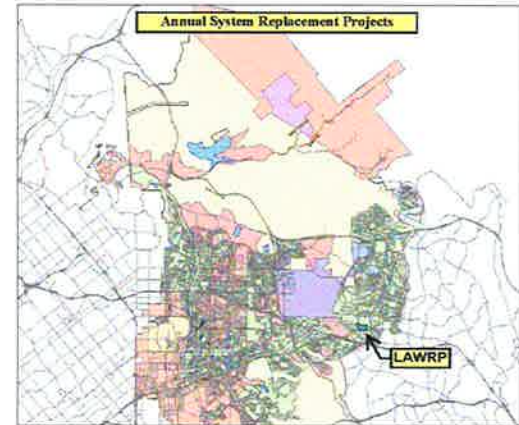
Project Status

The project was advertised for bids February 9, 2015, and bids were opened March 12, 2015. The construction Notice of Award was issued in May, 2015. The construction duration is 450 calendar days, and construction completion is anticipated for August, 2016.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: Annual Distribution System Repair and Rehabilitation

This series of projects is used for system repair and replacement projects. Examples of these projects include pipeline repairs, distribution system valve replacements, and treatment plant equipment repairs.



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ -	\$ 3,697,600	\$ -	\$ 3,697,600	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ -	\$ 3,697,600	\$ -	\$ 3,697,600	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
4418	LAWRP SYSTEM REPLACEMENTS 15/16	\$ 132,000	\$ 132,000	\$ -	\$ -
4423	MECH & ELEC SYS REPLACEMENT - DW 15/16	\$ 660,000	\$ 660,000	\$ -	\$ -
4430	MECH & ELEC SYS REPLACEMENT - RW 15/16	\$ 484,000	\$ 484,000	\$ -	\$ -
4433	MECH & ELEC SYS REPLACEMENT - SEWER 15/16	\$ 440,000	\$ 440,000	\$ -	\$ -
5468	SERVICE LINE, VALVE & MAIN REPLACEMENT-DW 15/16	\$ 1,246,900	\$ 1,246,900	\$ -	\$ -
5477	SERVICE LINE, VALVE & MAIN REPLACEMENT-RW 15/16	\$ 515,800	\$ 515,800	\$ -	\$ -
5491	SEWER LATERAL & MAIN REPLACEMENT 15/16	\$ 218,900	\$ 218,900	\$ -	\$ -
TOTAL		\$ 3,697,600	\$ 3,697,600	\$ -	\$ -

Project Status

This series of projects are ongoing and are budgeted for on an annual basis.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

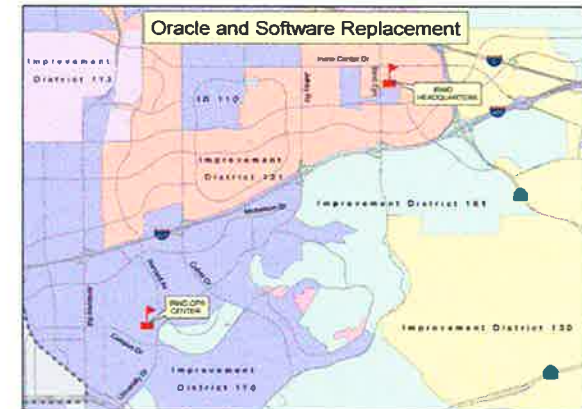
Project Group Name: Business Software

Project Description

The ID Consolidation Project Accounting implementation will focus on implementing changes to the Oracle Financial system to accommodate the recent consolidation of Improvement Districts (ID's) and simplify the project accounting structure. The changes will include implementing the Project Management software module.

The Business Intelligence Software Upgrade will focus on upgrading the system used for data analytics and reporting. Both the Oracle Financial and Customer Care and Billing systems use the Business Intelligence system.

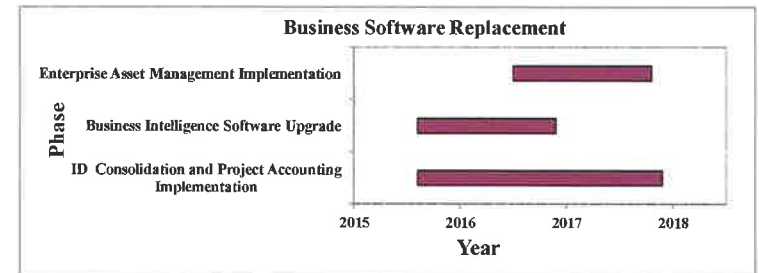
The Enterprise Asset Management software (EAMS) implementations will focus on upgrading the many system currently used to track and maintain District assets. Activities during the next fiscal year will be focused on the pre-implementation phase and include asset management strategic planning, EAMS enterprise standards, asset data definition, asset criticality rating, data collection, business process development, staffing analysis, and performance metrics.



FY 2015/16 Key Milestones

Begin ID Consolidation & Project Accounting Implementation
ID Consolidation Project Accounting Completion
Begin Business Intelligence Software Upgrade
Business Intelligence Software Upgrade Completion
Begin Enterprise Asset Management Implementation
Enterprise Asset Management Completion

Date
Jul-15
Dec-17
Jul-15
Dec-16
Jun-16
Dec-17



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 902,740	\$ 2,761,000	\$ 3,961,460	\$ 7,625,200	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 902,740	\$ 2,761,000	\$ 3,961,460	\$ 7,625,200	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
3566	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	\$ 2,432,100	\$ 473,300	\$ 1,741,710	\$ 217,090
3567	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	\$ 2,432,100	\$ 473,300	\$ 1,832,996	\$ 125,804
4394	ID CONSOLIDATION PROJECT ACCOUNTING IMPLEMENTATION	\$ 1,254,000	\$ 501,600	\$ 752,400	\$ -
4395	ID CONSOLIDATION PROJECT ACCOUNTING IMPLEMENTATION	\$ 1,254,000	\$ 501,600	\$ 752,400	\$ -
6181	BUSINESS INTELLIGENCE SOFTWARE UPGRADE	\$ 126,500	\$ 84,200	\$ 42,300	\$ -
6184	BUSINESS INTELLIGENCE SOFTWARE UPGRADE	\$ 126,500	\$ 84,200	\$ 42,300	\$ -
TOTAL		\$ 7,625,200	\$ 2,118,200	\$ 5,164,106	\$ 342,894

Project Status

The Enterprise Asset Management software implementation is currently in the pre-implementation phase with an anticipated completion date of approximately September 2016.

The ID Consolidation and Project Accounting implementation is currently scheduled to start in July 2015 with an anticipated completion date of approximately December 2017.

The Business Intelligence Software Upgrade is currently scheduled to start in July 2015 with an anticipated completion date of approximately December 2016.

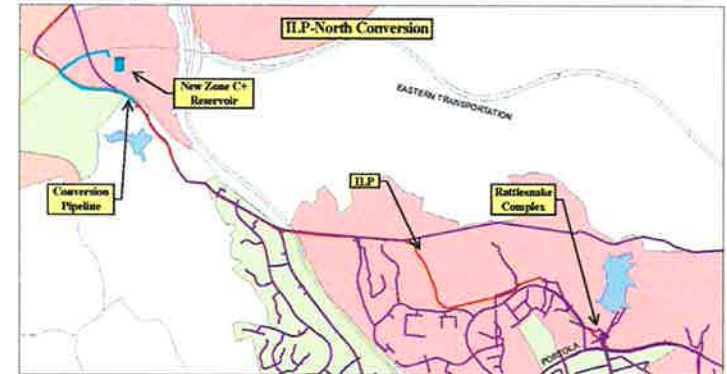
**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Project Group Name: Irvine Lake Pipeline North Conversion

Project Description

The project includes converting the northern portion of the Irvine Lake Pipeline (ILP) from untreated water to recycled water through the construction of a new Zone C+ Reservoir and associated facilities. The project also includes modifications at the Rattlesnake Complex and Zone A-C booster pump station (BPS).

The project is being designed and constructed under two separate projects. One project will design and construct the proposed Zone C+ reservoir and the modifications at the Rattlesnake Complex and the Zone A-C BPS. A second project will design and construct the offsite pipelines primarily consisting of the reservoir inlet and outlet piping. Both projects are being executed in parallel.

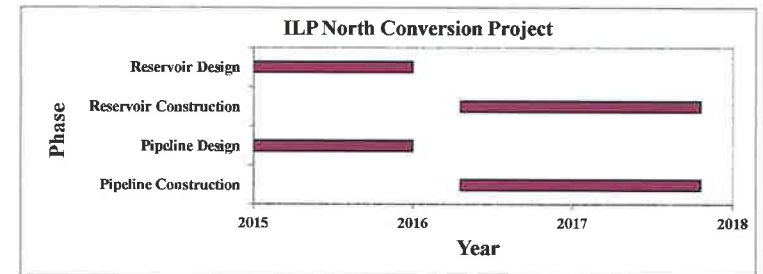


FY 2015/16 Key Milestones

Design complete
Advertise for bidding
Bid opening
Construction award
Construction complete

Date

December-15
January-16
February-16
March-16
May-17



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 3,622,047	\$ -	\$ 9,981,053	\$ 13,603,100	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 3,622,047	\$ -	\$ 9,981,053	\$ 13,603,100	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
5823	ILP NORTH CONVERSION - PIPELINES	\$ 7,494,600	\$ 724,900	\$ 6,766,749	\$ 2,951
5407	ILP NORTH CONVERSION - RESERVOIR	\$ 6,108,500	\$ 703,800	\$ 5,340,186	\$ 64,514
TOTAL \$		13,603,100	\$ 1,428,700	\$ 12,106,935	\$ 67,465

Project Status

Design contracts were awarded for the design of the reservoir and pipelines in November 2014. Design completion for both the reservoir and pipelines is scheduled for December 2015.

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

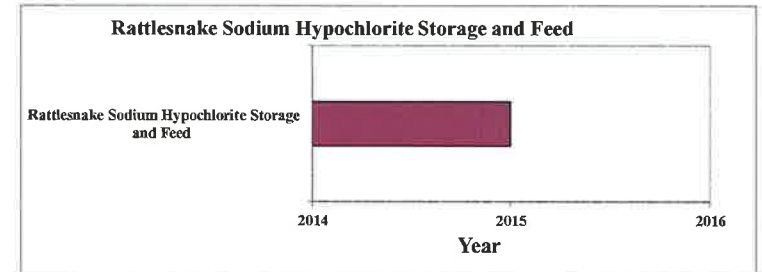
Project Group Name: Rattlesnake Sodium Hypochlorite Storage and Feed

Non-potable water discharged from the Rattlesnake Reservoir is disinfected at the Rattlesnake Chlorination Facility to control biological growth in the recycled water distribution system and to control odors downstream of the Zone A North tank. This project will replace the existing chlorine gas system and related appurtenances with sodium hypochlorite storage and feed facilities.



FY 2015/16 Key Milestones
Construction complete

Date
December-15



Project Group Budget, Source of Funds, and Offset Summary

	New Capital	Replacement	Enhancement	Total	Comments
Total Budget	\$ 647,267	\$ -	\$ 1,783,633	\$ 2,430,900	
Existing Offsets	\$ -	\$ -	\$ -	\$ -	
Potential Future Offsets	\$ -	\$ -	\$ -	\$ -	
Net Amounts	\$ 647,267	\$ -	\$ 1,783,633	\$ 2,430,900	

**Irvine Ranch Water District
Capital Improvement Project
Fiscal Year 2015/16**

Oracle No.	Project	Proj Total Dir	FY15-16 Dir	Projected Future Expenditure	Expended to Date
4959	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	\$ 2,430,900	\$ 1,403,800	\$ 709,068	\$ 318,032
TOTAL		\$ 2,430,900	\$ 1,403,800	\$ 709,068	\$ 318,032

Project Status

Construction completion is scheduled for December 2015.

IRVINE RANCH WATER DISTRICT
Fiscal Year 2015/16
Water Improvement District (ID) Allocation

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	Improvement District (ID) Allocation - % of Project Budget								
						101	110	112	113	125	153	154	185	188
1038	11378	TUSTIN LEGACY MASTER DW FACILITIES	\$500	\$1,495,200	Local				100.0%					
1047	11379	TUSTIN LEGACY TUSTIN RANCH ROAD	\$1,400	\$990,900	Local				100.0%					
1181	11560	LAKE FOREST DW OFFSITE	\$700	\$962,500	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
1189	11562	LAKE FOREST DW OPPORTUNITY AREAS	\$2,400	\$3,686,600	Local								100.0%	
1264	11116	ASSET OPTIMIZATION - LAKE FOREST	\$887,300	\$6,500,000	Replacement	100.0%								
1336	11598	HQ LIGHTING RETROFIT & CEILING	\$45,400	\$225,000	Replacement	100.0%								
1346	11605	PA40 PH2 DW FACILITIES	\$300	\$238,700	Local						100.0%			
1354	11613	PA1 16" Z5 PIPE, 5-4 PRVS	\$11,000	\$1,237,500	Local						100.0%			
1363	11275	OCWD ANNEXATION FEE 15/16	\$439,400	\$439,400	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
1402	15051	WELLS 51/52/53 TREATMENT	\$10,600	\$133,100	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
1414	11434	SAND CANYON 16" DW PIPELINE	\$1,700	\$243,100	Replacement	100.0%								
1437	10394	DATS & WELL 77 LEASE PAYMENT	\$37,100	\$487,200	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
1466	19411	PA51 MASTER DW FACILITIES	\$1,800	\$5,680,500	Sub-Regional			77.7%			22.3%			
1520	11469	GREAT PARK COORDINATION AND	\$11,200	\$99,000	Local				100.0%					
1798	10517	LAKE FOREST CONTROL AND	\$66,300	\$319,000	Replacement	100.0%								
1804	11057	ENG PLANNING STUDY RESERVE 15/16	\$198,000	\$198,000	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
3566	11619	ENTERPRISE ASSET MGMT SOFTWARE	\$473,300	\$2,432,100	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
3766	11645	STOCKDALE WEST WELLHEAD	\$1,377,600	\$4,744,900	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
3977	11660	PA51 TRABUCO RD, SR133 TO LY ST DW	\$3,300	\$156,200	Local			100.0%						
4130	11665	SJM BUILDING CAMPUS MOLD	\$1,000	\$369,600	Regional	50.0%	16.3%	1.7%	1.5%	23.8%	5.6%	0.2%	0.8%	0.3%
4153	11668	PA51 MARINE WAY DW ZN3	\$192,200	\$332,200	Local			100.0%						

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	101	110	112	113	125	153	154	185	188
4261	11671	PA51 RIDGE VALLEY, TRABUCO TO	\$35,400	\$723,800	Local			100.0%						
4268	11673	PA51 RIDGE VALLEY, MARINE WAY TO	\$39,500	\$486,200	Local			100.0%						
4327	11672	DRWF WELL NO. 3 REHAB	\$387,400	\$401,500	Replacement	100.0%								
4366	11714	TUSTIN LEGACY TUSTIN RANCH,	\$800	\$343,200	Local				100.0%					
4387	11697	GEN SYS MODS-DW 15/16	\$190,300	\$190,300	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
4394	11711	ID CONSOLIDATION PROJECT	\$501,600	\$1,254,000	Replacement	100.0%								
4401	11679	WELL REHAB NO. 2 (DW)	\$228,700	\$401,500	Replacement	100.0%								
4409	11687	CHLORAMINE BOOSTER STATIONS AT	\$1,089,500	\$2,501,200	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
4423	11704	MECH & ELEC SYS REPLACEMENT - DW	\$660,000	\$660,000	Replacement	100.0%								
4441	11692	WELL MAINTENANCE AND	\$165,000	\$165,000	Replacement	100.0%								
4510	11716	TUSTIN LEGACY WARNER - LEGACY TO	\$400	\$196,900	Local				100.0%					
4512	11717	PA5B PHASE 1A 12" ZONE 3 DW	\$27,900	\$132,000	Local						100.0%			
4620	11719	PA51 LN ST FROM C ST TO LY ST DW	\$11,800	\$172,700	Local			100.0%						
4645	11721	PA51 C ST FROM LQ ST TO O ST DW	\$10,500	\$161,700	Local			100.0%						
4650	11723	PA51 LY ST FROM LQ ST TO IRVINE	\$3,100	\$51,700	Local			100.0%						
4680	11739	PA18S HIDDEN CANYON 12" DW	\$900	\$315,700	Local						100.0%			
4988	11746	TUSTIN LEGACY WARNER FROM	\$10,700	\$60,500	Local				100.0%					
5027	11747	BAKER WATER TREATMENT PLANT	\$38,868,400	\$96,852,000	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5243	30501	PA6 NEIGHBORHOOD 4B 6" RW ZONE	\$288,700	\$526,900	Local						100.0%			
5297	11698	RAISE DW SYSTEM VALVES 15/16	\$115,500	\$115,500	Replacement	100.0%								
5338	11797	MARSH MITIGATION CREDIT	\$17,000	\$36,300	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5404	11791	LAKE FOREST Z2-2RA PRV AT	\$59,200	\$337,700	Local								100.0%	
5405	11785	EL MODENA NTS POND INFILTRATION	\$1,000	\$321,200	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5406	11779	EL MODENA INLET MODIFICATION	\$1,000	\$156,200	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	101	110	112	113	125	153	154	185	188
5410	11755	COASTAL ZN2 PRV MODIFICATION	\$2,000	\$187,100	Local					100.0%				
5411	11787	COMPRESSED NATURAL GAS MOTOR	\$34,700	\$68,800	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5433	11789	GIS SUPPORT APPLICATIONS 15/16 -	\$60,000	\$60,000	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5436	11796	HYDRAULIC MODELING 15/16 DW	\$44,000	\$44,000	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5443	11781	PORTABLE DIESEL GENERATOR	\$293,900	\$880,000	Replacement	100.0%								
5453	11752	WELLS 12 AND 13 ROOF HATCHES	\$282,200	\$340,500	Replacement	100.0%								
5468	11702	SERVICE LINE, VALVE & MAIN	\$1,246,900	\$1,246,900	Replacement	100.0%								
5473	11754	WELLS 11 AND 15 SURGE TANK	\$304,300	\$627,600	Replacement	100.0%								
5484	11699	RESIDENTIAL METER REPLACEMENT-	\$336,600	\$336,600	Replacement	100.0%								
5493	11694	1" TO 2" METER REPLACEMENT-DW	\$139,000	\$139,000	Replacement	100.0%								
5494	11696	CSR METER REPLACEMENT-DW 15/16	\$213,200	\$213,200	Replacement	100.0%								
5499	11765	STOCKDALE STORAGE FOR RECOVERY	\$10,500	\$1,590,800	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5500	11764	WATER BANKING AGREEMENTS 14/16	\$242,400	\$484,000	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
5519	11801	EAST IRVINE ZONE 1 TO 3 BPS	\$168,200	\$198,600	Replacement	100.0%								
5756	11804	PA51 "B" ST FROM SOCIABLE TO	\$125,000	\$176,000	Local			100.0%						
5761	11805	ZONE 1 RESERVOIR INTERIOR	\$500	\$2,748,500	Replacement	100.0%								
5816	11806	PA51 ALTON, TECHNOLOGY TO	\$103,300	\$177,100	Local			100.0%						
6013	11808	WATER SUPPLY AND SYSTEM	\$228,200	\$496,900	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6016	11809	PA51 IRVINE BLV LAMBERT TO Z ST 12"	\$19,000	\$34,100	Local			100.0%						
6023	11812	ROSEDALE DROUGHT RELIEF PROJECT	\$3,407,800	\$6,133,600	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6049	11814	2015 IRVINE ANNUAL ST REHAB, DW	\$431,200	\$431,200	Replacement	100.0%								
6086	11842	PA51 MARINE WAY FROM ALTON TO	\$187,100	\$238,700	Local			100.0%						
6109	11866	TUSTIN LEGACY PARK AVE & MOFFETT	\$58,700	\$162,800	Local				100.0%					
6121	11879	VAULT LID REPLACEMENT - DW	\$3,300	\$315,200	Replacement	100.0%								

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	101	110	112	113	125	153	154	185	188
6145	11875	STOCKDALE WEST TURNOUT FACILITIES	\$126,300	\$2,557,500	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6158	11884	TURTLE ROCK ZONE 3-4 BOOSTER	\$189,200	\$2,747,900	Replacement	100.0%								
6160	11849	CENTRALIZED CONTROL ROOM AT	\$1,800	\$170,000	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6165	11882	DRWF SURGE TANKS	\$1,700	\$198,600	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6166	11877	NTS SEDIMENT REMOVAL	\$7,300	\$365,200	Replacement	100.0%								
6168	11878	SAN JOAQUIN MARSH IMPROVEMENTS	\$13,200	\$541,200	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6171	11819	WELLS 76 & 77 PUMP/MOTOR	\$275,400	\$550,000	Replacement	100.0%								
6181	11889	BUSINESS INTELLIGENCE SOFTWARE	\$84,200	\$126,500	Replacement	100.0%								
6208	11887	PA-51 MARINE WAY: SR133 TO RIDGE	\$113,100	\$162,800	Local			100.0%						
6210	11885	ASSET OPTIMIZATION - SAND CANYON	\$59,600	\$17,624,300	Replacement	100.0%								
6212	11876	NTS INFILTRATION STUDY	\$64,900	\$64,900	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6213	11838	IDF SODIUM HYPOCHLORITE STORAGE	\$166,400	\$1,905,900	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6214	11839	PDF SODIUM HYPOCHLORITE	\$4,200	\$2,430,900	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6215	11881	TUSTIN LEGACY REDHILL WELL	\$269,500	\$269,500	Local				100.0%					
6246	11867	WATER BANKING PLANNING 15/16	\$115,500	\$115,500	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6249	11874	STOCKDALE WEST WELL	\$1,804,500	\$2,711,500	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
6304	11890	PA 51 BENCHMARK, BOSQUE TO	\$113,100	\$162,800	Local			100.0%						
6398	11886	NEWPORT COAST JOINT BONDING	\$148,300	\$148,300	Local					100.0%				
6401	11891	ZONE 1 RESERVOIR	\$210,700	\$316,300	Regional		32.6%	3.3%	3.0%	47.5%	11.1%	0.4%	1.6%	0.5%
		Total	\$58,187,700	\$188,035,200		\$7.1	\$16.1	\$2.6	\$1.8	\$23.5	\$5.8	\$0.2	\$0.8	\$0.2

IRVINE RANCH WATER DISTRICT
Fiscal Year 2015/16
Sewer Improvement District (ID) Allocation

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	Improvement District (ID) Allocation - % of Project Budget									
						201	210	212	213	225	240	253	256	285	288
4267	21141	PA51 RIDGE VALLEY, MARINE WAY TO	\$50,000	\$1,064,800	Local			100.0							
4648	21156	PA51 LQ ST FROM O ST TO LY ST SEWER	\$17,000	\$255,200	Local			100.0							
4653	21158	PA51 C ST FROM TRABUCO RD TO LQ ST	\$16,500	\$403,700	Local			100.0							
4824	21159	PA51 LV ST FROM RIDGE VALLEY TO LY ST	\$20,100	\$310,200	Local			100.0							
5016	21165	PA51 C ST FROM LV ST TO TRABUCO SEWER	\$24,400	\$370,700	Local			100.0							
5535	21213	PA51 LQ ST FROM BOSQUE TO Z ST 12"	\$647,000	\$1,510,300	Local			100.0							
5788	21216	PA51 ALTON PKWY SS RELOCATION 12" AND	\$1,321,800	\$1,832,300	Local			100.0							
6010	21217	TUSTIN LEGACY PARK AVE FROM JAMBOREE	\$36,700	\$64,900	Local				100.0						
6048	21219	PA51 MARINE WAY, ALTON TO BARRANCA	\$911,200	\$1,424,500	Local			100.0							
6400	21287	NEWPORT COAST SLS IMPROVEMENTS	\$291,100	\$574,200	Local						100.0				
1062	21378	TUSTIN LEGACY MASTER SEWER FACILITIES	\$400	\$1,115,400	Local				100.0						
1066	21379	TUSTIN LEGACY TUSTIN RANCH ROAD	\$1,600	\$1,090,400	Local			100.0							
1167	21469	GREAT PARK COORDINATION AND SAMP	\$11,200	\$99,000	Local				100.0						
1436	21560	LAKE FOREST SEWER OFFSITE	\$1,400	\$3,280,200	Local									100.0	
1445	21562	LAKE FOREST SEWER OPPORTUNITY AREAS	\$900	\$1,647,800	Local									100.0	
3980	21660	PA51 TRABUCO RD, SR133 TO LY ST SEWER	\$3,600	\$161,700	Local			100.0							
4263	21671	PA51 RIDGE VALLEY, TRABUCO TO IRVINE	\$21,300	\$436,700	Local			100.0							
4651	21723	PA51 LY ST FROM LQ ST TO IRVINE BLVD	\$134,900	\$1,662,200	Local			100.0							
5817	21806	PA51 ALTON, TECHNOLOGY TO MUIRLANDS	\$819,100	\$1,326,300	Local			100.0							
6017	21809	PA51 IRVINE BLV LAMBERT TO Z ST 16" SS	\$15,300	\$28,600	Local			100.0							
6110	21866	TUSTIN LEGACY PARK AVE & MOFFETT DR	\$58,700	\$162,800	Local				100.0						
1716	30245	PA1 ORCHARD HILLS NEIGHBORHOOD 3	\$2,700	\$326,700	Local							100.0			
1722	30246	PA1 ORCHARD HILLS NEIGHBORHOOD 4	\$16,400	\$566,500	Local							100.0			

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	201	210	212	213	225	240	253	256	285	288
1762	30280	PA9B PHASE 5 GATEWAY PARK RW PIPES	\$6,400	\$506,100	Local							100.0			
4147	30388	PA51 MARINE WAY RW ZNB	\$206,900	\$365,200	Local			100.0							
4278	30394	PA51 RIDGE VALLEY, MARINE WAY TO	\$38,600	\$464,200	Local			100.0							
4318	30416	PA40 PH3B RW CAPITAL FACILITIES	\$300	\$165,000	Local							100.0			
4515	30421	PA5B IRVINE BLVD 8" ZONE B RW	\$83,300	\$100,100	Local							100.0			
4528	30424	PA40 NEIGHBORHOOD 2G BACKBONE RW	\$200	\$108,900	Local							100.0			
4557	30426	PA6 PHASE 1 NEIGHBORHOOD 3 ZONE C RW	\$133,800	\$315,700	Local							100.0			
4647	30427	PA51 LY ST FROM TRABUCO RD TO LQ ST RW	\$15,600	\$205,700	Local			100.0							
4717	30428	PA1 ORCHARD HILLS NH 2 - 6" ZNB & 6" ZNC	\$800	\$238,700	Local							100.0			
4753	30430	PA5B PHASE 2 6" RW	\$38,600	\$57,200	Local							100.0			
1056	30445	PA39 PHASE 1 RW PIPELINES	\$200	\$180,400	Local							100.0			
4984	30447	TUSTIN LEGACY ARMSTRONG ZONE A &	\$133,500	\$773,300	Local				100.0						
4990	30449	PA1 ORCHARD HILLS NEIGHBORHOOD 2, 6"	\$500	\$84,700	Local							100.0			
5758	30503	PA51 SOCIABLE ST FROM Z TO B ST 12" & 16"	\$137,400	\$240,900	Local			100.0							
5763	30508	PA6 NEIGHBORHOOD 5A RW ZONE D	\$76,700	\$132,000	Local							100.0			
5785	30512	TUSTIN LEGACY BARRANCA FROM	\$247,000	\$344,300	Local				100.0						
5919	30516	PA1 ORCHARD HILLS, NEIGHBORHOOD 1, 16"	\$185,200	\$294,800	Local							100.0			
6056	30534	PA40 8TH ST RIDGE VALLEY TO C ST CAPITAL	\$109,100	\$136,400	Local							100.0			
6470	30573	LAKE FOREST RW OPP AREA ZONE C	\$800	\$997,800	Local									100.0	
1308	30797	PA6 RW PIPELINES	\$300	\$620,500	Local							100.0			
4649	31156	PA51 LQ ST FROM O ST TO LY ST RW	\$5,100	\$78,100	Local			100.0							
4825	31159	PA51 LV ST FROM RIDGE VALLEY TO LY ST	\$20,900	\$321,200	Local			100.0							
5536	31213	PA51 LQ ST FROM BOSQUE TO Z ST 12" RW	\$226,700	\$383,900	Local			100.0							
1101	31378	TUSTIN LEGACY MASTER RW FACILITIES	\$600	\$1,544,900	Local				100.0						
3435	31379	TUSTIN LEGACY TUSTIN RANCH ROAD	\$1,800	\$1,210,700	Local				100.0						
1517	31562	LAKE FOREST RW OPPORTUNITY AREAS	\$1,400	\$2,137,900	Local									100.0	
1229	31605	PA40 PH2 RW FACILITIES	\$300	\$216,700	Local							100.0			

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	201	210	212	213	225	240	253	256	285	288
3735	31640	PA39 PH2 RW FACILITIES	\$3,600	\$226,600	Local							100.0			
3983	31660	PA51 TRABUCO RD, SR133 TO LY ST RW	\$12,100	\$480,700	Local			100.0							
4264	31671	PA51 RIDGE VALLEY, TRABUCO TO IRVINE	\$9,400	\$194,700	Local			100.0							
4368	31714	TUSTIN LEGACY TUSTIN RANCH, BARRANCA,	\$1,600	\$689,700	Local				100.0						
4511	31716	TUSTIN LEGACY WARNER - LEGACY TO	\$500	\$207,900	Local				100.0						
4513	31717	PA5B PHASE 1A AND 1B 6" & 8" RW	\$156,500	\$298,200	Local							100.0			
4621	31719	PA51 LN ST FROM C ST TO LY ST RW	\$6,900	\$105,600	Local			100.0							
4646	31721	PA51 C ST FROM LQ ST TO O ST RW	\$18,300	\$266,200	Local			100.0							
4652	31723	PA51 LY ST FROM LQ ST TO IRVINE BLVD RW	\$73,000	\$938,300	Local			100.0							
4681	31739	PA18S HIDDEN CANYON 6" & 8" RW	\$900	\$315,700	Local							100.0			
4989	31746	TUSTIN LEGACY WARNER FROM	\$47,100	\$282,700	Local				100.0						
5757	31804	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV	\$176,300	\$240,900	Local			100.0							
5818	31806	PA51 ALTON, TECHNOLOGY TO MUIRLANDS	\$207,000	\$344,300	Local			100.0							
6018	31809	PA51 IRVINE BLV LAMBERT TO Z ST 20" RW	\$346,600	\$609,400	Local			100.0							
6087	31842	PA51 MARINE WAY, ALTON TO BARRANCA	\$223,300	\$281,600	Local			100.0							
6111	31866	TUSTIN LEGACY PARK AVE & MOFFETT DR	\$58,700	\$162,800	Local				100.0						
6399	31886	NEWPORT COAST JOINT BONDING PHASE 2	\$80,500	\$80,500	Local						100.0				
6209	31887	PA-51 MARINE WAY: SR133 TO RIDGE	\$113,100	\$162,800	Local			100.0							
6306	31890	PA 51 BENCHMARK, BOSQUE TO 550'E/O	\$113,100	\$162,800	Local			100.0							
1552	20115	OCSD CORF 14/15	\$705,000	\$3,502,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
1554	20116	OCSD CORF 15/16	\$4,785,200	\$5,988,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
1508	20589	OCSD EQUITY 14/15	\$2,194,000	\$6,546,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
1516	20593	OCSD EQUITY 15/16	\$4,561,100	\$6,854,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
1420	20813	OCSD SOLIDS HANDLING 15/16	\$1,391,000	\$1,391,000	Regional	57.1	14.2	1.5	1.5	20.8		4.1	0.1	0.6	0.1
1377	21057	ENG PLANNING STUDY RESERVE 15/16	\$171,600	\$171,600	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
4286	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY	\$52,512,700	\$196,465,500	Regional	57.1	14.2	1.5	1.5	20.8		4.1	0.1	0.6	0.1
4985	21163	PETERS CANYON WATER CAPTURE AND	\$5,438,200	\$10,959,800	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	201	210	212	213	225	240	253	256	285	288
5186	21170	SJM SLS UPGRADE	\$1,200	\$153,500	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
5427	21188	WATER RECYCLING PLANT MASTER PLAN	\$202,800	\$550,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
5409	21191	OPS DATABASE MANAGEMENT SYSTEM	\$173,700	\$346,500	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
6167	21234	OPS CENTER PERMANENT GENERATOR	\$3,400	\$618,800	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
6402	21288	MBR BLOWER ROOM SAFETY PLATFORM	\$11,100	\$144,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
3567	21619	ENTERPRISE ASSET MGMT SOFTWARE	\$473,300	\$2,432,100	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
5412	21748	SCSMP UPDATE AND LONG-TERM FLOW	\$578,400	\$1,155,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
5435	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	\$60,000	\$60,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
5438	21796	HYDRAULIC MODELING 15/16 SEWER	\$44,000	\$44,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
6204	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	\$60,000	\$60,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
6161	21849	CENTRALIZED CONTROL ROOM AT MWRP	\$1,800	\$170,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
1813	30331	SANTIAGO DAM & OUTLET TWR SEISMIC	\$86,400	\$282,700	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
1015	30366	TECHNOLOGY DR AND LAGUNA CANYON RD	\$3,400	\$3,223,500	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
3808	30382	SYPHON RESERVOIR EXPANSION	\$88,100	\$60,169,200	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
4388	30408	REG RW - MULTI-ZONE BPS - ZONE A TO	\$90,100	\$2,989,500	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
4396	30415	CATHODIC PROTECTION FOR GAP PIPE	\$58,800	\$352,000	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
4514	30420	PASB PHASE 1A AND 1B 36" RW	\$414,900	\$1,769,400	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
4959	30435	RATTLESNAKE SODIUM HYPOCHLORITE	\$1,403,800	\$2,430,900	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
5154	30461	SJR SEISMIC EVALUATION (DSOD)	\$1,100	\$150,700	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
5168	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	\$6,200	\$2,103,200	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
5407	30496	ILP NORTH CONVERSION - RESERVOIR	\$703,800	\$6,108,500	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
5823	30513	ILP NORTH CONVERSION - PIPELINES	\$724,900	\$7,494,600	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
1096	30517	LAKE FOREST CONTROL AND TELEMETRY SYS	\$22,900	\$168,300	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
6242	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	\$82,500	\$82,500	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
6243	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	\$82,500	\$82,500	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
6244	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	\$82,500	\$82,500	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
6298	30572	PIEZOMETER ACCESS AT RATTLESNAKE	\$4,400	\$242,100	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	201	210	212	213	225	240	253	256	285	288
1611	31057	ENG PLANNING STUDY RESERVE 15/16 RW	\$176,000	\$176,000	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
5486	31697	GEN SYS MODS-RW 15/16	\$101,800	\$101,800	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
5434	31789	GIS SUPPORT APPLICATIONS 15/16 -	\$60,000	\$60,000	Regional		33.1	3.4	3.4	48.5		9.6	0.3	1.3	0.3
5437	31796	HYDRAULIC MODELING 15/16 RW	\$44,000	\$44,000	Regional		14.6	10.7	4.1	51.0	7.7	10.3		1.5	
4439	20915	MWRP SYS REPLACEMENTS 15/16	\$332,200	\$332,200	Replacement	100.0									
4418	21011	LAWRP SYSTEM REPLACEMENTS 15/16	\$132,000	\$132,000	Replacement	100.0									
3750	21119	SOCWA ETM PROTECTION - TRAIL BRIDGE	\$87,600	\$951,500	Replacement	100.0									
4467	21142	MWRP MISCELLANEOUS REPAIR AND	\$170,000	\$3,076,600	Replacement	100.0									
5491	21151	SEWER LATERAL & MAIN REPLACEMENT	\$218,900	\$218,900	Replacement	100.0									
5469	21167	MWRP FPS 2 ROOF REPLACEMENT	\$210,200	\$256,000	Replacement	100.0									
5470	21168	NEWPORT COAST SLS AND FM RECOATING	\$244,200	\$552,200	Replacement	100.0									
5450	21169	CULVER DRIVE SMH IMPROVEMENTS	\$328,700	\$368,000	Replacement	100.0									
5456	21171	SEWER GEN SYS MODS 15/16	\$330,000	\$330,000	Replacement	100.0									
5174	21181	MAIN ST DIVERSION STRUCTURE GROUND	\$1,800	\$191,400	Replacement	100.0									
5448	21182	PLANO LIFT STATION FORCE MAIN	\$291,900	\$583,000	Replacement	100.0									
5301	21183	RAISE MANHOLES TO GRADE 15/16 UNDER	\$110,000	\$110,000	Replacement	100.0									
5520	21205	MAINTENANCE ACCESS FOR FOUR SEWER	\$1,400	\$368,000	Replacement	100.0									
6067	21235	WOODHOLLOW SEWER REPLACEMENT	\$3,400	\$398,200	Replacement	100.0									
1549	21598	HQ LIGHTING RETROFIT & CEILING REPLACE	\$45,400	\$225,000	Replacement	100.0									
4433	21704	MECH & ELEC SYS REPLACEMENT - SEWER	\$440,000	\$440,000	Replacement	100.0									
4395	21711	ID CONSOLIDATION PROJECT ACCOUNTING	\$501,600	\$1,254,000	Replacement	100.0									
5445	21781	PORTABLE DIESEL GENERATOR	\$293,900	\$880,000	Replacement	100.0									
6053	21814	2015 IRVINE ANNUAL ST REHAB, SEWER	\$233,200	\$233,200	Replacement	100.0									
6122	21879	VAULT LID REPLACEMENT - SEWER	\$1,700	\$96,300	Replacement	100.0									
6184	21889	BUSINESS INTELLIGENCE SOFTWARE	\$84,200	\$126,500	Replacement	100.0									
3780	30381	SAN JOAQUIN RESERVOIR LINER	\$35,000	\$2,625,000	Replacement	100.0									
4328	30402	WELL REHAB PROGRAM RW 13/14 THRU	\$11,500	\$930,300	Replacement	100.0									

EBS No.	EPMS No.	Project Title	Fiscal Year Direct	Total Direct	Split Description	201	210	212	213	225	240	253	256	285	288
4402	30403	WELL REHAB NO. 1 (RW)	\$228,700	\$401,500	Replacement	100.0									
5498	30406	1" TO 2" METER REPLACEMENT-RW 15/16	\$140,300	\$140,300	Replacement	100.0									
5156	30453	LAGUNA CANYON RD RW PIPELINE	\$2,000	\$588,500	Replacement	100.0									
5153	30455	SJR ACTUATOR REPAIR/REPLACEMENT	\$23,900	\$254,700	Replacement	100.0									
5503	30482	WELL 78 SPARE PUMP AND MOTOR	\$138,300	\$276,100	Replacement	100.0									
5476	30495	REG RW - RATTLESNAKE BPS PUMP UPGRADE	\$40,500	\$990,000	Replacement	100.0									
5522	30502	WEIR CANYON VALVE VAULT PLC UPGRADE	\$2,200	\$108,900	Replacement	100.0									
6055	30530	SYPHON RESERVOIR SLIDE GATE	\$114,500	\$238,700	Replacement	100.0									
1257	31598	HQ LIGHTING RETROFIT & CEILING REPLACE	\$10,400	\$50,000	Replacement	100.0									
5496	31696	CSR METER REPLACEMENT-RW 15/16	\$112,200	\$112,200	Replacement	100.0									
5304	31698	RAISE RW SYSTEM VALVES 15/16 UNDER RA	\$38,500	\$38,500	Replacement	100.0									
5477	31702	SERVICE LINE, VALVE & MAIN REPLACEMENT-	\$515,800	\$515,800	Replacement	100.0									
4430	31704	MECH & ELEC SYS REPLACEMENT - RW 15/16	\$484,000	\$484,000	Replacement	100.0									
5444	31781	PORTABLE DIESEL GENERATOR	\$293,900	\$880,000	Replacement	100.0									
6054	31814	2015 IRVINE ANNUAL ST REHAB, RW	\$97,400	\$97,400	Replacement	100.0									
6123	31879	VAULT LID REPLACEMENT - RW	\$1,700	\$195,300	Replacement	100.0									
1642	20374	PA51 MASTER SS FACILITIES	\$300	\$1,028,500	Sub-Regional			81.3				18.7			
4457	30409	REG RW - MULTI-ZONE BPS - ZONE B	\$38,900	\$2,532,700	Sub-Regional			54.2		23.1		22.7			
4400	30410	REG RW - MULTI-ZONE BPS - ZONE C	\$98,100	\$3,624,700	Sub-Regional			50.5		27.8		21.7			
6216	30552	REG RW - NORTHWOOD ZONE B BPS	\$64,900	\$2,588,500	Sub-Regional			54.2		23.1		22.7			
6198	30570	REG RW - IIC ZONE B BPS UPGRADES	\$69,500	\$1,606,100	Sub-Regional			54.2		23.1		22.7			
6197	30571	REG RW - 20"ZN B PIPE CONSTRUCTION &	\$49,500	\$3,152,600	Sub-Regional			54.2		23.1		22.7			
1103	39410	PA51 MASTER RW FACILITIES	\$1,500	\$4,893,000	Sub-Regional			93.5				6.5			
		Total	\$92,026,200	\$403,193,800		\$37.1	\$14.7	\$8.0	\$2.2	\$22.9	\$0.7	\$5.4	\$0.1	\$0.6	\$0.1

IRVINE RANCH WATER DISTRICT
Fiscal Year 2015/2016
Allocation of FY Project Expenditures by Improvement District

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
101 - Rep					
	11702	SERVICE LINE, VALVE & MAIN REPLACEMENT-DW 15/16	100.0%	\$1,246,900	\$1,265,400
	11116	ASSET OPTIMIZATION - LAKE FOREST DEVELOPMENT	100.0%	\$887,300	\$887,300
	11704	MECH & ELEC SYS REPLACEMENT - DW 15/16	100.0%	\$660,000	\$660,000
	11711	ID CONSOLIDATION PROJECT ACCOUNTING IMPLEMENTATION	100.0%	\$501,600	\$723,600
	11814	2015 IRVINE ANNUAL ST REHAB, DW	100.0%	\$431,200	\$468,200
	11672	DRWF WELL NO. 3 REHAB	100.0%	\$387,400	\$451,000
	11699	RESIDENTIAL METER REPLACEMENT-DW 15/16	100.0%	\$336,600	\$360,700
	11754	WELLS 11 AND 15 SURGE TANK REPLACEMENT	100.0%	\$304,300	\$345,600
	11781	PORTABLE DIESEL GENERATOR REPLACEMENT - DW	100.0%	\$293,900	\$293,900
	11752	WELLS 12 AND 13 ROOF HATCHES REPLACEMENT	100.0%	\$282,200	\$329,800
	11819	WELLS 76 & 77 PUMP/MOTOR REPLACEMENT	100.0%	\$275,400	\$275,400
	11679	WELL REHAB NO. 2 (DW)	100.0%	\$228,700	\$284,100
	11696	CSR METER REPLACEMENT-DW 15/16	100.0%	\$213,200	\$222,500
	11884	TURTLE ROCK ZONE 3-4 BOOSTER PUMP STATION RETROFIT	100.0%	\$189,200	\$234,300
	11801	EAST IRVINE ZONE 1 TO 3 BPS PIPE/METER	100.0%	\$168,200	\$211,500
	11692	WELL MAINTENANCE AND REHABILITATION 15/16	100.0%	\$165,000	\$165,000
	11694	1" TO 2" METER REPLACEMENT-DW 15/16	100.0%	\$139,000	\$163,800
	11698	RAISE DW SYSTEM VALVES 15/16 UNDER RA	100.0%	\$115,500	\$124,800
	11889	BUSINESS INTELLIGENCE SOFTWARE UPGRADE	100.0%	\$84,200	\$127,300
	10517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	100.0%	\$66,300	\$84,800
	11885	ASSET OPTIMIZATION - SAND CANYON PROFESSIONAL CTR	100.0%	\$59,600	\$64,200

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
101 - Rep					
	11598	HQ LIGHTING RETROFIT & CEILING REPLACE	100.0%	\$45,400	\$66,800
	11877	NTS SEDIMENT REMOVAL	100.0%	\$7,300	\$11,200
	11879	VAULT LID REPLACEMENT - DW	100.0%	\$3,300	\$8,500
	11434	SAND CANYON 16" DW PIPELINE ANODE REPLACEMENT	100.0%	\$1,700	\$4,300
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	50.0%	\$500	\$500
	11805	ZONE 1 RESERVOIR INTERIOR RECOATING	100.0%	\$500	\$1,300
				\$7,094,400	\$7,835,800
110					
	11747	BAKER WATER TREATMENT PLANT	32.6%	\$12,671,098	\$12,995,436
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	32.6%	\$1,110,943	\$1,200,560
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	32.6%	\$588,267	\$608,349
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	32.6%	\$449,098	\$468,886
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	32.6%	\$355,177	\$373,172
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	32.6%	\$154,296	\$222,723
	11275	OCWD ANNEXATION FEE 15/16	32.6%	\$143,244	\$143,244
	11764	WATER BANKING AGREEMENTS 14/16	32.6%	\$79,022	\$199,805
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	32.6%	\$74,393	\$88,248
	11891	ZONE 1 RESERVOIR	32.6%	\$68,688	\$79,740
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	32.6%	\$64,548	\$112,796
	11697	GEN SYS MODS-DW 15/16	32.6%	\$62,038	\$75,339
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	32.6%	\$54,246	\$70,775
	11875	STOCKDALE WEST TURNOUT FACILITIES	32.6%	\$41,174	\$53,236
	11867	WATER BANKING PLANNING 15/16	32.6%	\$37,653	\$67,808
	11876	NTS INFILTRATION STUDY	32.6%	\$21,157	\$25,395

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
110					
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	32.6%	\$19,560	\$30,709
	11796	HYDRAULIC MODELING 15/16 DW	32.6%	\$14,344	\$20,375
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	32.6%	\$12,095	\$12,095
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	32.6%	\$11,312	\$11,932
	11797	MARSH MITIGATION CREDIT INVENTORY	32.6%	\$5,542	\$6,944
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	32.6%	\$4,303	\$6,422
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	32.6%	\$3,456	\$4,401
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	32.6%	\$3,423	\$9,454
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	32.6%	\$1,369	\$3,651
	11849	CENTRALIZED CONTROL ROOM AT MWRP	32.6%	\$587	\$1,434
	11882	DRWF SURGE TANKS	32.6%	\$554	\$1,402
	11785	EL MODENA NTS POND INFILTRATION	32.6%	\$326	\$750
	11779	EL MODENA INLET MODIFICATION	32.6%	\$326	\$750
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	32.6%	\$228	\$587
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	16.3%	\$163	\$163
				\$16,052,631	\$16,896,580
112 ET					
	11747	BAKER WATER TREATMENT PLANT	3.3%	\$1,282,657	\$1,315,489
	11668	PA51 MARINE WAY DW ZN3	100.0%	\$192,200	\$223,200
	11842	PA51 MARINE WAY FROM ALTON TO BARRANCA 12" DW ZN 3	100.0%	\$187,100	\$220,400
	11804	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV 12" ZN 4	100.0%	\$125,000	\$151,900
	11887	PA-51 MARINE WAY: SR133 TO RIDGE VALLEY 12" ZONE 3	100.0%	\$113,100	\$149,000
	11890	PA 51 BENCHMARK, BOSQUE TO 550'E/O BOSQUE 12" Z4R	100.0%	\$113,100	\$149,000
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	3.3%	\$112,457	\$121,529

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
112 ET					
	11806	PA51 ALTON, TECHNOLOGY TO MUIRLANDS 12" DW	100.0%	\$103,300	\$120,500
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	3.3%	\$59,549	\$61,581
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	3.3%	\$45,461	\$47,464
	11673	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - DW	100.0%	\$39,500	\$43,800
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	3.3%	\$35,954	\$37,775
	11671	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - DW	100.0%	\$35,400	\$39,800
	11809	PA51 IRVINE BLV LAMBERT TO Z ST 12" DW	100.0%	\$19,000	\$22,800
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	3.3%	\$15,619	\$22,546
	11275	OCWD ANNEXATION FEE 15/16	3.3%	\$14,500	\$14,500
	11719	PA51 LN ST FROM C ST TO LY ST DW	100.0%	\$11,800	\$13,900
	11721	PA51 C ST FROM LQ ST TO O ST DW	100.0%	\$10,500	\$13,400
	11764	WATER BANKING AGREEMENTS 14/16	3.3%	\$7,999	\$20,226
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	3.3%	\$7,531	\$8,933
	11891	ZONE 1 RESERVOIR	3.3%	\$6,953	\$8,072
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	3.3%	\$6,534	\$11,418
	11697	GEN SYS MODS-DW 15/16	3.3%	\$6,280	\$7,626
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	3.3%	\$5,491	\$7,164
	11875	STOCKDALE WEST TURNOUT FACILITIES	3.3%	\$4,168	\$5,389
	11867	WATER BANKING PLANNING 15/16	3.3%	\$3,812	\$6,864
	11660	PA51 TRABUCO RD, SR133 TO LY ST DW	100.0%	\$3,300	\$3,300
	11723	PA51 LY ST FROM LQ ST TO IRVINE BLVD DW	100.0%	\$3,100	\$4,900
	11876	NTS INFILTRATION STUDY	3.3%	\$2,142	\$2,571
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	3.3%	\$1,980	\$3,109
	11796	HYDRAULIC MODELING 15/16 DW	3.3%	\$1,452	\$2,063
	19411	PA51 MASTER DW FACILITIES	77.7%	\$1,399	\$3,730

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
112 ET					
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	3.3%	\$1,224	\$1,224
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	3.3%	\$1,145	\$1,208
	11797	MARSH MITIGATION CREDIT INVENTORY	3.3%	\$561	\$703
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	3.3%	\$436	\$650
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	3.3%	\$350	\$446
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	3.3%	\$347	\$957
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	3.3%	\$139	\$370
	11849	CENTRALIZED CONTROL ROOM AT MWRP	3.3%	\$59	\$145
	11882	DRWF SURGE TANKS	3.3%	\$56	\$142
	11785	EL MODENA NTS POND INFILTRATION	3.3%	\$33	\$76
	11779	EL MODENA INLET MODIFICATION	3.3%	\$33	\$76
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	3.3%	\$23	\$59
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	1.7%	\$17	\$17
				\$2,582,758	\$2,870,020
113 TU					
	11747	BAKER WATER TREATMENT PLANT	3.0%	\$1,166,052	\$1,195,899
	11881	TUSTIN LEGACY REDHILL WELL ACQUISITION	100.0%	\$269,500	\$306,500
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	3.0%	\$102,234	\$110,481
	11866	TUSTIN LEGACY PARK AVE & MOFFETT DR 12" DW	100.0%	\$58,700	\$82,200
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	3.0%	\$54,135	\$55,983
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	3.0%	\$41,328	\$43,149
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	3.0%	\$32,685	\$34,341
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	3.0%	\$14,199	\$20,496
	11275	OCWD ANNEXATION FEE 15/16	3.0%	\$13,182	\$13,182

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
113 TU					
	11469	GREAT PARK COORDINATION AND SAMP UPDATE	100.0%	\$11,200	\$17,400
	11746	TUSTIN LEGACY WARNER FROM ARMSTRONG TO LEGACY DW	100.0%	\$10,700	\$13,000
	11764	WATER BANKING AGREEMENTS 14/16	3.0%	\$7,272	\$18,387
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	3.0%	\$6,846	\$8,121
	11891	ZONE 1 RESERVOIR	3.0%	\$6,321	\$7,338
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	3.0%	\$5,940	\$10,380
	11697	GEN SYS MODS-DW 15/16	3.0%	\$5,709	\$6,933
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	3.0%	\$4,992	\$6,513
	11875	STOCKDALE WEST TURNOUT FACILITIES	3.0%	\$3,789	\$4,899
	11867	WATER BANKING PLANNING 15/16	3.0%	\$3,465	\$6,240
	11876	NTS INFILTRATION STUDY	3.0%	\$1,947	\$2,337
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	3.0%	\$1,800	\$2,826
	11379	TUSTIN LEGACY TUSTIN RANCH ROAD	100.0%	\$1,400	\$1,400
	11796	HYDRAULIC MODELING 15/16 DW	3.0%	\$1,320	\$1,875
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	3.0%	\$1,113	\$1,113
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	3.0%	\$1,041	\$1,098
	11714	TUSTIN LEGACY TUSTIN RANCH, BARRANCA, ARMSTRONG DW	100.0%	\$800	\$800
	11797	MARSH MITIGATION CREDIT INVENTORY	3.0%	\$510	\$639
	11378	TUSTIN LEGACY MASTER DW FACILITIES	100.0%	\$500	\$1,400
	11716	TUSTIN LEGACY WARNER - LEGACY TO TUSTIN RANCH DW	100.0%	\$400	\$400
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	3.0%	\$396	\$591
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	3.0%	\$318	\$405
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	3.0%	\$315	\$870
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	3.0%	\$126	\$336
	11849	CENTRALIZED CONTROL ROOM AT MWRP	3.0%	\$54	\$132

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
113 TU					
	11882	DRWF SURGE TANKS	3.0%	\$51	\$129
	11785	EL MODENA NTS POND INFILTRATION	3.0%	\$30	\$69
	11779	EL MODENA INLET MODIFICATION	3.0%	\$30	\$69
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	3.0%	\$21	\$54
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	1.5%	\$15	\$15
				\$1,830,436	\$1,978,000
125-DevID_Potable					
	11747	BAKER WATER TREATMENT PLANT	47.5%	\$18,462,490	\$18,935,068
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	47.5%	\$1,618,705	\$1,749,283
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	47.5%	\$857,138	\$886,398
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	47.5%	\$654,360	\$683,193
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	47.5%	\$517,513	\$543,733
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	47.5%	\$224,818	\$324,520
	11275	OCWD ANNEXATION FEE 15/16	47.5%	\$208,715	\$208,715
	11886	NEWPORT COAST JOINT BONDING PHASE 2	100.0%	\$148,300	\$166,900
	11764	WATER BANKING AGREEMENTS 14/16	47.5%	\$115,140	\$291,128
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	47.5%	\$108,395	\$128,583
	11891	ZONE 1 RESERVOIR	47.5%	\$100,083	\$116,185
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	47.5%	\$94,050	\$164,350
	11697	GEN SYS MODS-DW 15/16	47.5%	\$90,393	\$109,773
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	47.5%	\$79,040	\$103,123
	11875	STOCKDALE WEST TURNOUT FACILITIES	47.5%	\$59,993	\$77,568
	11867	WATER BANKING PLANNING 15/16	47.5%	\$54,863	\$98,800
	11876	NTS INFILTRATION STUDY	47.5%	\$30,828	\$37,003

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
125-DevID_Potable					
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	47.5%	\$28,500	\$44,745
	11796	HYDRAULIC MODELING 15/16 DW	47.5%	\$20,900	\$29,688
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	47.5%	\$17,623	\$17,623
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	47.5%	\$16,483	\$17,385
	11797	MARSH MITIGATION CREDIT INVENTORY	47.5%	\$8,075	\$10,118
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	47.5%	\$6,270	\$9,358
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	47.5%	\$5,035	\$6,413
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	47.5%	\$4,988	\$13,775
	11755	COASTAL ZN2 PRV MODIFICATION (DPR16)	100.0%	\$2,000	\$4,700
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	47.5%	\$1,995	\$5,320
	11849	CENTRALIZED CONTROL ROOM AT MWRP	47.5%	\$855	\$2,090
	11882	DRWF SURGE TANKS	47.5%	\$808	\$2,043
	11785	EL MODENA NTS POND INFILTRATION	47.5%	\$475	\$1,093
	11779	EL MODENA INLET MODIFICATION	47.5%	\$475	\$1,093
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	47.5%	\$333	\$855
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	23.8%	\$238	\$238
				\$23,539,870	\$24,790,850
153-FutDevID_Potable					
	11747	BAKER WATER TREATMENT PLANT	11.1%	\$4,314,392	\$4,424,826
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	11.1%	\$378,266	\$408,780
	30501	PA6 NEIGHBORHOOD 4B 6" RW ZONE D	100.0%	\$288,700	\$347,700
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	11.1%	\$200,300	\$207,137
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	11.1%	\$152,914	\$159,651
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	11.1%	\$120,935	\$127,062

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
153-FutDevID_Potable					
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	11.1%	\$52,536	\$75,835
	11275	OCWD ANNEXATION FEE 15/16	11.1%	\$48,773	\$48,773
	11717	PA5B PHASE 1A 12" ZONE 3 DW	100.0%	\$27,900	\$33,600
	11764	WATER BANKING AGREEMENTS 14/16	11.1%	\$26,906	\$68,032
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	11.1%	\$25,330	\$30,048
	11891	ZONE 1 RESERVOIR	11.1%	\$23,388	\$27,151
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	11.1%	\$21,978	\$38,406
	11697	GEN SYS MODS-DW 15/16	11.1%	\$21,123	\$25,652
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	11.1%	\$18,470	\$24,098
	11875	STOCKDALE WEST TURNOUT FACILITIES	11.1%	\$14,019	\$18,126
	11867	WATER BANKING PLANNING 15/16	11.1%	\$12,821	\$23,088
	11613	PA1 16" Z5 PIPE, 5-4 PRVS NEIGHBORHOOD 3	100.0%	\$11,000	\$29,400
	11876	NTS INFILTRATION STUDY	11.1%	\$7,204	\$8,647
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	11.1%	\$6,660	\$10,456
	11796	HYDRAULIC MODELING 15/16 DW	11.1%	\$4,884	\$6,938
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	11.1%	\$4,118	\$4,118
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	11.1%	\$3,852	\$4,063
	11797	MARSH MITIGATION CREDIT INVENTORY	11.1%	\$1,887	\$2,364
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	11.1%	\$1,465	\$2,187
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	11.1%	\$1,177	\$1,499
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	11.1%	\$1,166	\$3,219
	11739	PA18S HIDDEN CANYON 12" DW	100.0%	\$900	\$900
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	11.1%	\$466	\$1,243
	19411	PA51 MASTER DW FACILITIES	22.3%	\$401	\$1,070
	11605	PA40 PH2 DW FACILITIES	100.0%	\$300	\$300

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
153-FutDevID_Potable					
	11849	CENTRALIZED CONTROL ROOM AT MWRP	11.1%	\$200	\$488
	11882	DRWF SURGE TANKS	11.1%	\$189	\$477
	11779	EL MODENA INLET MODIFICATION	11.1%	\$111	\$255
	11785	EL MODENA NTS POND INFILTRATION	11.1%	\$111	\$255
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	11.1%	\$78	\$200
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	5.6%	\$56	\$56
				\$5,794,975	\$6,166,100
154					
	11747	BAKER WATER TREATMENT PLANT	0.4%	\$155,474	\$159,453
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	0.4%	\$13,631	\$14,731
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	0.4%	\$7,218	\$7,464
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	0.4%	\$5,510	\$5,753
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	0.4%	\$4,358	\$4,579
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	0.4%	\$1,893	\$2,733
	11275	OCWD ANNEXATION FEE 15/16	0.4%	\$1,758	\$1,758
	11764	WATER BANKING AGREEMENTS 14/16	0.4%	\$970	\$2,452
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	0.4%	\$913	\$1,083
	11891	ZONE 1 RESERVOIR	0.4%	\$843	\$978
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	0.4%	\$792	\$1,384
	11697	GEN SYS MODS-DW 15/16	0.4%	\$761	\$924
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	0.4%	\$666	\$868
	11875	STOCKDALE WEST TURNOUT FACILITIES	0.4%	\$505	\$653
	11867	WATER BANKING PLANNING 15/16	0.4%	\$462	\$832
	11876	NTS INFILTRATION STUDY	0.4%	\$260	\$312

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
154					
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	0.4%	\$240	\$377
	11796	HYDRAULIC MODELING 15/16 DW	0.4%	\$176	\$250
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	0.4%	\$148	\$148
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	0.4%	\$139	\$146
	11797	MARSH MITIGATION CREDIT INVENTORY	0.4%	\$68	\$85
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	0.4%	\$53	\$79
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	0.4%	\$42	\$54
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	0.4%	\$42	\$116
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	0.4%	\$17	\$45
	11849	CENTRALIZED CONTROL ROOM AT MWRP	0.4%	\$7	\$18
	11882	DRWF SURGE TANKS	0.4%	\$7	\$17
	11779	EL MODENA INLET MODIFICATION	0.4%	\$4	\$9
	11785	EL MODENA NTS POND INFILTRATION	0.4%	\$4	\$9
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	0.4%	\$3	\$7
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	0.2%	\$2	\$2
				\$196,965	\$207,320
185-LF_OSA					
	11747	BAKER WATER TREATMENT PLANT	1.6%	\$621,894	\$637,813
	11791	LAKE FOREST Z2-2RA PRV AT COMMERCENTRE	100.0%	\$59,200	\$63,900
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	1.6%	\$54,525	\$58,923
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	1.6%	\$28,872	\$29,858
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	1.6%	\$22,042	\$23,013
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	1.6%	\$17,432	\$18,315
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	1.6%	\$7,573	\$10,931

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
185-LF_OSA					
	11275	OCWD ANNEXATION FEE 15/16	1.6%	\$7,030	\$7,030
	11764	WATER BANKING AGREEMENTS 14/16	1.6%	\$3,878	\$9,806
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	1.6%	\$3,651	\$4,331
	11891	ZONE 1 RESERVOIR	1.6%	\$3,371	\$3,914
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	1.6%	\$3,168	\$5,536
	11697	GEN SYS MODS-DW 15/16	1.6%	\$3,045	\$3,698
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	1.6%	\$2,662	\$3,474
	11562	LAKE FOREST DW OPPORTUNITY AREAS	100.0%	\$2,400	\$6,600
	11875	STOCKDALE WEST TURNOUT FACILITIES	1.6%	\$2,021	\$2,613
	11867	WATER BANKING PLANNING 15/16	1.6%	\$1,848	\$3,328
	11876	NTS INFILTRATION STUDY	1.6%	\$1,038	\$1,246
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	1.6%	\$960	\$1,507
	11796	HYDRAULIC MODELING 15/16 DW	1.6%	\$704	\$1,000
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	1.6%	\$594	\$594
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	1.6%	\$555	\$586
	11797	MARSH MITIGATION CREDIT INVENTORY	1.6%	\$272	\$341
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	1.6%	\$211	\$315
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	1.6%	\$170	\$216
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	1.6%	\$168	\$464
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	1.6%	\$67	\$179
	11849	CENTRALIZED CONTROL ROOM AT MWRP	1.6%	\$29	\$70
	11882	DRWF SURGE TANKS	1.6%	\$27	\$69
	11785	EL MODENA NTS POND INFILTRATION	1.6%	\$16	\$37
	11779	EL MODENA INLET MODIFICATION	1.6%	\$16	\$37
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	1.6%	\$11	\$29

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
185-LF_OSA					
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	0.8%	\$8	\$8
				\$849,459	\$899,780
188					
	11747	BAKER WATER TREATMENT PLANT	0.5%	\$194,342	\$199,317
	11812	ROSEDALE DROUGHT RELIEF PROJECT FACILITIES	0.5%	\$17,039	\$18,414
	11874	STOCKDALE WEST WELL CONSTRUCTION PROJECT	0.5%	\$9,023	\$9,331
	11645	STOCKDALE WEST WELLHEAD EQUIPPING	0.5%	\$6,888	\$7,192
	11687	CHLORAMINE BOOSTER STATIONS AT 2 DW RESERVOIRS	0.5%	\$5,448	\$5,724
	11619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	0.5%	\$2,367	\$3,416
	11275	OCWD ANNEXATION FEE 15/16	0.5%	\$2,197	\$2,197
	11764	WATER BANKING AGREEMENTS 14/16	0.5%	\$1,212	\$3,065
	11808	WATER SUPPLY AND SYSTEM RELIABILITY MODEL	0.5%	\$1,141	\$1,354
	11891	ZONE 1 RESERVOIR	0.5%	\$1,054	\$1,223
	11057	ENG PLANNING STUDY RESERVE 15/16 DW	0.5%	\$990	\$1,730
	11697	GEN SYS MODS-DW 15/16	0.5%	\$952	\$1,156
	11838	IDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	0.5%	\$832	\$1,086
	11875	STOCKDALE WEST TURNOUT FACILITIES	0.5%	\$632	\$817
	11867	WATER BANKING PLANNING 15/16	0.5%	\$578	\$1,040
	11876	NTS INFILTRATION STUDY	0.5%	\$325	\$390
	11789	GIS SUPPORT APPLICATIONS 15/16 - DOMESTIC	0.5%	\$300	\$471
	11796	HYDRAULIC MODELING 15/16 DW	0.5%	\$220	\$313
	10394	DATS & WELL 77 LEASE PAYMENT 16/17	0.5%	\$186	\$186
	11787	COMPRESSED NATURAL GAS MOTOR FUEL	0.5%	\$174	\$183
	11797	MARSH MITIGATION CREDIT INVENTORY	0.5%	\$85	\$107

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
188					
	11878	SAN JOAQUIN MARSH IMPROVEMENTS	0.5%	\$66	\$99
	15051	WELLS 51/52/53 TREATMENT ALTERNATIVES STUDY	0.5%	\$53	\$68
	11765	STOCKDALE STORAGE FOR RECOVERY CAPACITY	0.5%	\$53	\$145
	11839	PDF SODIUM HYPOCHLORITE STORAGE AND FEED SYSTEM	0.5%	\$21	\$56
	11849	CENTRALIZED CONTROL ROOM AT MWRP	0.5%	\$9	\$22
	11882	DRWF SURGE TANKS	0.5%	\$9	\$22
	11779	EL MODENA INLET MODIFICATION	0.5%	\$5	\$12
	11785	EL MODENA NTS POND INFILTRATION	0.5%	\$5	\$12
	11560	LAKE FOREST DW OFFSITE IMPROVEMENTS	0.5%	\$4	\$9
	11665	SJM BUILDING CAMPUS MOLD REMEDIATION	0.3%	\$3	\$3
				\$246,206	\$259,150
201-Rep					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	57.1%	\$29,984,752	\$30,858,953
	20813	OCSO SOLIDS HANDLING 15/16	57.1%	\$794,261	\$794,261
	31702	SERVICE LINE, VALVE & MAIN REPLACEMENT-RW 15/16	100.0%	\$515,800	\$534,300
	21711	ID CONSOLIDATION PROJECT ACCOUNTING IMPLEMENTATION	100.0%	\$501,600	\$723,600
	31704	MECH & ELEC SYS REPLACEMENT - RW 15/16	100.0%	\$484,000	\$484,000
	21704	MECH & ELEC SYS REPLACEMENT - SEWER 15/16	100.0%	\$440,000	\$440,000
	20915	MWRP SYS REPLACEMENTS 15/16	100.0%	\$332,200	\$335,900
	21171	SEWER GEN SYS MODS 15/16	100.0%	\$330,000	\$330,000
	21169	CULVER DRIVE SMH IMPROVEMENTS	100.0%	\$328,700	\$373,800
	21781	PORTABLE DIESEL GENERATOR REPLACEMENT - SEWER	100.0%	\$293,900	\$293,900
	31781	PORTABLE DIESEL GENERATOR REPLACEMENT - RW	100.0%	\$293,900	\$293,900
	21182	PLANO LIFT STATION FORCE MAIN RELOCATION (SMWD)	100.0%	\$291,900	\$291,900

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
201-Rep					
	21168	NEWPORT COAST SLS AND FM RECOATING	100.0%	\$244,200	\$304,300
	21814	2015 IRVINE ANNUAL ST REHAB, SEWER	100.0%	\$233,200	\$251,700
	30403	WELL REHAB NO. 1 (RW)	100.0%	\$228,700	\$284,100
	21151	SEWER LATERAL & MAIN REPLACEMENT 15/16	100.0%	\$218,900	\$237,400
	21167	MWRP FPS 2 ROOF REPLACEMENT	100.0%	\$210,200	\$250,400
	21142	MWRP MISCELLANEOUS REPAIR AND REPLACEMENT	100.0%	\$170,000	\$281,000
	30406	1" TO 2" METER REPLACEMENT-RW 15/16	100.0%	\$140,300	\$154,200
	30482	WELL 78 SPARE PUMP AND MOTOR PURCHASE	100.0%	\$138,300	\$138,300
	21011	LAWRP SYSTEM REPLACEMENTS 15/16	100.0%	\$132,000	\$132,000
	30530	SYPHON RESERVOIR SLIDE GATE REPLACEMENT	100.0%	\$114,500	\$125,100
	31696	CSR METER REPLACEMENT-RW 15/16	100.0%	\$112,200	\$115,900
	21183	RAISE MANHOLES TO GRADE 15/16 UNDER RA	100.0%	\$110,000	\$110,000
	31814	2015 IRVINE ANNUAL ST REHAB, RW	100.0%	\$97,400	\$111,300
	21119	SOCWA ETM PROTECTION - TRAIL BRIDGE CROSSING	100.0%	\$87,600	\$96,800
	21889	BUSINESS INTELLIGENCE SOFTWARE UPGRADE	100.0%	\$84,200	\$127,300
	21598	HQ LIGHTING RETROFIT & CEILING REPLACE	100.0%	\$45,400	\$66,800
	30495	REG RW - RATTLESNAKE BPS PUMP UPGRADE	100.0%	\$40,500	\$58,900
	31698	RAISE RW SYSTEM VALVES 15/16 UNDER RA	100.0%	\$38,500	\$47,800
	30381	SAN JOAQUIN RESERVOIR LINER REPLACEMENT	100.0%	\$35,000	\$96,400
	30455	SJR ACTUATOR REPAIR/REPLACEMENT	100.0%	\$23,900	\$29,000
	30402	WELL REHAB PROGRAM RW 13/14 THRU 15/16	100.0%	\$11,500	\$13,100
	31598	HQ LIGHTING RETROFIT & CEILING REPLACE	100.0%	\$10,400	\$16,200
	21235	WOODHOLLOW SEWER REPLACEMENT	100.0%	\$3,400	\$8,600
	30502	WEIR CANYON VALVE VAULT PLC UPGRADE	100.0%	\$2,200	\$3,400
	30453	LAGUNA CANYON RD RW PIPELINE CORROSION REPLACE	100.0%	\$2,000	\$4,600

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
201-Rep					
	21181	MAIN ST DIVERSION STRUCTURE GROUND SETTLING	100.0%	\$1,800	\$4,400
	21879	VAULT LID REPLACEMENT - SEWER	100.0%	\$1,700	\$4,300
	31879	VAULT LID REPLACEMENT - RW	100.0%	\$1,700	\$4,300
	21205	MAINTENANCE ACCESS FOR FOUR SEWER REACHES	100.0%	\$1,400	\$3,300
				\$37,132,113	\$38,835,414
210					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	14.2%	\$7,456,751	\$7,674,151
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	33.1%	\$1,800,044	\$1,842,081
	20116	OCSD CORF 15/16	33.1%	\$1,583,901	\$1,583,901
	20593	OCSD EQUITY 15/16	33.1%	\$1,509,724	\$1,509,724
	20589	OCSD EQUITY 14/15	33.1%	\$726,214	\$726,214
	20115	OCSD CORF 14/15	33.1%	\$233,355	\$233,355
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	14.6%	\$204,955	\$217,613
	20813	OCSD SOLIDS HANDLING 15/16	14.2%	\$197,521	\$197,521
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	33.1%	\$191,450	\$252,785
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	33.1%	\$156,662	\$226,139
	30513	ILP NORTH CONVERSION - PIPELINES	14.6%	\$105,835	\$124,188
	30496	ILP NORTH CONVERSION - RESERVOIR	14.6%	\$102,755	\$116,596
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	33.1%	\$67,127	\$89,701
	30420	PA5B PHASE 1A AND 1B 36" RW	14.6%	\$60,575	\$64,999
	21191	OPS DATABASE MANAGEMENT SYSTEM	33.1%	\$57,495	\$62,096
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	33.1%	\$56,800	\$103,338
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	14.6%	\$25,696	\$41,902
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	33.1%	\$19,860	\$31,180

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
210					
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	33.1%	\$19,860	\$31,180
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	33.1%	\$19,860	\$31,180
	31697	GEN SYS MODS-RW 15/16	14.6%	\$14,863	\$18,119
	21796	HYDRAULIC MODELING 15/16 SEWER	33.1%	\$14,564	\$20,688
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	14.6%	\$13,155	\$27,258
	30382	SYPHON RESERVOIR EXPANSION	14.6%	\$12,863	\$20,484
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	14.6%	\$12,614	\$16,148
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	14.6%	\$12,045	\$14,527
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	14.6%	\$12,045	\$14,527
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	14.6%	\$12,045	\$14,527
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	14.6%	\$8,585	\$10,629
	31796	HYDRAULIC MODELING 15/16 RW	14.6%	\$6,424	\$9,125
	21288	MBR BLOWER ROOM SAFETY PLATFORM	33.1%	\$3,674	\$4,005
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	14.6%	\$3,343	\$6,044
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	33.1%	\$1,456	\$3,807
	21234	OPS CENTER PERMANENT GENERATOR	33.1%	\$1,125	\$2,847
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	14.6%	\$905	\$905
	21849	CENTRALIZED CONTROL ROOM AT MWRP	33.1%	\$596	\$1,456
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	14.6%	\$496	\$496
	21170	SJM SLS UPGRADE	33.1%	\$397	\$1,026
	30461	SJR SEISMIC EVALUATION (DSOD)	14.6%	\$161	\$409
				\$14,727,797	\$15,346,870
212 ET					
	21216	PA51 ALTON PKWY SS RELOCATION 12" AND 18"	100.0%	\$1,321,800	\$1,623,900

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
212 ET					
	21219	PA51 MARINE WAY, ALTON TO BARRANCA 18" SS	100.0%	\$911,200	\$1,050,000
	21806	PA51 ALTON, TECHNOLOGY TO MUIRLANDS SS RELOCATION	100.0%	\$819,100	\$880,600
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	1.5%	\$765,950	\$788,281
	21213	PA51 LQ ST FROM BOSQUE TO Z ST 12" SEWER	100.0%	\$647,000	\$739,000
	31809	PA51 IRVINE BLV LAMBERT TO Z ST 20" RW	100.0%	\$346,600	\$395,800
	31213	PA51 LQ ST FROM BOSQUE TO Z ST 12" RW	100.0%	\$226,700	\$275,900
	31842	PA51 MARINE WAY, ALTON TO BARRANCA 16" RW ZN B	100.0%	\$223,300	\$260,400
	31806	PA51 ALTON, TECHNOLOGY TO MUIRLANDS 16" RW	100.0%	\$207,000	\$238,200
	30388	PA51 MARINE WAY RW ZNB	100.0%	\$206,900	\$244,100
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	3.4%	\$184,899	\$189,217
	31804	PA51 "B" ST FROM SOCIABLE TO IRVINE BLV 16" ZN C	100.0%	\$176,300	\$200,100
	20116	OCSD CORF 15/16	3.4%	\$162,697	\$162,697
	20593	OCSD EQUITY 15/16	3.4%	\$155,077	\$155,077
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	10.7%	\$150,207	\$159,484
	30503	PA51 SOCIABLE ST FROM Z TO B ST 12" & 16" ZONE B	100.0%	\$137,400	\$155,900
	21723	PA51 LY ST FROM LQ ST TO IRVINE BLVD SEWER	100.0%	\$134,900	\$148,600
	31887	PA-51 MARINE WAY: SR133 TO RIDGE VALLEY 6" ZONE B	100.0%	\$113,100	\$149,000
	31890	PA 51 BENCHMARK, BOSQUE TO 550'E/O BOSQUE 6" ZC	100.0%	\$113,100	\$149,000
	30513	ILP NORTH CONVERSION - PIPELINES	10.7%	\$77,564	\$91,014
	30496	ILP NORTH CONVERSION - RESERVOIR	10.7%	\$75,307	\$85,450
	20589	OCSD EQUITY 14/15	3.4%	\$74,596	\$74,596
	31723	PA51 LY ST FROM LQ ST TO IRVINE BLVD RW	100.0%	\$73,000	\$88,500
	21141	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - SEWER	100.0%	\$50,000	\$50,000
	30410	REG RW - MULTI-ZONE BPS - ZONE C	50.5%	\$49,541	\$98,324
	30420	PA5B PHASE 1A AND 1B 36" RW	10.7%	\$44,394	\$47,636

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
212 ET					
	30394	PA51 RIDGE VALLEY, MARINE WAY TO TRABUCO - RW	100.0%	\$38,600	\$42,900
	30570	REG RW - IIC ZONE B BPS UPGRADES	54.2%	\$37,669	\$43,631
	30552	REG RW - NORTHWOOD ZONE B BPS UPGRADE	54.2%	\$35,176	\$50,135
	30571	REG RW - 20"ZN B PIPE CONSTRUCTION & CONVERSION	54.2%	\$26,829	\$40,813
	21165	PA51 C ST FROM LV ST TO TRABUCO SEWER	100.0%	\$24,400	\$30,100
	20115	OCSO CORF 14/15	3.4%	\$23,970	\$23,970
	21671	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - SS	100.0%	\$21,300	\$24,600
	30409	REG RW - MULTI-ZONE BPS - ZONE B	54.2%	\$21,084	\$47,317
	31159	PA51 LV ST FROM RIDGE VALLEY TO LY ST 12" RW	100.0%	\$20,900	\$25,200
	20813	OCSO SOLIDS HANDLING 15/16	1.5%	\$20,289	\$20,289
	21159	PA51 LV ST FROM RIDGE VALLEY TO LY ST 18" SEWER	100.0%	\$20,100	\$24,400
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	3.4%	\$19,666	\$25,966
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	10.7%	\$18,832	\$30,709
	31721	PA51 C ST FROM LQ ST TO O ST RW	100.0%	\$18,300	\$21,200
	21156	PA51 LQ ST FROM O ST TO LY ST SEWER	100.0%	\$17,000	\$19,100
	21158	PA51 C ST FROM TRABUCO RD TO LQ ST SEWER	100.0%	\$16,500	\$16,500
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	3.4%	\$16,092	\$23,229
	30427	PA51 LY ST FROM TRABUCO RD TO LQ ST RW	100.0%	\$15,600	\$19,900
	21809	PA51 IRVINE BLV LAMBERT TO Z ST 16" SS	100.0%	\$15,300	\$19,100
	31660	PA51 TRABUCO RD, SR133 TO LY ST RW	100.0%	\$12,100	\$12,100
	31697	GEN SYS MODS-RW 15/16	10.7%	\$10,893	\$13,279
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	10.7%	\$9,641	\$19,977
	30382	SYPHON RESERVOIR EXPANSION	10.7%	\$9,427	\$15,012
	31671	PA51 RIDGE VALLEY, TRABUCO TO IRVINE BLVD - RW	100.0%	\$9,400	\$11,100
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	10.7%	\$9,245	\$11,834

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
212 ET					
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	10.7%	\$8,828	\$10,647
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	10.7%	\$8,828	\$10,647
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	10.7%	\$8,828	\$10,647
	31719	PA51 LN ST FROM C ST TO LY ST RW	100.0%	\$6,900	\$8,600
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	3.4%	\$6,895	\$9,214
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	10.7%	\$6,292	\$7,790
	21191	OPS DATABASE MANAGEMENT SYSTEM	3.4%	\$5,906	\$6,378
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	3.4%	\$5,834	\$10,615
	31156	PA51 LQ ST FROM O ST TO LY ST RW	100.0%	\$5,100	\$6,100
	31796	HYDRAULIC MODELING 15/16 RW	10.7%	\$4,708	\$6,688
	21660	PA51 TRABUCO RD, SR133 TO LY ST SEWER	100.0%	\$3,600	\$3,600
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	10.7%	\$2,450	\$4,430
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	3.4%	\$2,040	\$3,203
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	3.4%	\$2,040	\$3,203
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	3.4%	\$2,040	\$3,203
	21379	TUSTIN LEGACY TUSTIN RANCH ROAD	100.0%	\$1,600	\$1,600
	21796	HYDRAULIC MODELING 15/16 SEWER	3.4%	\$1,496	\$2,125
	39410	PA51 MASTER RW FACILITIES	93.5%	\$1,403	\$3,647
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	10.7%	\$663	\$663
	21288	MBR BLOWER ROOM SAFETY PLATFORM	3.4%	\$377	\$411
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	10.7%	\$364	\$364
	20374	PA51 MASTER SS FACILITIES	81.3%	\$244	\$650
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	3.4%	\$150	\$391
	30461	SJR SEISMIC EVALUATION (DSOD)	10.7%	\$118	\$300
	21234	OPS CENTER PERMANENT GENERATOR	3.4%	\$116	\$292

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
212 ET					
	21849	CENTRALIZED CONTROL ROOM AT MWRP	3.4%	\$61	\$150
	21170	SJM SLS UPGRADE	3.4%	\$41	\$105
				\$8,022,863	\$9,248,797
213 TU					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	1.5%	\$765,950	\$788,281
	30512	TUSTIN LEGACY BARRANCA FROM ARMSTRONG TO ASTON RW	100.0%	\$247,000	\$297,800
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	3.4%	\$184,899	\$189,217
	20116	OCSD CORF 15/16	3.4%	\$162,697	\$162,697
	20593	OCSD EQUITY 15/16	3.4%	\$155,077	\$155,077
	30447	TUSTIN LEGACY ARMSTRONG ZONE A & WARNER ZONE A RW	100.0%	\$133,500	\$155,800
	20589	OCSD EQUITY 14/15	3.4%	\$74,596	\$74,596
	31866	TUSTIN LEGACY PARK AVE & MOFFETT DR 16" & 6" RW	100.0%	\$58,700	\$82,200
	21866	TUSTIN LEGACY PARK AVE & MOFFETT DR 16" & 15" SS	100.0%	\$58,700	\$82,200
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	4.1%	\$57,556	\$61,111
	31746	TUSTIN LEGACY WARNER FROM ARMSTRONG TO LEGACY RW	100.0%	\$47,100	\$56,400
	21217	TUSTIN LEGACY PARK AVE FROM JAMBOREE TO VICTORY SS	100.0%	\$36,700	\$42,900
	30513	ILP NORTH CONVERSION - PIPELINES	4.1%	\$29,721	\$34,875
	30496	ILP NORTH CONVERSION - RESERVOIR	4.1%	\$28,856	\$32,743
	20115	OCSD CORF 14/15	3.4%	\$23,970	\$23,970
	20813	OCSD SOLIDS HANDLING 15/16	1.5%	\$20,289	\$20,289
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	3.4%	\$19,666	\$25,966
	30420	PA5B PHASE 1A AND 1B 36" RW	4.1%	\$17,011	\$18,253
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	3.4%	\$16,092	\$23,229
	21469	GREAT PARK COORDINATION AND SAMP UPDATE	100.0%	\$11,200	\$17,400

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
213 TU					
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	4.1%	\$7,216	\$11,767
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	3.4%	\$6,895	\$9,214
	21191	OPS DATABASE MANAGEMENT SYSTEM	3.4%	\$5,906	\$6,378
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	3.4%	\$5,834	\$10,615
	31697	GEN SYS MODS-RW 15/16	4.1%	\$4,174	\$5,088
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	4.1%	\$3,694	\$7,655
	30382	SYPHON RESERVOIR EXPANSION	4.1%	\$3,612	\$5,752
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	4.1%	\$3,542	\$4,535
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	4.1%	\$3,383	\$4,080
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	4.1%	\$3,383	\$4,080
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	4.1%	\$3,383	\$4,080
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	4.1%	\$2,411	\$2,985
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	3.4%	\$2,040	\$3,203
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	3.4%	\$2,040	\$3,203
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	3.4%	\$2,040	\$3,203
	31796	HYDRAULIC MODELING 15/16 RW	4.1%	\$1,804	\$2,563
	31379	TUSTIN LEGACY TUSTIN RANCH ROAD	100.0%	\$1,800	\$1,800
	31714	TUSTIN LEGACY TUSTIN RANCH, BARRANCA, ARMSTRONG RW	100.0%	\$1,600	\$1,600
	21796	HYDRAULIC MODELING 15/16 SEWER	3.4%	\$1,496	\$2,125
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	4.1%	\$939	\$1,697
	31378	TUSTIN LEGACY MASTER RW FACILITIES	100.0%	\$600	\$1,600
	31716	TUSTIN LEGACY WARNER - LEGACY TO TUSTIN RANCH RW	100.0%	\$500	\$500
	21378	TUSTIN LEGACY MASTER SEWER FACILITIES	100.0%	\$400	\$1,000
	21288	MBR BLOWER ROOM SAFETY PLATFORM	3.4%	\$377	\$411
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	4.1%	\$254	\$254

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
213 TU					
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	3.4%	\$150	\$391
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	4.1%	\$139	\$139
	21234	OPS CENTER PERMANENT GENERATOR	3.4%	\$116	\$292
	21849	CENTRALIZED CONTROL ROOM AT MWRP	3.4%	\$61	\$150
	30461	SJR SEISMIC EVALUATION (DSOD)	4.1%	\$45	\$115
	21170	SJM SLS UPGRADE	3.4%	\$41	\$105
				\$2,219,154	\$2,445,582
225-DevID_Potable					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	20.8%	\$10,926,055	\$11,244,602
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	48.5%	\$2,637,527	\$2,699,122
	20116	OCSD CORF 15/16	48.5%	\$2,320,822	\$2,320,822
	20593	OCSD EQUITY 15/16	48.5%	\$2,212,134	\$2,212,134
	20589	OCSD EQUITY 14/15	48.5%	\$1,064,090	\$1,064,090
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	51.0%	\$715,938	\$760,155
	30513	ILP NORTH CONVERSION - PIPELINES	51.0%	\$369,699	\$433,806
	30496	ILP NORTH CONVERSION - RESERVOIR	51.0%	\$358,938	\$407,286
	20115	OCSD CORF 14/15	48.5%	\$341,925	\$341,925
	20813	OCSD SOLIDS HANDLING 15/16	20.8%	\$289,418	\$289,418
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	48.5%	\$280,524	\$370,395
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	48.5%	\$229,551	\$331,352
	30420	PA5B PHASE 1A AND 1B 36" RW	51.0%	\$211,599	\$227,052
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	48.5%	\$98,358	\$131,435
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	51.0%	\$89,760	\$146,370
	21191	OPS DATABASE MANAGEMENT SYSTEM	48.5%	\$84,245	\$90,986

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
225-DevID_Potable					
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	48.5%	\$83,226	\$151,417
	31697	GEN SYS MODS-RW 15/16	51.0%	\$51,918	\$63,291
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	51.0%	\$45,951	\$95,217
	30382	SYPHON RESERVOIR EXPANSION	51.0%	\$44,931	\$71,553
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	51.0%	\$44,064	\$56,406
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	51.0%	\$42,075	\$50,745
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	51.0%	\$42,075	\$50,745
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	51.0%	\$42,075	\$50,745
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	51.0%	\$29,988	\$37,128
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	48.5%	\$29,100	\$45,687
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	48.5%	\$29,100	\$45,687
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	48.5%	\$29,100	\$45,687
	30410	REG RW - MULTI-ZONE BPS - ZONE C	27.8%	\$27,272	\$54,127
	31796	HYDRAULIC MODELING 15/16 RW	51.0%	\$22,440	\$31,875
	21796	HYDRAULIC MODELING 15/16 SEWER	48.5%	\$21,340	\$30,313
	30570	REG RW - IIC ZONE B BPS UPGRADES	23.1%	\$16,055	\$18,596
	30552	REG RW - NORTHWOOD ZONE B BPS UPGRADE	23.1%	\$14,992	\$21,368
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	51.0%	\$11,679	\$21,114
	30571	REG RW - 20"ZN B PIPE CONSTRUCTION & CONVERSION	23.1%	\$11,435	\$17,394
	30409	REG RW - MULTI-ZONE BPS - ZONE B	23.1%	\$8,986	\$20,166
	21288	MBR BLOWER ROOM SAFETY PLATFORM	48.5%	\$5,384	\$5,869
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	51.0%	\$3,162	\$3,162
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	48.5%	\$2,134	\$5,578
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	51.0%	\$1,734	\$1,734
	21234	OPS CENTER PERMANENT GENERATOR	48.5%	\$1,649	\$4,171

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
225-DevID_Potable					
	21849	CENTRALIZED CONTROL ROOM AT MWRP	48.5%	\$873	\$2,134
	21170	SJM SLS UPGRADE	48.5%	\$582	\$1,504
	30461	SJR SEISMIC EVALUATION (DSOD)	51.0%	\$561	\$1,428
				\$22,894,461	\$24,075,788
240					
	21287	NEWPORT COAST SLS IMPROVEMENTS	100.0%	\$291,100	\$353,300
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	7.7%	\$108,093	\$114,769
	31886	NEWPORT COAST JOINT BONDING PHASE 2	100.0%	\$80,500	\$99,100
	30513	ILP NORTH CONVERSION - PIPELINES	7.7%	\$55,817	\$65,496
	30496	ILP NORTH CONVERSION - RESERVOIR	7.7%	\$54,193	\$61,492
	30420	PA5B PHASE 1A AND 1B 36" RW	7.7%	\$31,947	\$34,280
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	7.7%	\$13,552	\$22,099
	31697	GEN SYS MODS-RW 15/16	7.7%	\$7,839	\$9,556
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	7.7%	\$6,938	\$14,376
	30382	SYPHON RESERVOIR EXPANSION	7.7%	\$6,784	\$10,803
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	7.7%	\$6,653	\$8,516
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	7.7%	\$6,353	\$7,662
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	7.7%	\$6,353	\$7,662
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	7.7%	\$6,353	\$7,662
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	7.7%	\$4,528	\$5,606
	31796	HYDRAULIC MODELING 15/16 RW	7.7%	\$3,388	\$4,813
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	7.7%	\$1,763	\$3,188
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	7.7%	\$477	\$477
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	7.7%	\$262	\$262

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
240					
	30461	SJR SEISMIC EVALUATION (DSOD)	7.7%	\$85	\$216
				\$692,975	\$831,332
253-FutDevID_Sewer					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	4.1%	\$2,162,683	\$2,225,736
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	9.6%	\$522,067	\$534,259
	20116	OCSD CORF 15/16	9.6%	\$459,379	\$459,379
	20593	OCSD EQUITY 15/16	9.6%	\$437,866	\$437,866
	20589	OCSD EQUITY 14/15	9.6%	\$210,624	\$210,624
	30516	PA1 ORCHARD HILLS, NEIGHBORHOOD 1, 16" ZONE C	100.0%	\$185,200	\$222,600
	31717	PA5B PHASE 1A AND 1B 6" & 8" RW	100.0%	\$156,500	\$178,800
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	10.3%	\$144,591	\$153,522
	30426	PA6 PHASE 1 NEIGHBORHOOD 3 ZONE C RW	100.0%	\$133,800	\$152,500
	30534	PA40 8TH ST RIDGE VALLEY TO C ST CAPITAL 6" RW	100.0%	\$109,100	\$122,700
	30421	PA5B IRVINE BLVD 8" ZONE B RW	100.0%	\$83,300	\$100,000
	30508	PA6 NEIGHBORHOOD 5A RW ZONE D	100.0%	\$76,700	\$88,500
	30513	ILP NORTH CONVERSION - PIPELINES	10.3%	\$74,665	\$87,612
	30496	ILP NORTH CONVERSION - RESERVOIR	10.3%	\$72,491	\$82,256
	20115	OCSD CORF 14/15	9.6%	\$67,680	\$67,680
	20813	OCSD SOLIDS HANDLING 15/16	4.1%	\$57,287	\$57,287
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	9.6%	\$55,526	\$73,315
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	9.6%	\$45,437	\$65,587
	30420	PA5B PHASE 1A AND 1B 36" RW	10.3%	\$42,735	\$45,856
	30430	PA5B PHASE 2 6" RW	100.0%	\$38,600	\$42,800
	30410	REG RW - MULTI-ZONE BPS - ZONE C	21.7%	\$21,288	\$42,250

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
253-FutDevID_Sewer					
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	9.6%	\$19,469	\$26,016
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	10.3%	\$18,128	\$29,561
	21191	OPS DATABASE MANAGEMENT SYSTEM	9.6%	\$16,675	\$18,010
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	9.6%	\$16,474	\$29,971
	30246	PA1 ORCHARD HILLS NEIGHBORHOOD 4	100.0%	\$16,400	\$16,400
	30570	REG RW - IIC ZONE B BPS UPGRADES	22.7%	\$15,777	\$18,274
	30552	REG RW - NORTHWOOD ZONE B BPS UPGRADE	22.7%	\$14,732	\$20,998
	30571	REG RW - 20"ZN B PIPE CONSTRUCTION & CONVERSION	22.7%	\$11,237	\$17,093
	31697	GEN SYS MODS-RW 15/16	10.3%	\$10,485	\$12,782
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	10.3%	\$9,280	\$19,230
	30382	SYPHON RESERVOIR EXPANSION	10.3%	\$9,074	\$14,451
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	10.3%	\$8,899	\$11,392
	30409	REG RW - MULTI-ZONE BPS - ZONE B	22.7%	\$8,830	\$19,817
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	10.3%	\$8,498	\$10,249
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	10.3%	\$8,498	\$10,249
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	10.3%	\$8,498	\$10,249
	30280	PA9B PHASE 5 GATEWAY PARK RW PIPES	100.0%	\$6,400	\$8,200
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	10.3%	\$6,056	\$7,498
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	9.6%	\$5,760	\$9,043
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	9.6%	\$5,760	\$9,043
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	9.6%	\$5,760	\$9,043
	31796	HYDRAULIC MODELING 15/16 RW	10.3%	\$4,532	\$6,438
	21796	HYDRAULIC MODELING 15/16 SEWER	9.6%	\$4,224	\$6,000
	31640	PA39 PH2 RW FACILITIES	100.0%	\$3,600	\$5,400
	30245	PA1 ORCHARD HILLS NEIGHBORHOOD 3	100.0%	\$2,700	\$7,300

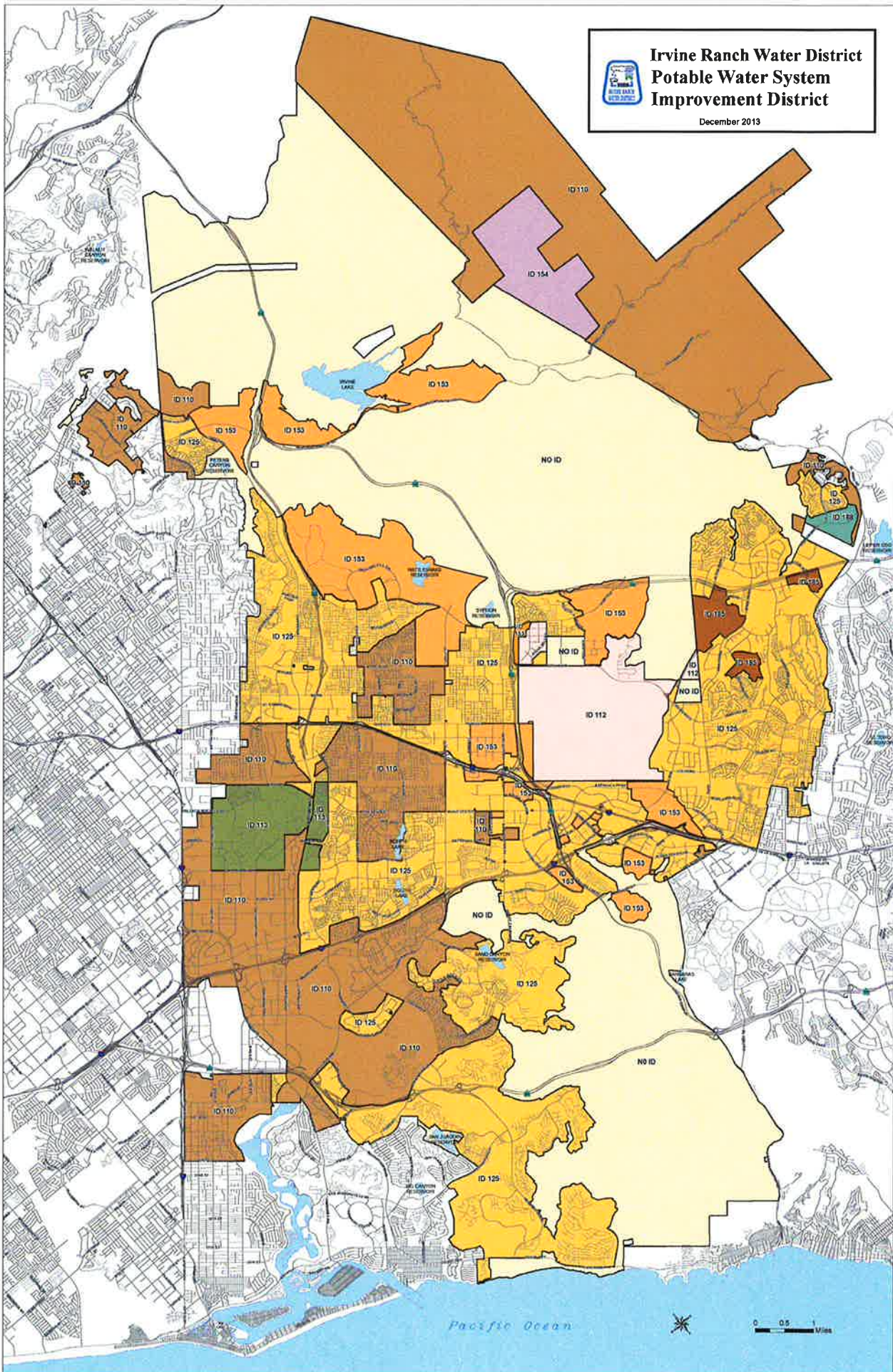
ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
253-FutDevID_Sewer					
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	10.3%	\$2,359	\$4,264
	21288	MBR BLOWER ROOM SAFETY PLATFORM	9.6%	\$1,066	\$1,162
	31739	PA18S HIDDEN CANYON 6" & 8" RW	100.0%	\$900	\$900
	30428	PA1 ORCHARD HILLS NH 2 - 6" ZNB & 6" ZNC RW	100.0%	\$800	\$800
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	10.3%	\$639	\$639
	30449	PA1 ORCHARD HILLS NEIGHBORHOOD 2, 6" ZNC RW	100.0%	\$500	\$500
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	9.6%	\$422	\$1,104
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	10.3%	\$350	\$350
	21234	OPS CENTER PERMANENT GENERATOR	9.6%	\$326	\$826
	30416	PA40 PH3B RW CAPITAL FACILITIES	100.0%	\$300	\$300
	31605	PA40 PH2 RW FACILITIES	100.0%	\$300	\$300
	30797	PA6 RW PIPELINES	100.0%	\$300	\$300
	30445	PA39 PHASE 1 RW PIPELINES	100.0%	\$200	\$200
	30424	PA40 NEIGHBORHOOD 2G BACKBONE RW FACILITIES	100.0%	\$200	\$200
	21849	CENTRALIZED CONTROL ROOM AT MWRP	9.6%	\$173	\$422
	21170	SJM SLS UPGRADE	9.6%	\$115	\$298
	30461	SJR SEISMIC EVALUATION (DSOD)	10.3%	\$113	\$288
	39410	PA51 MASTER RW FACILITIES	6.5%	\$98	\$254
	20374	PA51 MASTER SS FACILITIES	18.7%	\$56	\$150
				\$5,412,481	\$5,817,088
256					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	0.1%	\$67,584	\$69,554
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	0.3%	\$16,315	\$16,696
	20116	OCSD CORF 15/16	0.3%	\$14,356	\$14,356

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
256					
	20593	OCSO EQUITY 15/16	0.3%	\$13,683	\$13,683
	20589	OCSO EQUITY 14/15	0.3%	\$6,582	\$6,582
	20115	OCSO CORF 14/15	0.3%	\$2,115	\$2,115
	20813	OCSO SOLIDS HANDLING 15/16	0.1%	\$1,790	\$1,790
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	0.3%	\$1,735	\$2,291
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	0.3%	\$1,420	\$2,050
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	0.3%	\$608	\$813
	21191	OPS DATABASE MANAGEMENT SYSTEM	0.3%	\$521	\$563
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	0.3%	\$515	\$937
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	0.3%	\$180	\$283
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	0.3%	\$180	\$283
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	0.3%	\$180	\$283
	21796	HYDRAULIC MODELING 15/16 SEWER	0.3%	\$132	\$188
	21288	MBR BLOWER ROOM SAFETY PLATFORM	0.3%	\$33	\$36
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	0.3%	\$13	\$35
	21234	OPS CENTER PERMANENT GENERATOR	0.3%	\$10	\$26
	21849	CENTRALIZED CONTROL ROOM AT MWRP	0.3%	\$5	\$13
	21170	SJM SLS UPGRADE	0.3%	\$4	\$9
				\$127,962	\$132,583
285-LF_OSA_Ssewer					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	0.6%	\$292,863	\$301,402
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	1.3%	\$70,697	\$72,348
	20116	OCSO CORF 15/16	1.3%	\$62,208	\$62,208
	20593	OCSO EQUITY 15/16	1.3%	\$59,294	\$59,294

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
285-LF_OSA_Ssewer					
	20589	OCSD EQUITY 14/15	1.3%	\$28,522	\$28,522
	30435	RATTLESNAKE SODIUM HYPOCHLORITE STORAGE AND FEED	1.5%	\$21,057	\$22,358
	30513	ILP NORTH CONVERSION - PIPELINES	1.5%	\$10,874	\$12,759
	30496	ILP NORTH CONVERSION - RESERVOIR	1.5%	\$10,557	\$11,979
	20115	OCSD CORF 14/15	1.3%	\$9,165	\$9,165
	20813	OCSD SOLIDS HANDLING 15/16	0.6%	\$7,758	\$7,758
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	1.3%	\$7,519	\$9,928
	30420	PA5B PHASE 1A AND 1B 36" RW	1.5%	\$6,224	\$6,678
	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	1.3%	\$6,153	\$8,882
	31057	ENG PLANNING STUDY RESERVE 15/16 RW	1.5%	\$2,640	\$4,305
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	1.3%	\$2,636	\$3,523
	21191	OPS DATABASE MANAGEMENT SYSTEM	1.3%	\$2,258	\$2,439
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	1.3%	\$2,231	\$4,059
	31697	GEN SYS MODS-RW 15/16	1.5%	\$1,527	\$1,862
	21560	LAKE FOREST SEWER OFFSITE IMPROVEMENTS	100.0%	\$1,400	\$3,700
	31562	LAKE FOREST RW OPPORTUNITY AREAS	100.0%	\$1,400	\$3,600
	30408	REG RW - MULTI-ZONE BPS - ZONE A TO SYPHON	1.5%	\$1,352	\$2,801
	30382	SYPHON RESERVOIR EXPANSION	1.5%	\$1,322	\$2,105
	30331	SANTIAGO DAM & OUTLET TWR SEISMIC STABILITY	1.5%	\$1,296	\$1,659
	30569	RW IMPROVEMENTS FOR OFF-SITE 17/18	1.5%	\$1,238	\$1,493
	30561	RW IMPROVEMENTS FOR OFF-SITE 16/17	1.5%	\$1,238	\$1,493
	30560	RW IMPROVEMENTS FOR OFF-SITE 15/16	1.5%	\$1,238	\$1,493
	21562	LAKE FOREST SEWER OPPORTUNITY AREAS	100.0%	\$900	\$2,500
	30415	CATHODIC PROTECTION FOR GAP PIPE SEGMENT	1.5%	\$882	\$1,092
	30573	LAKE FOREST RW OPP AREA ZONE C CONVERSION.	100.0%	\$800	\$2,100

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
285-LF_OSA_Ssewer					
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	1.3%	\$780	\$1,225
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	1.3%	\$780	\$1,225
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	1.3%	\$780	\$1,225
	31796	HYDRAULIC MODELING 15/16 RW	1.5%	\$660	\$938
	21796	HYDRAULIC MODELING 15/16 SEWER	1.3%	\$572	\$813
	30517	LAKE FOREST CONTROL AND TELEMETRY SYS REPLACEMENT	1.5%	\$344	\$621
	21288	MBR BLOWER ROOM SAFETY PLATFORM	1.3%	\$144	\$157
	30487	PA18S HIDDEN CANYON 36" RW PIPELINE	1.5%	\$93	\$93
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	1.3%	\$57	\$150
	30366	TECHNOLOGY DR AND LAGUNA CANYON RD RW ZONE B	1.5%	\$51	\$51
	21234	OPS CENTER PERMANENT GENERATOR	1.3%	\$44	\$112
	21849	CENTRALIZED CONTROL ROOM AT MWRP	1.3%	\$23	\$57
	30461	SJR SEISMIC EVALUATION (DSOD)	1.5%	\$17	\$42
	21170	SJM SLS UPGRADE	1.3%	\$16	\$40
				\$621,606	\$660,246
288					
	21146	MWRP BIOSOLIDS AND ENERGY RECOVERY FACILITIES	0.1%	\$67,584	\$69,554
	21163	PETERS CANYON WATER CAPTURE AND REUSE PIPELINE	0.3%	\$16,315	\$16,696
	20116	OCSD CORF 15/16	0.3%	\$14,356	\$14,356
	20593	OCSD EQUITY 15/16	0.3%	\$13,683	\$13,683
	20589	OCSD EQUITY 14/15	0.3%	\$6,582	\$6,582
	20115	OCSD CORF 14/15	0.3%	\$2,115	\$2,115
	20813	OCSD SOLIDS HANDLING 15/16	0.1%	\$1,790	\$1,790
	21748	SCSMP UPDATE AND LONG-TERM FLOW MONITORING	0.3%	\$1,735	\$2,291

ID	EPMS No.	Project Title	Alloc	FY Direct	FY Direct+GA
288	21619	ENTERPRISE ASSET MGMT SOFTWARE IMPLEMENTATION	0.3%	\$1,420	\$2,050
	21188	WATER RECYCLING PLANT MASTER PLAN UPDATE	0.3%	\$608	\$813
	21191	OPS DATABASE MANAGEMENT SYSTEM	0.3%	\$521	\$563
	21057	ENG PLANNING STUDY RESERVE 15/16 SEWER	0.3%	\$515	\$937
	31789	GIS SUPPORT APPLICATIONS 15/16 - RECYCLED	0.3%	\$180	\$283
	21826	GIS SUPPORT APPLICATIONS 16/17 - SEWER	0.3%	\$180	\$283
	21789	GIS SUPPORT APPLICATIONS 15/16 - SEWER	0.3%	\$180	\$283
	21796	HYDRAULIC MODELING 15/16 SEWER	0.3%	\$132	\$188
	21288	MBR BLOWER ROOM SAFETY PLATFORM	0.3%	\$33	\$36
	30572	PIEZOMETER ACCESS AT RATTLESNAKE SYPHON & SAND CYN	0.3%	\$13	\$35
	21234	OPS CENTER PERMANENT GENERATOR	0.3%	\$10	\$26
	21849	CENTRALIZED CONTROL ROOM AT MWRP	0.3%	\$5	\$13
	21170	SJM SLS UPGRADE	0.3%	\$4	\$9
				\$127,962	\$132,583
				\$150,167,072	\$159,429,884



 **Irvine Ranch Water District
Sewer System
Improvement District**
December 2013

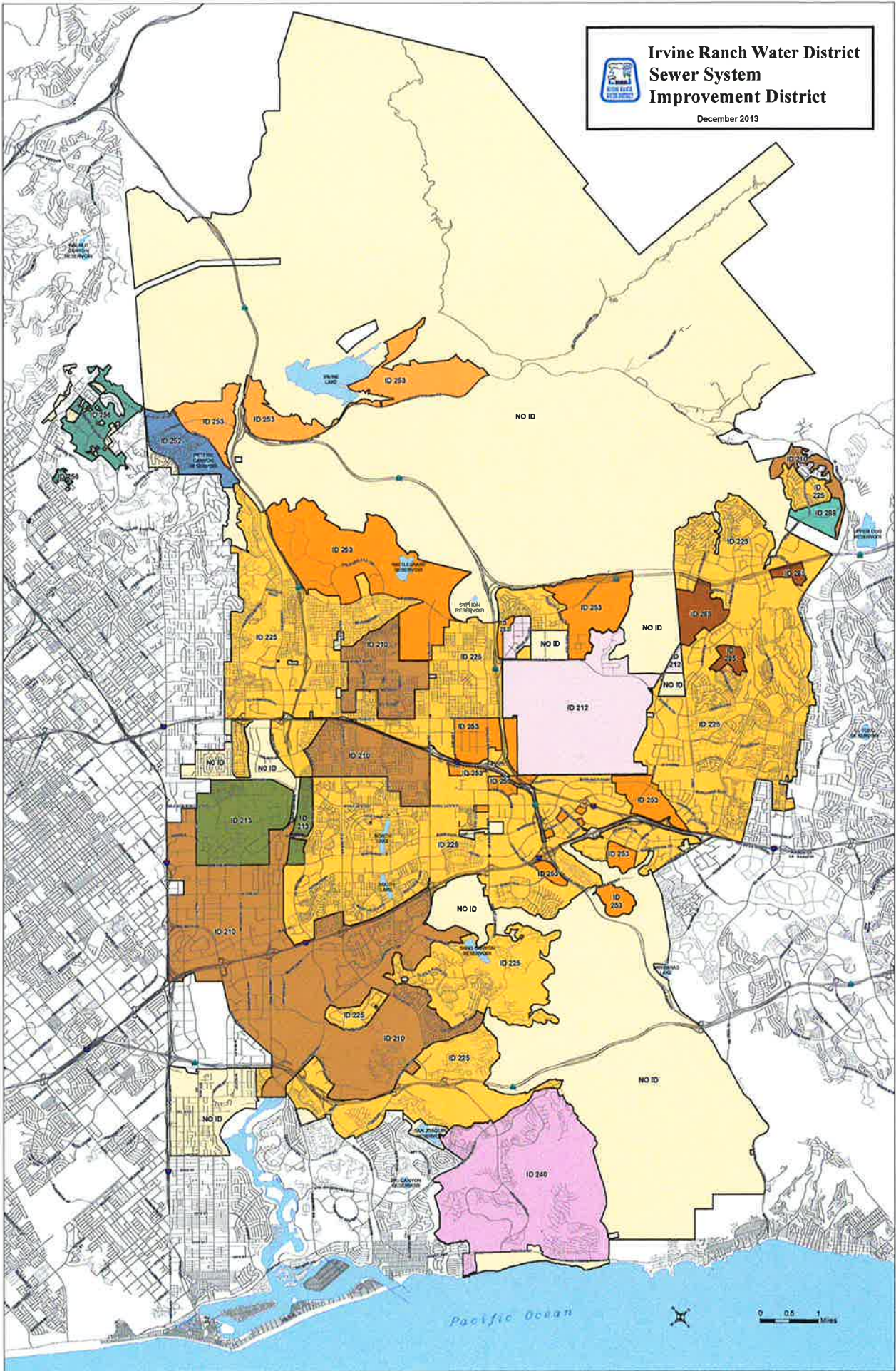


EXHIBIT "C"

RESOLUTION NO. 2015 -

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT, ORANGE COUNTY, CALIFORNIA, APPROVING DISTRICT'S CAPITAL BUDGET FOR FISCAL YEAR 2015-16

WHEREAS, the Board of Directors of the Irvine Ranch Water District (IRWD) has considered the capital project needs of IRWD for Fiscal Year 2015-16; and

WHEREAS, a Capital Budget, which includes both the capital expenditures projected for Fiscal Year 2015-16 and entire project budgets for the listed projects, 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 capital expenditures for projects for further review by the Board; and

WHEREAS, Article XIII B 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 XIII B 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 XIII B 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 user fees and charges excluded by Article XIII B, Section 8, 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 pursuant to Article XIII B, Section 9.

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.

Section 2. That relative to appropriations subject to limitation under Article XIII B of the Constitution of the State of California, it is hereby determined that IRWD's Capital Budget for Fiscal Year 2015-16 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. Subject in all respects to prior pledges for debt service requirements, including those contained in Resolution No. 2002-10, the Treasurer is hereby authorized and directed to allocate to the Replacement Fund, 28% of the general 1% ad valorem property tax revenues for the 2015-16 fiscal year, to be expended for qualified capital outlay projects.

Section 4. That IRWD's Capital Budget for Fiscal Year 2015-16 is in compliance with the provisions of Article XIII B of the Constitution of the State of California.

Section 5. That IRWD's Capital Budget for Fiscal Year 2015-16, shown in the attached Exhibit "A" and by this reference incorporated herein, be and the same is hereby approved.

Section 6. That the capital expenditures for 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, pursuant to the Policy Regarding Authorization of Expenditures.

ADOPTED, SIGNED and APPROVED this 8th day of June, 2015.

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

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

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

By _____

June 8, 2015

Prepared and

Submitted by: L. Bonkowski

Approved by: P. Cook




CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the May 26, 2015 Regular Board Meeting minutes for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE MAY 26, 2015 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – Minutes

EXHIBIT "A"

MINUTES OF REGULAR MEETING – MAY 26, 2015

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President LaMar on May 26, 2015 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive Director of Engineering and Water Quality Burton, Executive Director of Finance and Administration Clary, Executive Director of Water Policy Weghorst, Executive Director of Operations Shields, Director of Public Affairs Beeman, Director of Human Resources Roney, Director of Water Resources Sanchez, Director of Treasury and Risk Management Jacobson, Assistant Director of Recycling Operations Lee, Legal Counsel Arneson, Secretary Bonkowski, Ms. Christine Compton, Mr. Christopher Smithson, Ms. Gina Jackson, Mr. Ray Bennett, Mr. Ian Swift, Mr. Mike Hoolihan, Mr. Matt Veeh, Ms. Rosemary Riddle, Ms. Sandy Garcia, Mr. Jim Reed, Mr. Bruce Newell, Mr. Pierce Rossum, Mr. Rob Granthum, and other members of the public and staff.

Written and Oral Communications: None.

Items too late to be agendaized: None.

CONSENT CALENDAR

On MOTION by Matheis, seconded and unanimously carried, CONSENT CALENDAR ITEMS 3 THROUGH 12 WERE APPROVED AS FOLLOWS:

3. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the May 11, 2015 Regular Board Meeting and the May 19, 2015 Adjourned Regular Board Meeting be approved as presented.

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

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

5. 2015 STATE LEGISLATIVE UPDATE

Recommendation: That the Board authorize staff to work to mitigate SB 992 (2014)'s impact on homeowners who take steps to substantially reduce outdoor water use during the drought through communication with homeowner associations and a legislative solution; and take a "Support" position on AB 1201 (Salas).

CONSENT CALENDAR (CONTINUED)

6. IRVINE RANCH WATER DISTRICT'S STRATEGIC MEASURES

Recommendation: That the Board receive and file the report.

7. APRIL 2015 TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Monthly Interest Rate Swap Summary for April 2015, and Disclosure Report of Reimbursements to Board members and staff; approve the April 2015 Summary of Payroll Ach Payments in the total amount of \$1,484,635 and approve the April 2015 Accounts Payable Disbursement Summary of Warrants 357376 through 358199, Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$29,372,726.

8. AUDIT FIRM CHANGE FOR THE FISCAL YEARS ENDING JUNE 30, 2015 AND 2016

Recommendation: That the Board authorize the General Manager to execute a new Audit Services Contract with Davis Farr LLP for the Fiscal Years ending June 30, 2015 and 2016 at a cost of approximately \$100,000 plus possible single audit fees not to exceed \$2,600 over the two-year period.

9. IRVINE RANCH WATER DISTRICT APARTMENT CONSULTANT – CONTRACT RENEWAL

Recommendation: That the Board approve the retention of Market-THINK LLC as apartment consultant for the District's apartment properties for a period of two years effective May 1, 2015 for an amount not to exceed \$103,080 which includes monthly out-of-pocket expenses estimated at \$50 per month.

10. ON-CALL DATABASE ADMINISTRATION CONSULTANTS

Recommendation: That the Board authorize the General Manager to execute an On-Call Professional Services Agreement with LCS Technologies, Inc. in the amount of \$120,000, for on-call database administration services.

11. ON-CALL INFORMATION SERVICES PROFESSIONAL PROGRAMMING AND NETWORK CONSULTANTS

Recommendation: That the Board authorize the General Manager to execute an On-Call Professional Services Agreement with Outsource Technical in the amount of \$400,000, for on-call programming, analysis, and network services for miscellaneous projects.

CONSENT CALENDAR (CONTINUED)

12. MICHELSON WATER RECYCLING PLANT FILTER PUMP STATION 2 AND DYER ROAD WELL FIELD WELLS NOS.12 AND 13 ROOF MODIFICATIONS' DESIGN CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement for engineering services with Kleinfelder in the amount of \$112,395 for the Michelson Water Recycling Plant Filter Pump Station 2 and the Dyer Road Well Field Wells Nos. 12 and 13 Roof Modifications, Projects 21167 (5469) and 11752 (5453).

ACTION CALENDAR

COST OF SERVICE STUDY AND POLICY CONSIDERATIONS

Executive Director of Finance and Administration Clary said that the District's consultant, Carollo Engineering, Inc., assisted by staff and legal counsel, has developed the District's Cost of Service Study which evaluates the District's existing rate setting processes and considered rate structure design components.

Using a PowerPoint presentation, Mr. Pierce Rossum of Carollo Engineering presented an overview of this study. He reviewed the District's objectives including: 1) providing water, sewer, and recycled service at rates that are fair and equitable; 2) charging rates that are consistent with industry-accepted cost of service principles that satisfy future revenue requirements and meet all state law requirements (including Proposition 218); and 3) providing services while fairly and equitably allocating costs appropriately to those benefitting from them. Mr. Rossum reviewed key elements including: 1) fiscal policies and rate structure; 2) revenue requirements; 3) cost of service; and 4) rate design. He said that the analysis defines how costs are incurred and how revenues should be recovered. He said the analysis also confirms that IRWD's water rates and its sewer and recycled water systems development process have a strong financial and equity foundation. He further reviewed policy considerations for 1) water service charge for low volume users; 2) recycled water's cost of service nexus; and 3) sewer rate methodology refinement.

Director Swan reported that this item was reviewed by the Finance and Personnel Committee on December 9, 2014, January 13, 2015, and February 21, 2015. Following discussion, Director Reinhart noted that he will be reviewing this document further and will provide any comments to the General Manager.

PROPOSED OPERATING BUDGET AND RATES AND CHARGES FOR FISCAL YEAR 2015-16

Executive Director of Finance of Administration Clary reported that the recommended proposed Fiscal Year (FY) 2015-16 Operating Budget for Irvine Ranch Water District is \$140.4 million, representing an increase of \$9.7 million, or 7.5%, over FY 2014-15. Ms. Clary said that the preliminary proposed Operating Budget presented at the April 27, 2015 Board meeting was

\$139.0 million and that the draft version of the FY 2015-16 Operating Budget presented to the Board on April 27, 2015 was changed to reflect the costs associated with achieving the revised State Water Resources Control Board proposed potable water use reduction of 16%. She said that the \$1.3 million or 0.9% recommended increase since the April 27, 2015 Board meeting reflects the need to incur certain operating costs even with the reduction in sales. Copies of supplemental pages of the Operating Budget Assumptions were placed before each Director. Mr. Christopher Smithson explained that the changes related to rate stabilization for water, sewer and recycled water.

On MOTION by Swan, seconded and unanimously carried, THE BOARD ADOPTED THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2015-12

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT,
ORANGE COUNTY, CALIFORNIA
APPROVING DISTRICT'S OPERATING BUDGET FOR
FISCAL YEAR 2015-16 AND DETERMINING COMPLIANCE WITH
ARTICLE XIIB OF THE CALIFORNIA CONSTITUTION

NEWPORT COAST LIFT STATION AND FORCE MAIN REHABILITATION BUDGET
INCREASE, BUDGET ADDITION AND CONSULTANT SELECTION

The Newport Coast Lift Station Rehabilitation project will recoat the lift station wet well, construct a building to house spill containment materials, construct a stairway into the lift station dry well and rehabilitate the original ductile iron force main. On MOTION by Reinhart, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE FOR PROJECT 21168 (5470) IN THE AMOUNT OF \$296,200, FROM \$256,000 TO \$552,200; AUTHORIZED THE ADDITION OF PROJECT 21287 (6400) IN THE AMOUNT OF \$574,200 TO THE FY 2014-15 CAPITAL BUDGET; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH GHD IN THE AMOUNT OF \$395,677, FOR THE NEWPORT COAST LIFT STATION AND FORCE MAIN REHABILITATION, PROJECTS 21168 (5470) AND 21287 (6400).

PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE
PROJECT AGREEMENT AMENDMENT, VARIANCE, CONSULTANT SELECTIONS,
AND CONSTRUCTION AWARD

General Manager Cook reported that an amendment to the agreement is necessary to update the estimated project cost, to adjust each funding Party's respective capital cost contribution, and to augment and clarify certain provisions with respect to capital and operations and maintenance costs. He said that this amendment also updates the project schedule, describes the parties' rights and obligations with respect to suspension of the project operation, and clarifies the rights and obligations with respect to grant funding.

Executive Director of Water Policy Weghorst reported that Tetra Tech, Inc. submitted Variance No. 3 in the amount of \$27,750 which accounts for additional plan revisions associated with

comments received from staff and the funding parties after submission of the final design deliverable and for additional budget associated with extended coordination and project administration. He said that staff also requested Tetra Tech, Inc. to submit an updated proposal for engineering support during construction. The updated proposal includes additional budget for submittals, RFIs, site visits, record drawings, and construction coordination that more accurately reflects the requirements associated with the final configuration of the project.

Staff received proposals from Borchard Surveying and Mapping, Inc., Bush & Associates, Inc., Guida Surveying, Inc., and Hunsaker & Associates, Inc. to provide construction phase surveying services. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Hunsaker for construction phase surveying services. Additionally, staff received proposals from LGC Geotechnical, Inc., Ninyo & Moore, and NMG Geotechnical, Inc. to provide construction phase soils and materials testing. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with NMG.

Additionally, the project was advertised for construction February 9, 2015 to a select list of 12 contractors with a bid opening on March 12, 2015 with bids received from CCL Contracting, Inc., E.J. Meyer Company, Paulus Engineering, Inc., Sully-Miller Contracting, Vido Artukovich & Sons, Inc., and W.A. Rasic Construction. E.J. Meyer Company is the apparent low bidder. Staff reviewed E.J. Meyer Company's bid and has determined that it is responsive. Staff recommends awarding the construction contract to E.J. Meyer Company in the amount of \$7,877,777.

Director Swan said that this project was reviewed by the Newport Bay Watershed Executive Committee last week and believes this project to be valuable. On MOTION by Reinhart, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 2 TO THE PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE PROJECT AGREEMENT WITH THE CITY OF IRVINE, THE CITY OF TUSTIN, ORANGE COUNTY FLOOD CONTROL DISTRICT, CALIFORNIA DEPARTMENT OF TRANSPORTATION, AND THE COUNTY OF ORANGE; AUTHORIZED THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 3, IN THE AMOUNT OF \$27,750, WITH TETRA TECH, INC. FOR ADDITIONAL ENGINEERING DESIGN SERVICES; AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT, IN THE AMOUNT OF \$222,250, WITH TETRA TECH, INC. FOR ENGINEERING SERVICES DURING CONSTRUCTION; AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT, IN THE AMOUNT OF \$115,160, WITH HUNSAKER & ASSOCIATES, INC. FOR SURVEYING SERVICES DURING CONSTRUCTION; AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT, IN THE AMOUNT OF \$128,326, WITH NMG GEOTECHNICAL, INC. FOR GEOTECHNICAL SERVICES DURING CONSTRUCTION; AND AUTHORIZED THE GENERAL MANAGER TO EXECUTE A CONSTRUCTION CONTRACT WITH E.J. MEYER COMPANY IN THE AMOUNT OF \$7,877,777 FOR THE PETERS CANYON WASH CHANNEL WATER CAPTURE AND REUSE PIPELINE, PROJECT 21163 (4985).

AGREEMENT WITH THE CITY OF TUSTIN FOR RELOCATION OF SERVICE CONNECTION OC-58, MITIGATION OF WELL 21 AND 22 IMPACTS, AND AMENDING AND RESTATING AGREEMENT FOR THE PREPARATION OF SAMP AND EXCHANGE OF TUSTIN LEGACY WELL SITES

Using a PowerPoint presentation, Principle Engineer Hoolihan reported that staff has been working with the City of Tustin (Tustin) on an agreement for the relocation of IRWD's OC-58 facility in the intersection of Redhill Avenue and Warner Avenue. The OC-58 facility was formerly used to serve both the City of Tustin (Tustin) and El Toro Marine Corps Air Stations through the 18-inch "Navy" pipeline which has since been abandoned. The agreement will abandon the existing OC-58 facilities and replace both the 1996 "SAMP/Well Site Exchange Agreement" and the 2011 "Agreement for Cooperative Implementation of IRWD Well 21 and 22 Groundwater Treatment Project."

Mr. Hoolihan said that under the new agreement, Tustin will pay for the abandonment of the OC-58 facility and Well 29H1, a former Irvine Company well currently owned by IRWD. Tustin will also grant new easements to IRWD and MWD for the relocation of the OC-58 facility, permanent easement to IRWD for a new well site, and relieve IRWD of all mitigation obligations from the Well 21 and 22 treatment project. In return, IRWD agrees to pay all costs for the future relocation of the OC-58 facility, quitclaim all existing OC-58 and Well 29H1 easements, and relinquish rights to purchase four new well sites on the Tustin Legacy property as identified in the 1996 SAMP/Well Site Exchange Agreement. Additionally, IRWD will pay Tustin \$90,000 for physical modifications to five Tustin wells as identified in the Well 21 and 22 Impact Analysis.

Mr. Hoolihan said that the easement documents for the new OC-58 site and the new well site have been finalized. Because the property for the proposed well site is currently owned by the Department of Navy (DON) and is pending final transfer to Tustin, an interim well site license agreement is required until Tustin can grant the permanent easement. The license agreement was reviewed by DON and it imposed a requirement that an impact analysis of its groundwater cleanup operations be completed before any well is drilled. This requirement will be imposed on both the proposed license agreement and the final transfer easements. IRWD added language to the agreement that the City, at no cost to IRWD, would procure an alternative well site for IRWD if IRWD could not drill a well in a timely manner or properly maintain a well at the park site due to DON restrictions. Final transfer of the property from the DON to Tustin is expected to occur sometime in 2017, at which time a permanent well easement and temporary construction easement for the well site will be executed.

Director Reinhart reported that this item was reviewed by the Engineering and Operations Committee on April 21, 2015. On MOTION by Reinhart, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE THE "AGREEMENT BETWEEN THE CITY OF TUSTIN AND IRVINE RANCH WATER DISTRICT FOR RELOCATION OF SERVICE CONNECTION OC-58, MITIGATION OF WELL 21 AND 22 IMPACTS, AND AMENDING AND RESTATING AGREEMENT FOR THE PREPARATION OF SAMP AND EXCHANGE OF TUSTIN LEGACY WELL SITES," SUBJECT TO NON-SUBSTANTIVE CHANGES.

AMENDMENT NO. 1 TO DROUGHT RELIEF PROJECT COST SHARING AGREEMENT AND REQUEST FOR BUDGET INCREASE

Executive Director of Water Policy Weghorst reported that the drilling and construction of wells for the Drought Relief Project is ongoing in the Rosedale-Rio Bravo Water Storage District service area. Mr. Weghorst said that this project will allow IRWD, Rosedale and Castaic Lake Water Agency (CLWA) to benefit from additional groundwater recovery and conveyance capacities that will supplement existing and new water banking and exchange programs. He said that a Cost Sharing Agreement for the project was approved by the Board in February 2015 which covers the drilling and construction of six wells that will be shared by IRWD and CLWA but did not cover equipping the wells. Amendment No. 1 to the Cost Sharing Agreement has been prepared to provide the terms for cost sharing the equipping of the six wells.

Mr. Weghorst said that staff and CLWA have evaluated alternatives for equipping the six shared wells and that design consultants at URS have prepared designs and specifications that are consistent with IRWD's standards and will be incorporated into a new project manual for the well equipping project. Based on estimates provided by URS, IRWD's share of the cost of the design and construction to equip the Superior East and West wells will be approximately \$1,682,000. Staff recommends an increase to the FY 2014-15 Capital Budget for Project 11812 (6023) in the amount of \$1,904,100 to fund IRWD's share of the design and construction for equipping the six wells and associated project management, administration and inspection work.

Director Swan reported that this item was reviewed and approved by the Water Banking Committee on May 21, 2015. On MOTION by Swan, seconded and unanimously carried, **THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 1 TO THE COST SHARING AGREEMENT SUBJECT TO NON-SUBSTANTIVE CHANGES; AND APPROVE AN INCREASE TO THE FY 2014-15 CAPITAL BUDGET FOR PROJECT 11812 (6023) IN THE AMOUNT OF \$1,904,100 TO FUND IRWD'S SHARE OF DESIGN, CONSTRUCTION, PROJECT ADMINISTRATION AND INSPECTION COSTS FOR EQUIPPING OF SIX WELLS TO BE SHARED BY IRWD AND CLWA.**

GENERAL MANAGER'S REPORT

General Manager Cook reported that the MWD turf replacement was discussed today where it implemented caps of \$2 a square foot for grass removals.

Mr. Cook introduced Mr. Matthew Veeh, the District's new Public Affairs Manager, who is a former Public Affairs Director from the Long Beach Water Department.

Mr. Cook presented an award the District received from the Orange County League of Conservation voters for environmental excellence in 2015.

He further said that he will be participating on a water panel on Thursday hosted by the Orange County Taxpayers' Association.

DIRECTORS' COMMENTS

Director Reinhart commented on the recent District "Pipelines" and its messaging relative to the lawns and sprinkler settings for watering. Director Reinhart left the Board room at 6:25 p.m.

Director Swan reported on his attendance at an OCWA lunch meeting and a Newport Bay Watershed Executive Committee meeting where he was elected Chairman. He said he will be attending a Southern California Dialogue meeting tomorrow.

Director Matheis noted that she was on the east coast for two weeks and folks are very aware of the drought conditions in California.

Mr. Jim Reed, the District's consultant, reported that he attended an ISDOC Executive Committee meeting, a monthly WACO meeting, a City of Lake Forest Council meeting, and a Lake Forest Chamber of Commerce meeting. Mr. Bruce Newell, the District's consultant, said that he attended an Inter-Canyon League meeting and that they will be inviting the District to speak on the drought conditions.

ADJOURNMENT

There being no further business, President LaMar adjourned the Board meeting at 6:30 p.m.

APPROVED and SIGNED this 8th day of June, 2015.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

Legal Counsel - Bowie, Arneson,
Wiles & Giannone

June 8, 2015

Prepared and

Submitted by: N. Savedra

Approved by: P. Cook



CONSENT CALENDAR

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

SUMMARY:

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

Events/Meetings

Steven LaMar

6/04/15	Coast Meeting at OCFA relative to Nature Reserve of Orange County
6/12/15	ACC-OC 2015 City Infrastructure Summit
6/13/15	IRWD Resident Tour
6/25/15	SCWC Stormwater Workshop-Drought Proof Strategy
7/29-30/15	California Environmental Dialogue Plenary Meeting, Sonoma, CA

Mary Aileen Matheis

6/04/15	South OC Watershed Mgmt Area Executive Committee Meeting
6/11/15	Tustin's State of the City Address
6/12/15	ACC-OC 2015 City Infrastructure Summit
6/14-16/15	California Water Law & Policy, San Francisco, CA
6/25/15	SCWC Stormwater Workshop-Drought Proof Strategy

Douglas Reinhart

6/25/15	SCWC Stormwater Workshop-Drought Proof Strategy

RECOMMENDATION:

THAT THE BOARD RATIFY/APPROVE THE MEETINGS AND EVENTS FOR STEVEN LAMAR, MARY AILEEN MATHEIS, AND DOUGLAS REINHART AS DESCRIBED.

LIST OF EXHIBITS:

None

June 8, 2015

Prepared by: Gretchen Ronin

Submitted by: Jenny Roney

Approved by: Paul Cook



CONSENT CALENDAR

PROPOSED SALARY GRADE CHANGES FOR FY 2015-16

SUMMARY:

As a follow-up to the adoption of the District's FY 2015-16 Operating Budget, staff recommends the Board approve the proposed changes in the budgeted salary positions and adopt a resolution revising the Salary Grade Schedule as presented, effective July 1, 2015.

BACKGROUND:

Each year during the process of developing the District's 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. Staff's 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 FY 2015-16 Operating Budget adopted by the Board on May 26, 2015.

Staff recommends that three job titles be removed from the Salary Grade Schedule, five job titles be added for new or re-titled positions, and three job titles be moved to correspond with the reclassifications adopted in the Operating Budget. Staff recommends the Board approve the proposed changes to the Salary Grade Schedule, which is attached as Exhibit "A", and adopt a resolution revising Salary Grade Schedule, effective July 1, 2015, which is attached as Exhibit "B".

FISCAL IMPACTS:

The fiscal impacts are included in the FY 2015-16 Operating Budget adopted by the Board on May 26, 2015.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item is a follow-up to the FY 2015-16 Operating Budget adopted by the Board on May 26, 2015.

RECOMMENDATION:

THAT THE BOARD APPROVE THE PROPOSED CHANGES IN THE DISTRICT'S BUDGETED SALARY POSITIONS AS OUTLINED IN THE OPERATING BUDGET ADOPTED BY THE BOARD ON MAY 26, 2015; APPROVE THE REVISED SALARY GRADE SCHEDULE AS OUTLINED IN EXHIBIT "A" EFFECTIVE WITH THE APPROVED FY 2015-16 OPERATING BUDGET ON JULY 1, 2015; AND ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2015 - _____

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT RESCINDING
RESOLUTION NO. 2015-8 AND ESTABLISHING A
REVISED SCHEDULE OF POSITIONS AND SALARY
RATE RANGES

LIST OF EXHIBITS:

Exhibit "A" –Proposed IRWD Salary Grade Schedule

Exhibit "B" – Resolution Revising Schedule of Positions and Salary Rate Changes

EXHIBIT "A"**IRVINE RANCH WATER DISTRICT**
SALARY GRADE SCHEDULE
UNREPRESENTED POSITIONS
July-April 1, 2015

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE U1.N	\$2656	\$3293	\$3457
SALARY GRADE U2.N	\$2714	\$3383	\$3553
SALARY GRADE U3.N	\$2771	\$3476	\$3651
SALARY GRADE U4.N	\$2821	\$3577	\$3756
SALARY GRADE U5.N	\$2885	\$3676	\$3861
SALARY GRADE U6.N	\$2943	\$3783	\$3972
SALARY GRADE U7.N	\$3001	\$3888	\$4083
SALARY GRADE U8.N	\$3067	\$4000	\$4200
SALARY GRADE U9.N	\$3126	\$4110	\$4316
SALARY GRADE U10.N	\$3190	\$4222	\$4432
SALARY GRADE U11.N	\$3252	\$4331	\$4545
SALARY GRADE U12.N	\$3316	\$4457	\$4681
SALARY GRADE U13.N	\$3378	\$4585	\$4815
SALARY GRADE U14.N	\$3454	\$4714	\$4950
SALARY GRADE U15.N	\$3528	\$4840	\$5082
SALARY GRADE U16.N	\$3611	\$4975	\$5223

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE U17.N	\$3688	\$5099	\$5354
SALARY GRADE U18.N	\$3769	\$5237	\$5499
SALARY GRADE U19.N	\$3855	\$5369	\$5639
SALARY GRADE U20.N	\$3958	\$5542	\$5820
SALARY GRADE U21.N	\$4070	\$5710	\$5997
SALARY GRADE U22.N Executive Secretary Human Resources Assistant	\$4182	\$5889	\$6185
SALARY GRADE U23.N	\$4292	\$6068	\$6371
SALARY GRADE U24.N	\$4414	\$6258	\$6571
SALARY GRADE U25.N	\$4530	\$6450	\$6774
SALARY GRADE U26.N Executive Assistant	\$4670	\$6642	\$6974
SALARY GRADE U27.N	\$4805	\$6837	\$7179
SALARY GRADE U28.N	\$4946	\$7040	\$7393
SALARY GRADE U29.N Safety & Security Specialist Administrative Assistant	\$5093	\$7245	\$7607
SALARY GRADE U30.N Collection Systems Supervisor	\$5247	\$7459	\$7833
SALARY GRADE U31.N Human Resources Analyst Cross Connection Supervisor Water Maintenance Supervisor Facilities Services Supervisor	\$5402 A-2	\$7684	\$8067

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	EXCEPTIONAL PERFORMANCE <u>TOP OF RANGE</u>
Fleet Supervisor			
SALARY GRADE U32.N Network Administrator Mechanical Maintenance Supervisor	\$5558	\$7911	\$8307
SALARY GRADE U33.N Construction Inspection Supervisor	\$5720	\$8141	\$8548
SALARY GRADE U34.N Automation Supervisor Electrical Supervisor Instrumentation Supervisor	\$5889	\$8366	\$8785
SALARY GRADE U35.N Operations Supervisor	\$6067	\$8617	\$9048

IRVINE RANCH WATER DISTRICT
SALARY GRADE SCHEDULE
UNREPRESENTED POSITIONS

July ~~April~~ 1, 2015

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE U1.E	\$4271	\$5488	\$5761
SALARY GRADE U2.E	\$4413	\$5700	\$5985
SALARY GRADE U3.E	\$4555	\$5913	\$6209
SALARY GRADE U4.E	\$4697	\$6139	\$6446
SALARY GRADE U5.E	\$4840	\$6367	\$6686
SALARY GRADE U6.E	\$5006	\$6614	\$6945
SALARY GRADE U7.E	\$5167	\$6858	\$7200
SALARY GRADE U8.E	\$5335	\$7126	\$7483
SALARY GRADE U9.E	\$5497	\$7387	\$7756
SALARY GRADE U10.E Customer Service Supervisor ~~Administrative Assistant~~	\$5681	\$7667	\$8051
SALARY GRADE U11.E Senior Accountant Financial Analyst ~~Recycled Water Supervisor~~	\$5863	\$7951	\$8349
SALARY GRADE U12.E	\$6054	\$8256	\$8667
SALARY GRADE U13.E Senior Human Resources Analyst Senior Analyst GIS Supervisor	\$6249	\$8556	\$8982

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE U14.E District Secretary Assistant Facilities/Fleet Manager	\$6453	\$8886	\$9329
SALARY GRADE U15.E Senior Programmer/Analyst Senior Network Administrator Applications Analyst Assistant Field Services Manager ~~Assistant Construction Services Manager~~ Laboratory Supervisor	\$6657	\$9218	\$9677
SALARY GRADE U16.E Assistant Operations Manager Principal Analyst Natural Resources Manager Collection Systems Manager Laboratory Manager Water Use Efficiency Manager	\$6879	\$9567	\$10045
SALARY GRADE U17.E District Safety and Security Manager Customer Service Manager Purchasing Manager Construction Inspection Manager Construction & Field Services Manager Water Maintenance Manager Facilities/Fleet Manager ~~Regulatory Compliance Manager~~	\$7099	\$9918	\$10413
SALARY GRADE U18.E Public Affairs Manager Human Resources Manager Treasury Manager Manager of Contracts Admin & Risk Senior Applications Analyst ~~Senior Applications Developer~~ ~~Senior Database Administrator~~ Chief Plant Operator Water Quality Manager ~~Regulatory Compliance Manager~~	\$7328	\$10296	\$10810
SALARY GRADE U19.E Operations Manager Electrical and Automation Manager Mechanical Services Manager Recycled Water Development Manager Water Resources Manager	\$7561	\$10676	\$11211

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
Government Relations Manager			
SALARY GRADE U20.E Controller Manager of Strategic Planning and Analysis Applications Manager Networking & Support Manager Senior Engineer	\$7796	\$11071	\$11625
SALARY GRADE U21.E	\$8034	\$11471	\$12045
SALARY GRADE U22.E	\$8292	\$11897	\$12494
SALARY GRADE U23.E Governmental Relations Officer Principal Engineer Assistant Director of Water Operations Assistant Director of Recycling Operations Assistant Director of Maintenance	\$8555	\$12329	\$12946
SALARY GRADE U24.E	\$8786	\$12825	\$13466
SALARY GRADE U25.E	\$9058	\$13311	\$13975
SALARY GRADE U26.E	\$9471	\$14014	\$14715
SALARY GRADE U27.E Director of Public Affairs Director of Human Resources Treasurer/Director of Risk Management Director of Administrative Services Director of Water Resources	\$9905	\$14756	\$15494
SALARY GRADE U28.E	\$10360	\$15534	\$16311
SALARY GRADE U29.E	\$10832	\$16356	\$17174
SALARY GRADE U30.E Executive Director of Finance Executive Director of Engineering & Water Quality Executive Director of Operations Executive Director of Water Policy	\$11333	\$17224	\$18085

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE U31.E	\$11896	\$18201	\$19111
SALARY GRADE U32.E	\$12493	\$19238	\$20200
SALARY GRADE U33.E	\$13114	\$20330	\$21347
SALARY GRADE U34.E General Manager	\$13772	\$21484	\$22557

| *Effective Date* ~~04/01/2015~~ 07/01/2015

IRVINE RANCH WATER DISTRICT
SALARY GRADE SCHEDULE
GENERAL EMPLOYEES' UNIT

JulyApril_1, 2015

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 1.N	\$2656	\$3293	\$3457
SALARY GRADE 2.N	\$2714	\$3383	\$3553
SALARY GRADE 3.N	\$2771	\$3476	\$3651
SALARY GRADE 4.N	\$2821	\$3577	\$3756
SALARY GRADE 5.N	\$2885	\$3676	\$3861
SALARY GRADE 6.N Office Assistant Mail Coordinator	\$2943	\$3783	\$3972
SALARY GRADE 7.N	\$3001	\$3888	\$4083
SALARY GRADE 8.N	\$3067	\$4000	\$4200
SALARY GRADE 9.N	\$3126	\$4110	\$4316
SALARY GRADE 10.N	\$3190	\$4222	\$4432
SALARY GRADE 11.N Material Control Clerk I Maintenance Apprentice Utility Worker	\$3252	\$4331	\$4545
SALARY GRADE 12.N	\$3316	\$4457	\$4681
SALARY GRADE 13.N Customer Service Specialist I Support Specialist	\$3378	\$4585	\$4815

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 14.N	\$3454	\$4714	\$4950
SALARY GRADE 15.N Office Specialist Collection Systems Technician I	\$3528	\$4840	\$5082
SALARY GRADE 16.N Accounting Clerk Customer Service Field Technician Metering Systems Technician I Water Maintenance Technician I Laboratory Analyst	\$3611	\$4975	\$5223
SALARY GRADE 17.N Customer Service Specialist II	\$3688	\$5099	\$5354
SALARY GRADE 18.N Material Control Clerk II Senior Support Specialist	\$3769	\$5237	\$5499
SALARY GRADE 19.N Senior Office Specialist Purchasing Coordinator	\$3855	\$5369	\$5639
SALARY GRADE 20.N Senior Accounting Clerk Engineering Technician I Operator I Collection Systems Technician II	\$3958	\$5542	\$5820
SALARY GRADE 21.N Customer Service Specialist III Senior Customer Service Field Technician Collection Systems CCTV Technician II	\$4070	\$5710	\$5997
SALARY GRADE 22.N Sr. Purchasing Coordinator Metering Systems Tech. II Water Maintenance Technician II Maintenance Mechanic Facilities Services Technician Vehicle/Equipment Mechanic Recycled Water Specialist	\$4182	\$5889	\$6185

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 23.N Construction Inspector I	\$4292	\$6068	\$6371
SALARY GRADE 24.N Buyer Cross Connection Specialist Wetlands Specialist Water Use Efficiency Specialist	\$4414	\$6258	\$6571
SALARY GRADE 25.N Engineering Technician II Senior Collection Systems Technician Senior Collection Systems CCTV Technician	\$4530	\$6450	\$6774
SALARY GRADE 26.N Metering Systems Tech. III Water Maintenance Technician III	\$4670	\$6642	\$6974
SALARY GRADE 27.N Accountant Senior Vehicle/Equipment Maintenance Mechanic Senior Facilities Services Technician Operator II Senior Maintenance Mechanic Senior Recycled Water Specialist	\$4805	\$6837	\$7179
SALARY GRADE 28.N Construction Inspector II Automation Technician Landscape Contracts Administrator Electrical Technician Instrumentation Technician Scientist	\$4946	\$7040	\$7393
SALARY GRADE 29.N Payroll Administrator Senior Buyer Engineering Technician III Senior Wetlands Specialist Operator III Lead Maintenance Mechanic Recycled Water Project Specialist Senior Water Use Efficiency Specialist Public Affairs Specialist	\$5093	\$7245	\$7607

<u>NON-EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 30.N Risk Analyst Senior Electrical Technician Senior Instrumentation Technician	\$5247	\$7459	\$7833
SALARY GRADE 31.N Treasury Analyst Information Services Coordinator Construction Inspector III Water Use Efficiency Analyst	\$5402	\$7684	\$8067
SALARY GRADE 32.N Automation Specialist Senior Scientist	\$5558	\$7911	\$8307
SALARY GRADE 33.N Operations Coordinator	\$5720	\$8141	\$8548
SALARY GRADE 34.N Electrical/Instrumentation Designer	\$5889	\$8366	\$8785
SALARY GRADE 35.N	\$6067	\$8617	\$9048

IRVINE RANCH WATER DISTRICT
SALARY GRADE SCHEDULE
GENERAL EMPLOYEES' UNIT

July April 1, 2015

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 1.E	\$4271	\$5488	\$5761
SALARY GRADE 2.E	\$4413	\$5700	\$5985
SALARY GRADE 3.E	\$4555	\$5913	\$6209
SALARY GRADE 4.E	\$4697	\$6139	\$6446
SALARY GRADE 5.E	\$4840	\$6367	\$6686
SALARY GRADE 6.E	\$5006	\$6614	\$6945
SALARY GRADE 7.E	\$5167	\$6858	\$7200
SALARY GRADE 8.E	\$5335	\$7126	\$7483
SALARY GRADE 9.E	\$5497	\$7387	\$7756
SALARY GRADE 10.E Analyst Assistant Engineer Public Affairs Analyst Regulatory Compliance Analyst	\$5681	\$7667	\$8051
SALARY GRADE 11.E	\$5863	\$7951	\$8349
SALARY GRADE 12.E Programmer/Analyst Energy Analyst Laboratory QA/QC	\$6054	\$8256	\$8667
SALARY GRADE 13.E Right of Way Agent & Real Property Manager Water Resources Planner	\$6249	\$8556	\$8982
SALARY GRADE 14.E	\$6453	\$8886	\$9329

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
Associate Engineer			
SALARY GRADE 15.E Automation Programmer	\$6657	\$9218	\$9677
SALARY GRADE 16.E	\$6879	\$9567	\$10045
SALARY GRADE 17.E Engineer	\$7099	\$9918	\$10413
SALARY GRADE 18.E	\$7328	\$10296	\$10810
SALARY GRADE 19.E	\$7561	\$10676	\$11211
SALARY GRADE 20.E	\$7796	\$11071	\$11625
SALARY GRADE 21.E	\$8034	\$11471	\$12045
SALARY GRADE 22.E	\$8292	\$11897	\$12494
SALARY GRADE 23.E	\$8555	\$12329	\$12946
SALARY GRADE 24.E	\$8786	\$12825	\$13466
SALARY GRADE 25.E	\$9058	\$13311	\$13975
SALARY GRADE 26.E	\$9471	\$14014	\$14715
SALARY GRADE 27.E	\$9905	\$14756	\$15494
SALARY GRADE 28.E	\$10360	\$15534	\$16311
SALARY GRADE 29.E	\$10832	\$16356	\$17174
SALARY GRADE 30.E	\$11333	\$17224	\$18085
SALARY GRADE 31.E	\$11896	\$18201	\$19111

<u>EXEMPT</u>	<u>MINIMUM</u>	<u>MAXIMUM</u>	<u>EXCEPTIONAL PERFORMANCE TOP OF RANGE</u>
SALARY GRADE 32.E	\$12493	\$19238	\$20200
SALARY GRADE 33.E	\$13114	\$20330	\$21347
SALARY GRADE 34.E	\$13772	\$21484	\$22557

| *Effective Date* ~~04/01/15~~ 07/01/2015

EXHIBIT "B"

RESOLUTION NO. 2015 -

**RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT,
RESCINDING RESOLUTION NO. 2015-8 AND
ESTABLISHING A REVISED SCHEDULE OF POSITIONS
AND SALARY RATE RANGES**

WHEREAS, the Board of Directors of Irvine Ranch Water District, by adoption of Resolution No. 2015-8 on March 23, 2015, established a Schedule of Positions and Salary Rate Ranges of the Irvine Ranch Water District; and

WHEREAS, the Board of Directors of Irvine Ranch Water District has reviewed the Schedule of Positions and Salary Rate Ranges and desires to make revisions thereto.

NOW, THEREFORE, the Board of Directors of Irvine Ranch Water District does hereby resolve, determine and order as follows:

Section 1. That the Schedule of Positions and Salary Rate Ranges adopted by Resolution No. 2015-8 on March 23, 2015 is hereby rescinded, effective July 1, 2015.

Section 2. That the Schedule of Positions and Salary Rate Ranges for the Irvine Ranch Water District be and hereby is approved and adopted as more particularly set forth in Exhibit "A" to this Resolution, attached hereto and by this reference made a part hereto.

Section 3. That the provisions of this Resolution shall be effective July 1, 2015.

ADOPTED, SIGNED and APPROVED THIS 8th day of June 2015.

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

June 8, 2015

Prepared by: J. Smyth/M. Cortez

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

Approved by: Paul Cook *P. Cook*

CONSENT CALENDAR

BAKER PIPELINE CATHODIC PROTECTION SYSTEM UPGRADES PROJECT FINAL ACCEPTANCE

SUMMARY:

The Baker Pipeline Cathodic Protection Upgrades Project is complete. The contractor, American Construction and Supply, Inc., completed the required work and all punch list items. The project has received final inspection and acceptance of construction is recommended.

BACKGROUND:

The Baker Pipeline Cathodic Protection Upgrades Project replaced three anode beds and added one anode bed with rectifier and electrical service. The design was completed in July 2014. American Construction was awarded the construction contract on October 13, 2014 and completed construction in May 2015. The cathodic protection improvements are fully operational and the pipe is polarizing to protected levels.

Project Title:	Baker Pipeline Cathodic Protection Upgrades
Project No.:	11802 (5530)
Design Engineer:	RBF Consulting
Construction Management by:	IRWD Staff
Contractor:	American Construction and Supply, Inc.
Original Contract Cost:	\$442,500.00
Final Contract Cost:	\$440,381.95
Original Contract Days:	170
Final Contract Days:	170
Final Change Order Approved On:	May 26, 2015

FISCAL IMPACTS:

Project 11802 (5530) is included in the FY 2014-15 Capital Budget. The existing budget is sufficient to fund the final payment for the project.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was filed with the County of Orange on December 13, 2013.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ACCEPT CONSTRUCTION OF THE BAKER PIPELINE CATHODIC PROTECTION SYSTEM UPGRADES, PROJECT 11802 (5530); AUTHORIZE THE GENERAL MANAGER TO FILE A NOTICE OF COMPLETION; AND AUTHORIZE THE PAYMENT OF THE RETENTION 35 DAYS AFTER THE DATE OF RECORDING THE NOTICE OF COMPLETION.

LIST OF EXHIBITS:

None.

June 8, 2015

Prepared by: D. Johnson/K. Welch

Submitted by: P. Weghorst 

Approved by: Paul Cook 

CONSENT CALENDAR

BUREAU OF RECLAMATION WATERSMART DROUGHT RESILIENCY PROJECT GRANT APPLICATION

SUMMARY:

The Bureau of Reclamation (Reclamation) is accepting applications for drought resiliency projects to receive grant funding under its 2015 WaterSMART program. Staff recommends that the District submit an application for the proposed Irvine Lake Pipeline North Conversion Project (North ILP Project). As part of the application process, Reclamation requires a resolution adopted by the applicant's governing body which designates an authorized representative to submit a proposal for grant funding and to enter into an agreement to receive the funding. Staff recommends that the Board adopt a resolution authorizing the General Manager to file an application with Reclamation for WaterSMART Drought Resiliency Project Grant funding and to execute a related agreement with Reclamation.

BACKGROUND:

Reclamation has announced, through its WaterSMART program, that up to \$3 million in grant funding is available to expedite projects that provide drought resiliency in the Western United States. The grant program will help agencies to implement projects that will build long-term resiliency to drought. Grants will be provided up to \$300,000 per project with the requirement that implementation be completed within two years. Applicants are required to provide a minimum match of at least 50% of project costs. Grant applications are due June 25, 2015 and awards will be announced in July 2015 or later based on the enactment of FY 2015 federal budget appropriations.

Staff evaluated several potential projects for grant funding and determined that the North ILP Project best meets Reclamation eligibility criteria. The North ILP Project is expected to convert remaining portions of the Irvine Lake Pipeline system from untreated imported water to recycled water. Currently, the District must purchase untreated water through Metropolitan Water District of Southern California to serve agricultural and landscape irrigation customers that receive supply from the north portions of the pipeline. The planned project is expected to result in imported water savings of up to 3,156 AF per year by converting the pipeline from imported to recycled water. In addition, the project could potentially serve an additional 300 AF of future demands in the Santiago Hills area.

As part of the grant application process, Reclamation requires a resolution adopted by the applicant's governing body that designates an authorized representative to submit the grant application and to enter into an agreement with Reclamation to receive the funding. A resolution for submitting a grant application for the proposed North ILP Project is attached as Exhibit "A". The resolution authorizes staff to apply for the WaterSMART grant on behalf of the District, confirms that the District has the capability to provide at least 50% in cost share funding and

acknowledges that the District agrees to meet the established deadlines for entering into a cooperative agreement.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

The North ILP Project is subject to the California Environmental Quality Act (CEQA). An Initial Study/Mitigated Declaration (IS/MND) is being prepared in conformance with the California Environmental Quality Act (CEQA), California Code of Regulations Title 14, Chapter 3, Article 6. If the project is awarded grant funding, the IS/MND will be revised consistent with requirements for compliance with the National Environmental Policy Act.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2015 - XX

RESOLUTION OF THE BOARD OF DIRECTORS OF
IRVINE RANCH WATER DISTRICT AUTHORIZING SUBMISSION OF
A GRANT APPLICATION FOR THE IRVINE LAKE NORTH PIPELINE CONVERSION
PROJECT TO THE DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION,
POLICY AND ADMINISTRATION

LIST OF EXHIBITS:

Exhibit "A" – Resolution Authorizing Submission of an Application for WaterSMART:
Drought Resiliency Project Grants for FY 2015

EXHIBIT “A”

RESOLUTION NO. 2015 - XX

RESOLUTION OF THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT AUTHORIZING SUBMISSION OF A GRANT APPLICATION FOR THE IRVINE LAKE PIPELINE CONVERSION PROJECT TO THE DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, POLICY AND ADMINISTRATION

WHEREAS the Department of the Interior, Bureau of Reclamation, Policy and Administration (Reclamation) has released a Funding Opportunity Announcement to provide federal grant funding under the WaterSMART: Drought Resiliency Project Grants for Fiscal Year (FY) 2015; and

WHEREAS Reclamation is seeking applications from eligible water delivery agencies to cost share 50 percent or more with Reclamation on projects that increase the reliability of water supplies; improve water management; facilitate the voluntary sale, transfer, or exchange of water; provide benefits for fish and wildlife and the environment; and

WHEREAS the Irvine Ranch Water District is eligible to submit an application for grant funding up to \$300,000 for its Irvine Lake Pipeline Conversion project with a cost share of 50 percent or more of the total project costs.

NOW, THEREFORE, the Board of Directors of IRVINE RANCH WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE and ORDER as follows:

Section 1. The General Manager of the Irvine Ranch Water District or his/her designee is hereby authorized to submit an application to Reclamation for grant funding up to \$300,000 for the Irvine Lake North Pipeline Conversion project.

Section 2. The Board of Directors of the Irvine Ranch Water District has reviewed and supports the application for a grant from Reclamation for the construction of Irvine Lake North Pipeline Conversion project facilities.

Section 3. The Irvine Ranch Water District hereby agrees and further confirms that it has the capability to provide its cost share funding (50 percent or more of the total project costs) as specified in the application's project funding plan.

Section 4. The General Manager or his/her designee is hereby authorized to enter into a cooperative agreement and any amendments thereto with Reclamation on behalf of the Irvine Ranch Water District.

Section 5. The General Manager or his/her designee is hereby authorized to work with Reclamation to meet the established deadlines for entering into a cooperative agreement.

Section 6. That the Secretary is hereby authorized to certify a copy of this resolution to accompany the grant application.

ADOPTED, SIGNED AND APPROVED this 8th day of June, 2015.

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

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

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

By: _____

June 8, 2015

Prepared by: C. Compton

Submitted by: P. Weghorst *pkw*

Approved by: Paul Cook *Paul Cook*

CONSENT CALENDAR

2015 LEGISLATIVE UPDATE

SUMMARY:

This report provides an update on the 2015-2016 legislative session and IRWD priorities. As legislation develops, staff will provide updates and recommendations to the Water Resources Policy and Communications Committee and the Board, as appropriate.

Staff recommends that the Board consider the following actions/position:

- AB 1390 (Alejo, D-Salinas)— *Groundwater: adjudication* and SB 226 (Pavley, D-Calabasas)— *Sustainable Groundwater Management Act: groundwater rights*— Adopt a “CONCERNED” position, and authorize staff to engage with stakeholders to protect IRWD's interests related to groundwater adjudications.

BACKGROUND:

The last day for fiscal committees to hear and report to the floor any bills introduced in its house was May 1, 2015, and the house of origin deadline is June 5. Any bill that does not meet the June 5 deadline and does not contain an urgency clause is now dead or has become a two-year bill. The next major legislative deadline is June 15, which is the constitutional deadline for passage of the budget.

A copy of the 2015 State Legislative Matrix is attached as Exhibit “A”.

State Budget Update:

April Revenue Numbers:

On May 11, 2015, State Controller Betty Yee released her monthly report on the state's finances. She announced that the state took in \$1.8 billion, or 12.2 percent, more than projections during the month of April. All three of the state's top sources of revenues exceeded the projections contained in the Governor's proposed Fiscal Year 2015-2016 budget. Personal income tax revenues alone came in 13.3 percent higher than estimates. Total General Fund revenues, as of the end of April, were \$3.4 billion, or 3.8 percent, above estimates. The State General Fund outstanding loans were \$8 billion or \$2.3 billion less than estimates at the end of April.

Governor's May Revise:

On May 14, 2015, Governor Brown released his May revision to his proposed state budget (the May Revise). The May Revise proposes \$115.3 billion in total expenditures, \$116.8 billion in total revenues and designates \$3.46 billion for the Budget Stabilization Account/Rainy Day Fund.

The increases in revenue and spending included in the May Revise reflect the continued trend of increased revenues the state has experienced this fiscal year. Overall, the May Revise includes a net increase in forecasted General Fund revenues of \$6.7 billion from the January budget. The May Revise allocates \$5.5 billion of the \$6.7 billion for K-12 schools and community colleges as required by Proposition 98, and allocates \$633 million to the Rainy Day Fund and \$633 million to pay down debts and liabilities as required by Proposition 2.

While higher-than-expected revenues have helped the state's financial situation in the current fiscal year and are projected to continue aiding the State in Fiscal Year 2015-2016, the proposed budget notes that spending commitments must remain constrained given the state's fiscal outlook over the next few years. Specifically, the May Revise states that "the budget remains precariously balanced and faces the prospect of deficits in succeeding years. The state has hundreds of billions of dollars in existing liabilities, such as deferred maintenance on its roads and other infrastructure and its unfunded liability for future retiree health care benefits for [S]tate employees and various pension benefits" (*2015-16 May Revision, Introduction, Page 1*). These three factors have led Governor Brown to propose a budget that is only 0.7 percent higher than the Fiscal Year 2014-2015 approved budget.

The May Revise, similar to the Governor's proposed budget, focuses on paying down budgetary debts from past years, adding funds to the Rainy Day Fund, and addressing needs in education and health care. Additionally, the May Revise includes the following proposals:

- Creation of a California Earned Income Tax Credit: The May Revise proposes an earned income tax credit to assist lower income workers. The credit will provide a refundable tax credit for wages of households with incomes less than \$6,580 if there are no dependents or \$13,870 if there are three or more dependents. The proposed credit would match 85 percent of the federal credit with a maximum benefit of \$2,653 providing an average estimated household benefit of \$460 annually for 825,000 families.
- UC and CSU Tuition Freeze: The May Revise proposes to hold tuition flat at University of California and California State University campuses for in-state undergraduate students for two more years by providing increased ongoing funding to the California State University and temporary assistance to the University of California to pay down its unfunded pension liability.
- Social Service Cost Increases Due to Changes in Federal Law: The May Revise includes \$62 million to provide health care and other safety net services to currently undocumented immigrants who would have gained Permanent Residence under Color of Law status under the President's executive actions. In conjunction with the President's executive actions, the May Revise proposes an additional \$5 million for direct assistance for immigrant applicants and temporary workers.

In addition to these proposals, the May Revise contains several items of interest to IRWD. Of interest to the District are the budget's proposed Cap-and-Trade Revenue expenditure plan, emergency drought response plan and water policy proposals. More detail on each of these proposals is provided below.

Proposed Fiscal Year 2014-2015 Proposed Cap-and-Trade Expenditures:

One of IRWD's legislative priorities for 2015 is the promotion of policies which encourage energy reliability in Orange County and energy efficiency in the water and wastewater sectors without an increase in cost to or mandates on local entities. As part of the District's advocacy efforts in this area, IRWD has supported allocating some of the Cap-and-Trade revenues to projects that reduce the greenhouse gas emissions and energy demands in the water and wastewater sectors, and has been monitoring the Fiscal Year 2015-2016 budget negotiations surrounding the Cap-and-Trade revenues.

As part of his proposed budget in January, Governor Brown proposed a \$1.002 billion Cap-and-Trade Expenditure Plan. Since the release of the January budget, Governor Brown issued Executive Order B 30-15 establishing a new interim statewide greenhouse gas (GHG) emission reduction target for 2030. The Executive Order sets the new 2030 target at 40 percent below 1990 levels. The May Revise supports the Governor's 2030 GHG reduction target by including a \$2.2 billion Cap-and-Trade Expenditure Plan, which is \$1.2 billion more than was included in the Governor's January budget. The increased investment reflects a revised auction proceed estimate and establishes a reserve to account for potential volatility in future auction proceeds.

Overall, the proposed expenditure plan for the \$2.2 billion allocates most of the revenue to existing programs previously funded with Cap-and-Trade revenues. The additional investment of \$1.2 billion is targeted largely for investments in clean transportation and mass transit, energy efficiency and renewable energy, waste reduction and ecosystem restoration programs. One newer program included in the expenditure plan is the Healthy Soils Program. The Healthy Soils Program will support demonstration projects that increase carbon in soil.

A comparison of the January budget expenditure plan and the May Revise expenditure plans is provided below:

*Cap-and-Trade Expenditure Plan
(Dollars in Millions)*

Investment Category	Department	Program	Amounted Included in Jan 2015 Proposed Budget	Additional Funds Proposed in the May Revise	Total Proposed for inclusion in the FY 2015-16 Budget
Sustainable Communities and Clean Transportation	High-Speed Rail Authority	High-Speed Rail	\$ 250	\$ 250	\$ 500
	State Transit Assistance	Low Carbon Transit Operations Program	\$ 50	\$ 50	\$ 100
		Transit and Intercity Rail Capital Program	\$ 100	\$ 165	\$ 265
	Strategic Growth Council	Affordable Housing and Sustainable Communities Program	\$ 200	\$ 200	\$ 400
	Air Resources Board	Low Carbon Transportation	\$ 200	\$ 150	\$ 350
Energy Efficiency and Clean Energy	Department of Community Services and Development	Energy Efficiency Upgrades/Weatherization	\$ 75	\$ 65	\$ 140
	Department of General Services	Energy Efficiency for Public Buildings	\$ 20	\$ 20	\$ 40

	University of California/California State University	Renewable Energy and Energy Efficiency Projects	\$ 0	\$ 60	\$ 60
	Department of Water Resources (DWR)/Department of Food and Agriculture (DFA)	Water and Energy Efficiency *\$30 million was appropriated to this program through the emergency drought legislation enacted earlier this year.	\$ 0	\$ 60	\$ 60
	Energy Commission/ DWR	Drought Executive Order- Rebates for Appliances	\$ 0	\$ 30	\$ 30
	Energy Commission/ DWR	Drought Executive Order- Water and Energy Technology Program	\$ 0	\$ 30	\$ 30
	DFA	Agricultural and Operational Efficiency	\$ 5	\$ 20	\$ 25
Natural Resources and Waste Diversion	Department of Fish and Wildlife	Wetlands and Watershed Restoration	\$ 25	\$ 40	\$ 65
	Department of Forestry and Fire Protection	Forest Health	\$ 42	\$ 50	\$ 92
	DFA	Healthy Soils	\$ 0	\$ 20	\$ 20
	Cal Recycled	Waste Diversion	\$ 25	\$ 35	\$ 60
TOTAL			\$ 992	\$1,245	\$2,237

Emergency Drought Response:

Since the Governor first declared a state of emergency for the drought in January 2014, approximately \$1.9 billion has been appropriated toward emergency drought response. The May Revise includes an additional \$2.175 billion of one-time resources to continue the state's response to the drought. Of the \$2.175 billion proposed to be expended for drought response in Fiscal Year 2015-2016, \$1.8 billion will come from Proposition 1, which is significantly higher than the \$532.5 million proposed as part of the Governor's January budget. The \$1.8 billion in Proposition 1 funds will be available over the next three years.

A summary of the funding proposed for drought response is provided below:

*Emergency Drought Response Funding
(Dollars in Millions)*

Investment Category	Department	Program	Amount	Fund Source
Protecting and Expanding Local Water Supplies	State Water Resources Control Board	Groundwater Contamination	\$ 784.0	Proposition 1
	State Water Resources Control Board	Water Recycling	\$ 475.0	Proposition 1
	State Water Resources Control Board	Safe Drinking Water in Disadvantaged Communities	\$ 180.0	Proposition 1
	State Water Resources Control Board	Wastewater Treatment Projects	\$ 160.0	Proposition 1
	State Water Resources Control Board	Stormwater Management	\$ 100.0	Proposition 1
	Department of Water Resources	Groundwater Sustainability	\$ 60.0	Proposition 1
	Department of Water Resources	Desalination Projects	\$ 50.0	Proposition 1
Water Conservation	Department of Water Resources/Energy Commission	Urban Water Conservation	\$ 104.0	Proposition 1/Cap & Trade Revenues
	Department of Water Resources/Department of Food and Agriculture	Agricultural Water Conservation	\$ 75.0	Proposition 1/Cap & Trade Revenues
	Department of Water Resources/Energy Commission	Make Water Conservation a Way of Life	\$ 43.0	Proposition 1/Cap & Trade Revenues
	Department of General Services	Water Conservation at State Facilities	\$ 23.4	General Fund/ Special Funds

Emergency Response	Department of Forestry and Fire Protection	Enhanced Fire Protection	\$ 61.8	General Fund
	Office of Emergency Services	California Disaster Assistance	\$ 22.2	General Fund
	Department of Community Services and Development	Farmworker Assistance	\$ 7.5	General Fund
	Department of Housing and Community Development	Rental Relocation Assistance	\$ 6.0	General Fund
	State Water Resources Control Board	Executive Order Implementation	\$ 1.4	General Fund
TOTAL			\$2,175	

As part of the funding outlined above, the May Revise includes:

- \$43 million to implement consumer rebate programs for the replacement of inefficient water consuming appliances, including dishwashers and toilets, to save water and energy and to reduce greenhouse gas emissions. \$30 million of the \$43 million is from Cap-and-Trade revenues and \$13 is from Proposition 1;
- \$27 million of Proposition 1 funds to replace lawns in underserved communities throughout the state with water efficient landscaping;
- \$22 million from the General Fund to remove the emergency salinity barrier the Department of Water Resources (DWR) installed in the West False River in the Delta. The barrier slows the tidal push of saltwater from the San Francisco Bay into the Delta limiting salinity impacts on water quality. The barrier must be removed in November to avoid potential flood impacts and to prevent harm to migratory fish;
- \$20 million in Cap-and-Trade revenues for the DWR Water Energy Grant Program to reduce energy demand and greenhouse gas emissions through local projects that also support water use efficiency and conservation; and
- \$10 million in Proposition 1 funds to implement the CalConserve Program which will enable homeowners and businesses to finance water efficiency upgrades through a revolving-loan program.

Water Policy Changes Proposed with the May Revise:

Along with the May Revise, the Governor released proposed language for a number of water-related budget trailer bills. The water-related budget trailer bills deal with:

- CEQA Exemption for Drought Mitigation and Water Recycling: This budget trailer bill, as originally proposed, would provide a CEQA exemption for any project carried out to mitigate drought conditions if it:
 - Connects existing residential users facing critical water shortages to a community water system;
 - Provides interconnections between existing community water systems to improve drought resilience for existing residential users;
 - Involves construction or expansion of stormwater infiltration or recycled water treatment facilities;

- Involves construction or expansion of recycled water distribution infrastructure within existing right of way; or
 - Implements specific directives that the Governor may include in a state of emergency proclamation.
- CEQA Exemption for Groundwater Wells: As proposed, this budget trailer bill would create a CEQA exemption for the adoption of a city or county ordinance that places limitations on the drilling of new groundwater wells. It would also create a CEQA exemption for a city's or county's placement of limitations on changes in land use that would result in new demands on groundwater, including a temporary moratorium. These exemptions would remain in effect until July 1, 2017, or until the end of the drought emergency, whichever is later.
- Drought- Expanded Local Enforcement Authority: The May Revision proposed legislation to enhance local enforcement authority related to the drought. The budget trailer bill would provide all water agencies including wholesale agencies and local governments a consistent, minimum set of enforcement authorities to achieve water conservation. If approved, the proposal would grant local agencies the ability to levy a \$10,000 base and \$500 per day administrative fine upon persons who violate the emergency regulations adopted by the State Water Resources Control Board (SWRCB) or a conservation regulation adopted by the local agency. The proposal requires that any penalties obtained from this enforcement be used for local conservation efforts.
- Drought- Monitoring and Reporting: Currently the SWRCB has the ability to fine a person or entity up to \$500 per day for violating an emergency regulation or order adopted by the board. This proposal would grant the SWRCB the ability to fine a person or entity up to \$500 per day for a violation of any regulation or order adopted by the board and eliminates all references to the authority only being available to the SWRCB in critically dry years and drought emergencies. Additionally, the bill would require monitoring of and annual reporting on water diversions of 10 acre-feet or greater. It would also grant the SWRCB the ability to adopt emergency regulations to require the measurement and reporting of water diversions.
- Drought- Penalties: The current budget trailer bill language related to drought penalties would require the SWRCB to deposit any penalties it collects from violations of the recently-approved emergency urban conservation regulations or other emergency regulations into a separate fund. Those funds would then be made available for water conservation activities and programs upon appropriation by the Legislature.
- Drought- Stormwater Plans: As proposed, this budget trailer bill would allow the SWRCB to establish guidance on stormwater resource plans as directed in SB 985 (2014) more quickly. The guidance will define the types of local agencies and nongovernmental organizations that need to be consulted in the development of a stormwater resource plan; the quantitative methods for identifying and prioritizing opportunities for stormwater and dry weather runoff capture projects; the appropriate geographic scale of watersheds for stormwater resource planning; and other guidance the SWRCB deems appropriate.

- Drought – Sub-metering: As has been proposed through legislation in years past, the budget trailer bill on submetering would require the installation of submeters in any new residential or mixed-use development. Although the proposal provides that a water purveyor does not have responsibility for the submeters, it does require water purveyors to take some actions. It requires that water purveyors that “deliver water service to a newly constructed multiunit residential structure or newly constructed mixed-use residential and commercial structure, shall require a measurement of the quantity of water supplied to each individual dwelling unit as a condition of new water service.” The measurement may be individual meters or submeters.
- Drought-Water System Consolidation: As part of the May Revise, a budget trailer bill has been proposed that would provide the SWRCB with authority to require a public water system to consolidate with another public water system or a state small system where the public water system or a state small water system fails to reliably provide an adequate supply of safe drinking water. It also provides the SWRCB with authority to require a public water system to extend service to another public water system, a state small system, or domestic well users in an area that does not have access to an adequate supply of safe potable water as long as the extension of service is an interim extension of service in preparation for consolidation. The proposal would also grant the SWRCB with authority to require a public water system to provide technical, managerial or financial management assistance to another public water system.
- Public Well Logs: This budget trailer bill proposal would require that reports filed with the DWR upon the completion, alternation, abandonment or destruction of a well be made available to governmental agencies and the public, upon request.
- Safe Drinking Water Program Funding and Fees: As reported to the Board last month, the SWRCB, as part of the budget process, has asked for an increase in the fees charged under the Safe Drinking Water Program and for changes in how the fees are set. The Safe Drinking Water Program was previously operated by the Department of Public Health but is now being operated by the SWRCB’s Division of Drinking Water given the transition of the Drinking Water Program to the SWRCB last July. The program ensures that small and large public water systems meet Safe Drinking Water Act standards.

The Health and Safety Code provides authority for this program and the fees set under it. Specifically, the Health and Safety Code requires that the program’s fees be charged on a fee-for-service basis; be based on the actual cost incurred by the SWRCB; caps the total fees charged to large systems which is defined as those serving 1,000 or more connections based on a 5 percent annual escalation to Fiscal Year 2001-2002 expenditures of \$7,000,000; caps annual increases in the fees at 5 percent; and requires that changes to the fee amount and its implementing regulations be made under the Administrative Procedures Act (APA).

The SWRCB has determined that the current fee schedule is not generating sufficient revenue to fund the program and has asked that the fee structure be changed. The SWRCB, through the budget process, requested that the:

- Fees be increased to meet current program expenditures;
- Fee-for-service approach be abandoned and that the fees be based on a fee schedule;
- SWRCB be authorized to adopt the fee schedule by emergency regulation instead of the normal APA process; and
- Five percent cap on fee increases be removed.

The Association of California Water Agencies (ACWA) along with other industry associations, have proposed alternatives to the SWRCB's fee proposal, which would have retained existing provisions in state law but raised the fees to cover existing expenditure levels. The Administration rejected ACWA's proposal, but continues to discuss alternatives with ACWA and IRWD's industry partners. Staff will provide the Committee with an oral update on this budget trailer bill proposal.

Staff continues to monitor the budget negotiations and the proposed water-related budget trailer bills, and engage on the policy issues of interest to the District. As budget negotiations continue and proposals change, staff will provide the Committee with an oral update on any new developments.

IRWD 2015 State Legislative Priorities:

Legislative Clarification on Tiered Water Rates:

Since staff's April 27 presentation to the Board on the *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano* and the Board's discussion regarding the need for legislative clarification on tiered water rates, staff has been working with the District's industry and association partners on seeking legislative clarification. Staff will provide the Committee with an oral update on those efforts.

Updates on 2015 State Legislation of Interest to IRWD:

Proposals on Groundwater Adjudications:

After the adoption of sustainable groundwater management legislation last year, the Administration and the Legislature indicated their interest in pursuing legislation related to groundwater adjudications this year. There are currently two proposals related to groundwater adjudications before the Legislature— AB 1390 (Alejo, D-Salinas) and SB 226 (Pavley, D-Calabasas).

AB 1390 is sponsored by the California Farm Bureau Federation and other agricultural interests. It has been developed and continues to be shaped with input from ACWA. The bill would establish special procedures for an adjudication action to determine groundwater extraction rights within the basin including the right to extract stored water.

The author states that “The goal of AB 1390 is to clarify court procedures that apply to comprehensive groundwater adjudications to reduce the time and improve the efficiency of the process.” The bill would:

- Establish special procedures that govern all groundwater adjudication actions, with exceptions;
- Allow a court to determine all rights in a groundwater basin and to declare the priority, amount, purpose of use, extraction location, and place of use of the groundwater, together with other relief or a “physical solution” to conflicts;
- Require the court to hold a preliminary hearing to determine if the adjudication should proceed; an adjudication would only be permitted if one of the following is met:
 - There is substantial evidence that declining groundwater levels may cause an undesirable result in the basin;
 - The court cannot provide adequate relief among the potential claimants to a groundwater right unless the adjudication action is completed;
 - A sufficient number of the parties have agreed to a proposed judgment in the adjudication action; or
 - The interests of groundwater rights holders will be expeditiously and effectively served by the completion of the adjudication action.
- Specify that a plaintiff shall name counties, special districts, public water systems and small water systems as defendants in an adjudication action and that the plaintiff shall have the county assessor notify other persons owning land overlying the basin of the adjudication via a mailing along with their property tax bill;
- Allow any party owning land overlying the basin to become a party to the adjudication upon application to the court;
- Specify that the initial basin boundaries for purposes of the groundwater adjudication shall be the Bulletin 118 boundary, but allows the court to adjust the boundaries;
- Require that parties initially and expeditiously disclose specifics regarding their preceding 10 years of groundwater use and other information;
- Encourage parties to use a Groundwater Sustainability Plan developed pursuant to the Sustainable Groundwater Management Act (SGMA) as the basis of a stipulated judgment setting forth a physical solution for basin management; and
- Allow a party, or group of parties, that is more than 50 percent of all named parties in the adjudication and who hold at least 75 percent of the groundwater rights, to enter into a proposed stipulated judgment and binds the court to impose any physical solution from that settlement.

AB 1390 was passed by the Assembly on a 75 to 0 vote. It is currently in the Senate Rules Committee for assignment to a policy committee. A copy of AB 1390, as amended on May 18, 2015, is attached as Exhibit "B".

SB 226 has a number of similarities to AB 1390. Both bills would establish special procedures for groundwater adjudication actions and both require broad public noticing and disclosures of the adjudication. While both bills would keep groundwater adjudication cases in the courts, SB 226 does not provide for stays to allow a collaborative process to develop a Groundwater Sustainability Plan through SGMA and does not provide for an initial hearing by the court to determine if the adjudication is necessary as provided for in AB 1390.

SB 226 would:

- Provide that a court shall use the Code of Civil Procedure for determining rights to groundwater, except as provided by the special procedures established in the bill;
- Require the boundaries of a basin to be as identified in Bulletin 118, unless other basin boundaries are established;
- Authorize DWR and the Department of Fish and Wildlife to intervene in an action or proceeding if they claim an interest relating to the action;
- Provide that all unknown defendants shall be served by publication;
- Require a party to provide specified initial disclosures to the other parties, including, among other disclosures, information relating to expert witnesses; and
- Direct a court, in making its determination of rights to groundwater, to avoid undesirable results as defined in SGMA.

SB 226 was passed by the Senate on a 23-to-14 vote. It is currently in the Assembly for assignment to a policy committee. A copy of SB 226, as amended on May 5, 2015, is attached as Exhibit "C".

Staff has reviewed both AB 1390 and SB 226, and is of the opinion that the proposals may impact IRWD's groundwater interests and ability to engage in an adjudication related to those interests. Staff recommends that the Board adopt a "CONCERNED" position on these bills and authorized staff to engage with stakeholders to protect IRWD's interests.

Other 2015 State Legislation and Actions:

Short-Lived Climate Pollutants:

Last month, the California Air Resources Board (CARB) released a concept paper and held a workshop on the board's approach and possible actions related to short-lived climate pollutants. CARB has defined short-lived climate pollutants as powerful climate forcers that remain in the

atmosphere for a period of days to up to 10 years. The board has identified the three main components of short-lived climate pollutants as black carbon, fluorinated gases and methane. To address these three components CARB has proposed to:

- Reduce black carbon emissions by at least 50 percent below 2012 levels from transportation sources by 2020, and from all sources by 2030;
- Reduce methane emissions by at least 20 percent by 2020, and 40 percent by 2030 below forecasted emission levels; and
- Reduce fluorinated gas emissions by at least 25 percent in 2020, and 50 percent by 2030 below forecasted emission levels.

Wastewater has been identified by CARB as a contributor to the state's methane emissions. CARB is considering targeting the emissions from the wastewater sector by maximizing resource recovery from wastewater treatment facilities. At this point in time, it is unclear how they will approach this maximization.

Staff will monitor CARB's actions related to short-lived climate pollutants and will work with IRWD's association and industry partners on proposals of interest to the water and wastewater sectors. Staff will provide updates to the Committee, as appropriate.

A copy of CARB's "Short-Lived Climate Pollutant Reduction Strategy Concept Paper" is attached as Exhibit "D".

2015 Federal Legislation and Actions:

"Waters of the United States" Rule: On May 26, 2015, the United States Environmental Protector Agency and the U.S. Army Corps of Engineers finalized the rule on the Definitions of "Waters of the United States" (WOTUS). The rule, which differs substantially from the proposed rule, further defines WOTUS and expands the range of waters that fall under federal jurisdiction. Staff is in the process of evaluating the rule and its impacts on IRWD. Staff will provide an oral update to the Committee on the rule and its potential impacts on the District.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on June 4, 2015.

RECOMMENDATION:

THAT THE BOARD ADOPT A “CONCERNED” POSITION ON AB 1390 (ALEJO) AND SB 225 (PAVLEY) AND AUTHORIZE STAFF TO ENGAGE WITH STAKEHOLDERS TO PROTECT IRWD'S INTERESTS RELATED TO GROUNDWATER ADJUDICATIONS.

LIST OF EXHIBITS:

Exhibit “A” – 2015 IRWD Legislative Matrix

Exhibit “B” – AB 1390 (Alejo): *Groundwater: adjudication*

Exhibit “C” – SB 226 (Pavley): *Sustainable Groundwater Management Act: groundwater rights*

Exhibit “D” – CARB’s “Short-Lived Climate Pollutant Reduction Strategy Concept Paper”

EXHIBIT “A”
IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>AB 1</u> Brown (D)	Drought: Local Governments: Fines		Prohibits a city, county, or city and county from imposing a fine under any local maintenance ordinance or other relevant ordinance for a failure to water a lawn or having a brown lawn during a period for which the Governor has issued a proclamation of a state of emergency based on drought conditions.	05/07/2015 - To SENATE Committee on GOVERNANCE AND FINANCE.
<u>AB 2</u> Alejo (D)	Community Revitalization Authority		Authorizes certain local agencies to form a community revitalization authority with a community revitalization and investment area to carry out provisions of the Community Redevelopment Law in that area for infrastructure, affordable housing, and economic revitalization and to provide for the issuance of bonds serviced by tax increment revenues.	05/21/2015 - To SENATE Committees on GOVERNANCE AND FINANCE and TRANSPORTATION AND HOUSING.
<u>AB 10</u> Gatto (D)	Political Reform Act of 1974: Disclosures		Requires the disclosure of certain behested payments. Increases the thresholds at which a public official has a disqualifying financial interest in sources of income in investments in business entities and in interests in real property. Revises the dollar amounts associated with the value ranges for reporting the value of economic interests. Requires certain public officials to disclose information relating to governmental decisions for which the public official had a disqualifying financial interest.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 12</u> Cooley (D)	State Government: Administrative Regulations: Review		Requires each state agency after a noticed public hearing, to review the agency's regulations, identify any regulations that are duplicative, overlapping, inconsistent, or out of date, to revise those identified regulations, and report to the Legislature and Governor.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 14</u> Waldron (R)	Unmanned Aircraft Systems: Task Force		Creates the Unmanned Aircraft Systems Task Force to research, develop, and formulate a comprehensive policy for unmanned aircraft systems. Requires the task force to submit a policy draft and suggested legislation pertaining to unmanned aircraft systems.	04/13/2015 - In ASSEMBLY Committee on TRANSPORTATION: Failed passage.;04/13/2015 - In ASSEMBLY Committee on TRANSPORTATION: Reconsideration granted.
<u>AB 21</u> Perea (D)	Global Warming Solutions Act of 2006: Scoping Plan		Requires the State Air Resources Board in preparing its scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas reduction, to consult with specified State agencies regarding matters involving energy	05/18/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			efficiency and the facilitation of the electrification of the transportation sector.	
<u>AB 23</u> Patterson (R)	Global Warming Solutions Act of 2006: Compliance		Exempts categories of persons or entities that did not have a compliance obligation under a market-based compliance mechanism from being subject to that market-based compliance mechanism.	03/23/2015 - In ASSEMBLY Committee on NATURAL RESOURCES: Failed passage.;03/23/2015 - In ASSEMBLY Committee on NATURAL RESOURCES: Reconsideration granted.
<u>AB 33</u> Quirk (D)	Global Warming Solutions Act: Climate Council		Establishes the Climate Change Advisory Council. Requires the Council to develop an analysis of various strategies to achieve the statewide greenhouse gas emissions limit. Requires the State Air Resources Board to establish consistent metrics to accurately quantify reductions in greenhouse gas emissions, quantify public health benefits, and measure the cost-effectiveness of the various strategies identified by the Council.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 45</u> Mullin (D)	Household Hazardous Waste		Requires each jurisdiction providing for the residential collection and disposal of solid waste to increase the collection and diversion of household hazardous waste in its service area over the baseline. Provides the increase is to be determined in accordance with Department of Resources Recycling and Recovery regulations. Authorizes the adoption of a model ordinance for a comprehensive program for the collection of waste. Requires an annual report to the Department on progress in achieving compliance.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 56</u> Quirk (D)	Unmanned Aircraft Systems		Prohibits the use of unmanned aircraft systems by public agencies or the contracting therefor. Exempts law enforcement agencies. Requires public notice by agencies when intending to deploy such system. Provides the time frame for destruction of images and data collected. Prohibits public dissemination of images and data. Prohibits arming. Relates to surveillance restrictions. Applies to private entities contracting with agencies. Relates to data and images subject to disclosure. Requires public comment.	05/26/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 78</u> Mathis (R)	Groundwater Basins		Makes technical nonsubstantive changes to existing law that requires the Department of Water Resources to categorize each basin or	01/05/2015 - INTRODUCED.

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			subbasin as high-, medium-, low-, or very low priority and to establish ground water the initial priority for each basin.	
<u>AB 88</u> Gomez (D)	Sales and Use Taxes: Exemption: Home Appliances		Exempts from the sales and use tax laws the gross receipts from the sale of, and the storage, use, or other consumption in the State of, an energy or water efficient home appliance purchased by a public utility that is provided at no cost to a low-income participant in a federal, state, or ratepayer-funded energy efficiency program for use by that low-income participant in the energy efficiency program.	05/20/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 149</u> Chavez (R)	Urban Water Management Plans	Support	Requires each urban water supplier to update and submit a urban water management plan for a specified year to the State Department of Water Resources by a specified date. Requires the Department to submit its urban water management plan report for a specified year to the Legislature by a specified date.	05/21/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 156</u> Perea (D)	Greenhouse Gas Reduction Fund: Technical Assistance		Requires the State Air Resources Board to establish a comprehensive technical assistance program, upon the appropriation of moneys from the Greenhouse Gas Reduction Fund, for eligible applicants assisting disadvantaged communities and other specified communities. Requires the Department of Finance to include in a multi-year investment plan, an allocation to the State Board for the assistance program.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 219</u> Daly (D)	Public Works: Concrete Delivery		Expands the definition of public works for purposes of requirements regarding the payment of prevailing wages for public works projects to include the delivery of ready-mixed or asphaltic concrete with respect to contracts involving any State agency or any political subdivision of the State.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 243</u> Wood (D)	Medical Marijuana Cultivation		Requires a permit to cultivate medical marijuana. Provides limitations as to where such product may be grown. Requires indoor and outdoor medical marijuana cultivation to be conducted in accordance with state and local laws and best practices related to land conversion, grading, electricity usage, water usage, agricultural discharges, and similar matters. Requires each regional water quality control board to address discharges of waste resulting from medical marijuana cultivation and associated activities.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 259</u>	Personal Information		Requires an agency, if the agency was the source of the breach and	03/25/2015 - In ASSEMBLY

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
Dababneh (D)	Privacy		the breach compromised a person's social security number, driver's license number, or California identification card number, to offer to provide the person with identity theft prevention and mitigation services at no cost for not less than 12 months.	Committee on APPROPRIATIONS: To Suspense File.
<u>AB 291</u> Medina (D)	Environmental Quality Act: Local Agencies: Water		Authorizes a local agency, for certain water projects, to file the notice with the county clerk of the county in which the local agency's principal office is located in and with the Office of Planning and Research and to mail a copy of the notice to the county clerk of the counties in which the project is located. Requires the notices to be available to for public inspection.	05/14/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>AB 307</u> Mathis (R)	Graywater: Groundwater Recharge		States the intent of the Legislature to enact legislation to explicitly permit the usage of residential, commercial, and industrial graywater for the recharge of a groundwater basin or aquifer.	02/12/2015 - INTRODUCED.
<u>AB 308</u> Mathis (R)	Graywater: Agricultural Use		States the intent of the Legislature to enact legislation to explicitly permit incorporated and unincorporated communities to sell graywater for agricultural purposes and agriculture to use graywater for agricultural purposes.	02/12/2015 - INTRODUCED.
<u>AB 311</u> Gallagher (R)	Environmental Quality: Water Quality and Supply		Requires the public agency, in certifying the environmental impact report and in granting approvals for specified water storage projects funded, in whole or in part, by Proposition 1, to comply with specified procedures. Requires the Judicial Council to adopt a rule of court to establish procedures applicable to actions or proceedings seeking judicial review of an agency's action in certifying the environmental impact report and in granting project approval. Relates to court staying of the projects.	04/29/2015 - From ASSEMBLY Committee on NATURAL RESOURCES without further action pursuant to JR 62(a).
<u>AB 327</u> Gordon (D)	Public Works: Volunteers		Extends the provisions of existing law that governing public works does not apply to specified work performed by a volunteer, a volunteer coordinator, or a member of the California Conservation corps or a community conservation corps.	05/14/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 335</u> Patterson (R)	Air Quality: Minor Violations		Requires the State Air Resources Board and air pollution control and air quality management districts to adopt regulations classifying minor violations. Requires a representative of those agencies to issue a notice to comply. Requires the State Air Resources Board to report to the Legislature regarding implementation of these provisions.	05/19/2015 - From ASSEMBLY Committee on NATURAL RESOURCES without further action pursuant to JR 62(a).

IRWD 2015 LEGISLATIVE MATRIX
Updated May 27, 2015

Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			Exempts such districts from these provisions if the districts have a similar program in effect as of a specified date.	
<u>AB 341</u> Achadjian (R)	Financial Affairs: Reports		Amends existing law requiring the officer of each local agency, who has charge of the financial records of the local agency, to furnish to the Controller a report of all such transactions of the local agency during the preceding fiscal year. Requires the report to contain underlying data from audited financial statements if this data is available. Requires such information to be submitted to the Controller by a specified date each calendar year. Provides the due date for Controller publishing the reports.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 349</u> Gonzalez (D)	Common Interest Developments: Property Use		Amends the Davis-Stirling Common Interest Development Act. Makes void and unenforceable any provision of the governing documents or architectural or landscaping guidelines or policies that prohibits the use of artificial turf or any other synthetic surface that resembles grass.	05/22/2015 - In ASSEMBLY. Read third time and amended. To third reading.
<u>AB 356</u> Williams (D)	Oil and Gas: Groundwater Monitoring		Authorizes the State Oil and Gas Supervisor to require a well operator to implement a monitoring program for below ground oil production tanks and facilities, and disposal and injection wells. Requires the annual review of underground injection or disposal projects that use Class II wells. Requires the submission of a related groundwater monitoring plan. Requires submission of certain data for inclusion in the State's geotracker database. Provides procedures for an aquifer exemption.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 401</u> Dodd (D)	Low-Income Water Rate Assistance Program		Requires the Department of Community Services and Development to develop a plan for the funding and implementation of the Low-Income Water Rate Assistance Program, which would include specified elements. Requires the Department to report to the Legislature on its findings regarding the feasibility, financial stability, and desired structure of the program.	04/15/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 402</u> Dodd (D)	Local Agency Services: Contracts		Revises the circumstances under which a local agency formation commission may authorize a city or district to provide new or extended services. Establishes a pilot program for the Napa, Sonoma, and San Bernardino commissions that would the commissions to authority a city or district to provide new or	05/19/2015 - In ASSEMBLY. Read second time. To third reading.

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			extended services outside both its jurisdictional boundaries and its sphere of influence under specified circumstances.	
<u>AB 434</u> Garcia E (D)	Drinking Water: Point-of-Entry: Point-of-Use Treatment		Requires the State Water Resources Control Board to adopt regulations governing the use of point-of-entry and point-of-use treatment by a public water system in lieu of centralized treatment where it can be demonstrated that centralized treatment is not immediately economically feasible. Provides limitations. Prohibits the use of point-of-entry treatment absent a Board determination of no community opposition. Deletes the limitation on permit duration.	05/14/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>AB 452</u> Bigelow (R)	Water Rights Fund: Groundwater Regulation		Amends existing law that establishes groundwater reporting requirements for a person extracting groundwater in an area within a basin that is not within the management area of a groundwater sustainability agency or that is a probationary basin. Prohibits water rights fees from being available for expenditure by the Water Resources Control Board for the purposes of Board enforcement of the provisions of the Sustainable Groundwater Management Act and the groundwater reporting requirements.	04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Not heard.
<u>AB 453</u> Bigelow (R)	Groundwater Management		Authorizes, until a groundwater sustainability plan is adopted, a local agency to amend an existing groundwater management plan in furtherance of, and consistent with, the groundwater management plan's objectives.	05/07/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 454</u> Bigelow (R)	Sustainable Groundwater Management		Relates to groundwater basins. Requires a high- or medium-priority basin that is not subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plan. Provides for the designation of basins as probationary basins.	04/14/2015 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Do pass to Committee on APPROPRIATIONS.
<u>AB 455</u> Bigelow (R)	Groundwater Sustainability Plans		Amends the California Environmental Quality Act. Requires the Judicial Council to adopt a rule of court to establish procedures applicable to actions or proceedings brought to attack, review, set aside, void, or annul the certification of an environmental impact report for certain projects covered by a groundwater sustainability plan. Prohibits the court from staying or enjoying the construction or operation of the project unless the court makes a certain finding.	04/14/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Not heard.
<u>AB 472</u>	Public Works: Prevailing		Makes a nonsubstantive, technical change by deleting an obsolete	02/23/2015 - INTRODUCED.

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Harper (R)	Wage: Volunteers		provision in existing law that generally requires the payment of not less than the prevailing rate of per diem wages for work of a similar character in the locality in which the public work is performed by workers employed on public works projects, except work performed by a volunteer, a volunteer coordinator, or member of the State Conservation Corps, or a community conservation corps.	
<u>AB 478</u> Harper (R)	Desalination		Makes a nonsubstantive change to the Cobey-Porter Saline Water Conversion Law that states the policy of this state that desalination projects developed by or for public water entities be given the same opportunities for state assistance and funding as other water supply and reliability projects, and that desalination be consistent with all applicable environmental protection policies in the state.	02/23/2015 - INTRODUCED.
<u>AB 501</u> Levine (D)	Resources: Delta Research		Relates to the Sacramento-San Joaquin Delta Reform Act of 2009. Requires a person conducting State-funded Delta Research to take specified actions with regard to the sharing of the primary data, samples, physical collections, and other supporting materials created or gathered in the course of that research. Relates to ineligibility. Authorizes the Delta Independent Science Board to adopt guidelines. Suspends State funding for improper reporting. Provides research property rights remain with the researcher.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 537</u> Allen T (R)	Public Employees' Benefits		Prohibits a public agency, state employer, employee organization, or public employee from entering into a memorandum of understanding that provides postemployment health care benefits without a strategy for permanently prefunding members' postemployment healthcare benefits.	03/05/2015 - To ASSEMBLY Committee on PUBLIC EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.
<u>AB 577</u> Bonilla (D)	Biomethane: Grant Program		Allocates an specified amount of funds from the Greenhouse Gas Reduction Fund to the State Energy Resources Conservation and Development Commission for the implementation of a biomethane collection and purification grant program. Requires the Commission to develop and implement the grant program to award moneys for projects that build or develop collection, purification technology, infrastructure, and projects that upgrade existing biomethane facilities.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 585</u>	Outdoor Water Efficiency:	Support	Relates to the Outdoor Water Efficiency Act. Allows a credit, under	05/04/2015 - In ASSEMBLY

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Melendez (R)	Personal Income Tax Credits		the Personal Income Tax Law, for a specified percentage of the amount paid or incurred by a qualified taxpayer for water-efficiency improvements made to outdoor landscapes on real property in the State.	Committee on REVENUE AND TAXATION: To Suspend File.
AB 590 Dahle (R)	Greenhouse Gas Reduction Fund		Creates the Biomass State Cost Share Account within the Greenhouse Gas Reduction Fund. Provides that moneys in the account would be available for expenditure by the State Energy Resources Conservation and Development Commission for the purposes of maintaining the current level of biomass power generation in the State and revitalizing currently idle facilities in strategically located regions. Establishes requirements for an applicant to receive funding for a facility's eligible electrical generation.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 603 Salas (D)	Income Taxes: Every Drop Counts Tax Credit	Support	Allows a credit under the Personal Income Tax and the Corporation Tax laws to a taxpayer participating in a lawn replacement rebate program.	05/21/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
AB 606 Levine (D)	Water Conservation	Support and Seek Amendments	Requires the Department of General Services, when the Department replaces landscaping and irrigation on public property or when new property is added to the Department's inventory, to reduce water consumption and increase water efficiencies for that property through replacement of landscaping, irrigation timers, or spray sprinkler heads, implementation of recycled water irrigation, or any combination thereof. Imposes similar water conservation requirements of the Department of Transportation.	05/26/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
AB 617 Perea (D)	Groundwater		Authorizes a minimum combination of local agency and mutual water companies to enter into an agreement to form a groundwater sustainability agency. Authorizes such agency to enter into agreements and funding with private parties that assist in or facilitate the implementation of groundwater sustainability plans or elements of a plan. Requires the Water Resources Control Board to direct a State agency's cooperation with the plan. Relates to the designation of probationary basins. Relates to plan extensions.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
AB 639	Water Quality: Membership		Makes nonsubstantive changes to provisions of existing law which	02/24/2015 - INTRODUCED.

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Dahle (R)	of Regional Boards		requires the State Water Resources Control Board and the regional water quality control boards to prescribe waste discharge requirements in accordance with the federal national pollutant discharge elimination system permit program established by the federal Clean Water Act and the Porter-Cologne Water Quality Control Act.	
<u>AB 647</u> Eggman (D)	Beneficial Use: Storing of Water Underground		Declares that the storing of water underground constitutes a beneficial use of water if the diverted water is used while it is in underground storage for specified purposes. States the intent of the Legislature that this storage of water not injure any legal user of the water involved. Provides that the period for the reversion of a water right does not include any period when the water is being used in the aquifer or storage area or is being held in storage for later application to beneficial use.	05/06/2015 - In ASSEMBLY. Read second time. To third reading.
<u>AB 723</u> Rendon (D)	Plumbing Fixtures: WaterSense Standards		Requires the State Energy Commission, when setting plumbing fixture water efficiency standards, to consider the performance requirements established by the WaterSense standards set by the federal Environmental Protection Agency.	04/30/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.
<u>AB 725</u> Wagner (R)	Water Quality: Recycled Water: Storm-Induced Overflow	Sponsor	Requires the State Water Resources Control Board to adopt a policy to address the potential for a storm-induced overflow from an impoundment in which recycled water is stored for subsequent beneficial use or aesthetic purposes.	03/26/2015 - To ASSEMBLY Committee on WATER, PARKS AND WILDLIFE.;03/26/2015 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's amendments.;03/26/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
<u>AB 852</u> Burke (D)	Public Works: Prevailing Wages		Expands the definition of public works for the purposes of provisions relating to the prevailing rate of per diem wages, to also include any construction, alteration, demolition, installation, or repair work done under private contract on a general acute care hospital, when the project is paid for, in whole or in part, with the proceeds of conduit revenue bonds.	05/07/2015 - To SENATE Committee on LABOR AND INDUSTRIAL RELATIONS.

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<u>AB 856</u> Calderon I (D)	Invasion of Privacy		Expands liability for physical invasion of privacy to additionally include a person knowingly entering into the airspace above the land of another person without permission.	05/14/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 876</u> McCarty (D)	Compostable Organics		Requires each countywide siting element to provide an estimate of the total organics processing capacity that will be needed over a specified time period to safely handle organic wastes generated with the county and to identify areas for the location of organics processing facilities, if needed or desired.	04/29/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 888</u> Bloom (D)	Waste Management: Plastic Microbeads		Prohibits a person from selling or offering for promotional purposes in this state a personal care product containing plastic microbeads that are used to exfoliate or cleanse in a rinse-off product. Provides an exception. Makes a violator liable for a civil penalty to be assessed and recovered in a civil action brought in any court of competent jurisdiction by the Attorney General or local officials. Requires the civil penalties collected to be retained by the office that brought the action.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 935</u> Salas (D)	Integrated Regional Water Management Plans: Grants		Requires the Department of Water Resources to provide grants and expenditures for the planning, design and construction of local and regional conveyance projects supporting regional and interregional connectivity and water management. Requires a regional management group awarded a grant to provide a specified a cost share of the total project costs from nonstate resources. Authorizes the Department to waiver or reduce this requirements for projects that benefit a disadvantaged community or distressed area.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 936</u> Salas (D)	Groundwater Monitoring		Amends existing law which provides that certain entities with authority to assume groundwater monitoring functions with regard to a basin or subbasin for which the Department of Water Resources has assumed those functions are not eligible for a water grant or loan awarded or administered by the state. Authorizes an exemption for the eligibility restriction if the entity submits specified documentation that provides that there are special circumstances justifying noncompliance.	04/22/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 937</u> Salas (D)	Groundwater Planning: Disadvantaged Communities		Requires the Department of Water Resources to provide technical assistance to disadvantaged communities so that they may participate	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS:

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			in groundwater planning, including planning for regional groundwater banking, with any county or other local agency.	To Suspense File.
<u>AB 938</u> Salas (D)	Groundwater: Basin Reprioritization		Imposes the requirement to establish a groundwater sustainability agency on a local agency or combination of local agencies overlying a groundwater basin.	05/07/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 939</u> Salas (D)	Groundwater Sustainability Agency: Financial Authority		Requires a groundwater sustainability agency to make the data upon which a proposed fee is based available prior to a public meeting to impose or increase a fee.	05/07/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>AB 952</u> Garcia (D)	Local Government: Vacancies		Provides updated procedures for the filling of a vacancy in an elective office by a city council for a vacancy that occurs in the first half or the second half of the term of office and at least a specified number of days prior to the next general municipal election, the person appointed to fill the vacancy holds office until the next general municipal election at which a person is elected to fill that vacancy, and thereafter, until the person elected is qualified.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 954</u> Mathis (R)	Water and Wastewater Loan and Grant Pilot Program		Creates the Water and Wastewater Loan and Grant Pilot Program. Require the State Water Resources Control Board to establish a pilot program to provide low-interest loans and grants to local agencies for grants to eligible individual homeowners for purposes relating to drinking water and wastewater treatment. Creates a related fund for use under the program. Transfers a specified amount of funds from the General Fund to the fund.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 957</u> Mathis (R)	Water Quality, Supply, Infrastructure Improvement		Relates to grants under the Water Quality, Supply, and Infrastructure Improvement Act of 2014 for water supply reliability improvement to include in that improvement criterion whether the project is proposed by a community that is dependent on groundwater from a basin in overdraft, and would include in the public health benefits criterion whether the project is proposed by a community that has extended, or is in the process of extending, its water service deliveries to specified groundwater entities.	04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Not heard.
<u>AB 977</u> Mayes (R)	State Water Pollution Control Revolving Fund		Amends existing law that requires loans under the State Water Pollution Control Revolving Fund to meet specified criteria, including requiring full amortization not later than a specified number of years after project completion. Requires full amortization	03/26/2015 - From ASSEMBLY Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS with author's amendments.;03/26/2015

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			not later than another specified number of years after project completion.	- In ASSEMBLY. Read second time and amended. Re-referred to Committee on ENVIRONMENTAL SAFETY AND TOXIC MATERIALS.
<u>AB 1019</u> Garcia E (D)	Metal Theft and Related Recycling Crimes		Requires the Department of Justice to establish a Metal Theft Task Force Program designed to enhance the capacity of the department to serve as the lead law enforcement agency in the investigation and prosecution of illegal recycling operations, and metal theft and related recycling crimes. Authorizes the department to enter into partnerships with local law enforcement agencies.	04/22/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1030</u> Ridley-Thomas S (D)	Global Warming Solutions Act of 2006: Greenhouse Gas		Amends existing law that relates to the Greenhouse Gas Reduction Fund. Requires, for greenhouse gas emission reduction projects involving hiring, priority be given to projects that include partnerships with training entities that have a proven track record of placing disadvantaged workers in career-track jobs.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 1068</u> Allen T (R)	California Environmental Quality Act: Priority Projects		Authorizes each Member of the Legislature to nominate one project within his or her respective district each year, and the Governor to designate those projects as priority projects if the projects meet specified requirements. Requires the Governor to provide a notice of the designation to the appropriate lead agency and to the Office of Planning and Research. Requires an environmental impact report for each project. Authorizes tiering from previously prepared reports. Relates to court stays of projects.	03/19/2015 - To ASSEMBLY Committees on NATURAL RESOURCES and JUDICIARY.
<u>AB 1095</u> Garcia E (D)	Restoration Funding: Salton Sea		Appropriates an unspecified sum from funds of the Water Quality, Supply, and Infrastructure Improvement Act of 2014, that provides funding relating to multiparty water quantification settlement agreement provisions relating to the Salton Sea, to the Natural Resources Agency to be used for restoration projects that fulfill obligations of the State in complying with those quantification settlement agreement provisions.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1128</u> Jones-Sawyer (D)	Water Conservation		Makes nonsubstantive changes to existing law that declares the intent of the Legislature to, among other things, promote urban water conservation standards that are consistent with the California Urban	02/27/2015 - INTRODUCED.

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			Water Conservation Council's adopted best management practices and specified requirements for demand management.	
<u>AB 1139</u> Campos (D)	Personal Income Tax: Credit: Turf Removal		Allows a taxpayer, under the Personal Income Tax Law, a credit for participation in a lawn replacement program.	03/26/2015 - To ASSEMBLY Committee on REVENUE AND TAXATION.;03/26/2015 - From ASSEMBLY Committee on REVENUE AND TAXATION with author's amendments.;03/26/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on REVENUE AND TAXATION.
<u>AB 1144</u> Rendon (D)	Renewables Portfolio Standard Program: Credits		Provides that unbundled renewable energy credits may be used to meet the first category of the portfolio content requirements if the credits are earned by electricity that is generated by an entity that, if it were a person or corporation, would be excluded from the definition of an electrical corporation by operation of the exclusions for a corporation or person employing landfill gas technology or digester gas technology, and the entity has specified first points of interconnection.	05/22/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 1201</u> Salas (D)	Delta: Predation by Nonnative Species	Support	Requires the State Department of Fish and Wildlife to develop and initiate a science-based approach that addresses predation by nonnative species upon species of fish listed pursuant to the State Endangered Species Act that reside all or a portion of their lives in the Sacramento-San Joaquin Delta.	05/06/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1242</u> Gray (D)	Water Quality: Impacts on Groundwater: Instream Flows		Requires the State Water Resources Control Board to take into consideration any applicable groundwater sustainability plan or alternative in formulating state policy for water quality control and adopting or approving a water quality control plan that affects a groundwater basin. Requires the Board to identify projects for fish recovery that may be undertaken in lieu of instream flows before adopting or approving quality objectives or a program of implementation that requires such flows for beneficial uses.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1243</u> Gray (D)	Groundwater Recharge: Grants		Establishes the Groundwater Recharge Grant Fund. Provides that moneys in the fund are available to the State Water Resources	04/14/2015 - In ASSEMBLY Committee on WATER, PARKS

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			Control Board to provide grants to local governments and water districts for groundwater recharge infrastructure projects.	AND WILDLIFE: Not heard.
<u>AB 1315</u> Alejo (D)	Public Contracts Water Pollution Prevention Plans		Prohibits a public entity, charter city, or charter county from delegating to a contractor the development of a plan used to prevent or reduce water pollution or runoff on a public works contract. Provides exceptions. Prohibits those same entities from requiring a contractor on a public works contract that includes compliance with a plan to assume responsibility for the completeness and accuracy of a plan developed by that entity.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspense File.
<u>AB 1325</u> Salas (D)	Delta Smelt		Enacts the Delta Smelt Preservation and Restoration Act of 2016. Requires the development of a deltas smelt hatchery program to preserve and restore the delta smelt. Requires entering into mitigation banking agreements with banking partners of the Department of Fish and Wildlife for the purpose of providing take authorizations to those partners and to obtain funding from banking agreements. Appropriates an unspecified amount of money from an unspecified source to implement these provisions.	04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Failed passage.;04/28/2015 - In ASSEMBLY Committee on WATER, PARKS AND WILDLIFE: Reconsideration granted.
<u>AB 1362</u> Gordon (D)	Local Government Assessments Fees and Charges		Defines stormwater for purposes of the Proposition 218 Omnibus Implementation Act to mean any system of public improvements or service intended to provide for the quality, conservation, control, or conveyance of waters that land on or drain across the natural or man-made landscape.	03/23/2015 - To ASSEMBLY Committee on LOCAL GOVERNMENT.
<u>AB 1390</u> Alejo (D)	Groundwater: Adjudication		Establishes special procedures for an adjudication action to determine the rights to extract groundwater within a basin or store water from a basin. Authorizes the court to determine all rights to groundwater in a basin whether based on appropriation, overlying right, or other basis of right. Requires a complaint filed in an action to name certain defendants, including counties or cities that provide water service and overlie a basin in whole or in part, and to be served and published in a specified manner.	05/26/2015 - In ASSEMBLY. Read third time. Passed ASSEMBLY. *****To SENATE.
<u>AB 1454</u> Wagner (R)	Water Quality: Trash: Single-Use Carryout Bags		Suspends the operation of certain amendments to water quality control plans relating to the total maximum daily load for trash unless and until specified provisions inoperative due to a pending referendum election become effective. Requires the State Water	04/23/2015 - Re-referred to ASSEMBLY Committee on RULES.

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			Resources Control Board to revisit and revise the water quality control plans to address impaired water quality due to trash if the law pending referendum is defeated.	
<u>AB 1463</u> Gatto (D)	Onsite Recycled Water		Requires the State Water Resources Control Board to establish water quality standards and distribution, monitoring, and reporting requirements for onsite water recycling systems prior to authorizing the use of onsite recycled water in internal plumbing of residential and commercial buildings.	05/20/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>AB 1532</u> Local Government Cmt	Local Government: Omnibus		Amends provisions regarding local governments to include the revision of existing law regarding local agency formation commissions. Revises provisions regarding hospital districts, conflict of interest rules for a commission appointed legal counsel, the annexation of inhabited territory, and the issuance of a certificate of completion or termination regarding the consolidation of cities or districts.	05/22/2015 - In ASSEMBLY. Read third time and amended. To third reading.
<u>AB 1534</u> Ting (D)	Assessment Analyst: Certification		Prohibits an assessor or any person employed by the Office of the County Assessor from making decisions with regard to change in ownership, or with regard to property tax exemptions, except a homeowners' exemption claim, unless he or she is the holder of a valid assessment analyst certificate issued by the State Board of Equalization. Requires prescribed annual training for certification. Provides for advanced certification. Provide failure to complete training would be grounds for revocation.	05/13/2015 - In ASSEMBLY Committee on APPROPRIATIONS: To Suspend File.
<u>SB 7</u> Wolk (D)	Housing: Water Meters: Multi-unit Structures		Encourages the conservation of water in multifamily residential rental buildings through means within the landlord's or the tenant's control, and to ensure that the practices involving the submetering of dwelling units for water service are just and reasonable, and including appropriate safeguards for both tenants and landlords. Authorizes building standards that require the installation of water submeters in multiunit residential buildings. Defines the term submeter for the Water Measurement Law.	05/22/2015 - To ASSEMBLY Committees on HOUSING AND COMMUNITY DEVELOPMENT and WATER, PARKS AND WILDLIFE.
<u>SB 13</u> Pavley (D)	Groundwater		Authorizes the State Water Resource Control Board to designate a basin as a probationary basin and to develop an interim plan. Relates deficiency remedies by a local agency or groundwater sustainability	05/21/2015 - From ASSEMBLY Committee on WATER, PARKS AND WILDLIFE with author's

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			agency. Relates to the designation of a basin as probationary. Relates to establishing a groundwater sustainability plan. Authorizes a mutual water company to participate in such agency. Provides a water corporation or mutual water company may participate. Extends the deadline for basins to be under a plan.	amendments.;05/21/2015 - In ASSEMBLY. Read second time and amended. Re-referred to Committee on WATER, PARKS AND WILDLIFE.
<u>SB 20</u> Pavley (D)	Wells: Reports: Public Availability		Amends an existing law which requires a person who digs, bores, or drills a water well, cathodic protection well, or a monitoring well to file a report of completion with the Department of Water Resources. Requires the Department to make reports available to the public. Requires the Department to redact from the report specified information pertaining to the well owner.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 32</u> Pavley (D)	Global Warning Solutions Act of 2006: Emissions Limit		Requires the State Air Resources Board to approve a specified statewide greenhouse gas emission limit that is equivalent to a specified percentage below the 1990 level to be achieved by 2050. Authorizes the Board to adopt interim emissions level targets to be achieve by specified years. Makes conforming changes.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 47</u> Hill (D)	Environmental Health: Synthetic Turf		Requires the Office of Environmental Health Hazard Assessment, in consultation with the Department of Resources Recycling and Recovery, the State Department of Public Health, and the Department of Toxic Substances Control, to prepare and provide to the Legislature and post on the office's Internet Web site a study analyzing synthetic turf, for potential adverse health impacts. Provides the information to be included in the study. Authorizes grant to crumb rubber businesses to find alternative markets.	04/13/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 113</u> Galgiani (D)	Disaster Preparedness and Flood Prevention Bond Act		Specifies that the Disaster Preparedness and Flood Prevention Bond Act of 2006 funds provided by the act are only available for appropriation until a specified date and at that time the amount of indebtedness authorized by the act is reduced by the amount of funds that have not been appropriated. Removes the restriction that the funds are available for appropriation only until that specified date.	03/24/2015 - In SENATE Committee on NATURAL RESOURCES AND WATER: Not heard.
<u>SB 119</u> Hill (D)	Protection of Subsurface Installations		Relates to excavation. Provides for certain training requirements, fines, and license suspension. Makes changes relating to a regional notification center and subsurface installations. Provides for delineation of areas to be excavated, preservation of certain plans,	05/26/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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			damages, pipeline safety, an exemption for certain residential property owners, occupational safety and health standards for excavators, and the use of moneys collected as a result of the issuance of citations. Creates a complaint authority.	
<u>SB 122</u> Jackson (D)	Environmental Quality Act: Record of Proceedings		Amends the Environmental Quality Act. Relates to a database for the collection, storage, retrieval, and dissemination of environmental documents, notices of exemption, notices of preparation, notices of determination, and notices of completion provided to the office that shall be available online to the public through the internet. Provides for the phase-in of electronic documents. Requires the lead agency to submit to the State Clearinghouse a sufficient number of environmental documents for review.	05/04/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 127</u> Vidak (R)	Water Quality, Supply, and Infrastructure Improvement		Relates to the Water Quality, Supply, and Infrastructure Improvement Act of 2014. Requires the public agency, in certifying the environmental impact report and in granting approvals for projects funded, in whole or in part, by Proposition 1, including the concurrent preparation of the record of proceedings and the certification of the record of proceeding within 5 days of the filing of a specified notice, to comply with specified procedures.	02/05/2015 - To SENATE Committees on ENVIRONMENTAL QUALITY and JUDICIARY.
<u>SB 142</u> Jackson (D)	Civil law: Unmanned Aerial Vehicles		Defines knowing entry upon the land of another to include the operation of an unmanned aerial vehicle below the navigable airspace overlaying the real property. Extends liability for wrongful occupation of real property and damages to a person who without permission operates an unmanned aerial vehicle below the navigable airspace overlaying the real property or operation of an unmanned aerial vehicle less than a specified number of feet above ground level with the airspace overlaying the real property.	05/22/2015 - To ASSEMBLY Committees on PRIVACY AND CONSUMER PROTECTION and JUDICIARY.
<u>SB 143</u> Stone (R)	Diamond Valley Reservoir: Recreational Use	Oppose	Amends existing law that prohibits recreational use in which there is bodily contact with water, in a reservoir in which water is stored for domestic use.	02/05/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>SB 173</u> Nielsen (R)	Groundwater: De Minimis Extractors		Amends existing law that generally excepts a de minimis extractor from the requirement that a person who extracts groundwater from a probational basin or extracts groundwater on or after July 1, 2017, in an area within a basin that is not within the management area of a	03/24/2015 - In SENATE Committee on NATURAL RESOURCES AND WATER: Failed passage.;03/24/2015 - In SENATE Committee on

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			groundwater sustainability agency and where the county does not assume responsibility to be the groundwater sustainability agency has to file a report of groundwater extraction. Defines a de minimis extractor.	NATURAL RESOURCES AND WATER: Reconsideration granted.
<u>SB 179</u> Berryhill (R)	Secondhand Goods: Junk Dealers		Makes nonsubstantive changes to existing law that prohibits a junk dealer or recycler from possessing a reasonably recognizable, disassembled, or inoperative fire hydrant or fire department connection, a manhole cover or lid, or a backflow device, that was owned by an agency, without a written certification on the agency's letterhead that the agency either has sold the material described or is offering the material for sale.	02/19/2015 - To SENATE Committee on RULES.
<u>SB 184</u> Hertzberg (D)	Local Government: Omnibus Bill		Clarifies that provisions in existing law relating to the authority of the duties of the auditor apply only to the county auditor. Authorizes marginal notations on recorded records. Repeals keeping an index of separate property of married women. Authorizes general grantor-grantee index in computerized or electronic format. Deletes certain endorsement requirements. Deletes certain name and address posting on records requirement. Updates government contract cost accounting. Relates to local contract bidding.	05/18/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 185</u> De Leon (D)	Public Retirement Systems: Divestiture of Thermal Coal		Prohibits the boards of the Public Employees' Retirement System and the State Teachers' Retirement System from making new investments or renewing existing investments of funds in a thermal coal company. Requires the boards to liquidate investments and to engage with such companies to ascertain if they are transitioning to clean energy generation business models. Requires the boards to make a comprehensive assessment on divesting in natural gas and petroleum investments.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 208</u> Lara (D)	Integrated Regional Water Management Plans: Grants		Requires a regional water management group to provide the state entity administering the regional water management grant with a list of projects to be funded by the grant funds where the project proponent is a nonprofit organization or a disadvantaged community, or the project benefits a disadvantaged community.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 216</u> Pan (D)	Public Employees Retirement System		Amends the Public Employees Retirement System. Repeals the provisions regarding investing in residential realty on the system's	05/14/2015 - To ASSEMBLY Committee on PUBLIC

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			investment portfolio. Changes the frequency of a specified report to eliminate the requirement to report on the investments on a cost basis. Makes other changes to the content of the report. Specifies that the option to purchase service credit shall be elected prior to retirement, that the member be returning to State service.	EMPLOYEES, RETIREMENT AND SOCIAL SECURITY.
<u>SB 223</u> Galgiani (D)	Division of Boating and Waterways: Oversight Committee		Requires the Division of Boating and Waterways to establish an advisory and oversight committee to evaluate and monitor the activities of the Division relating to the management and control or eradication of invasive aquatic plants. Provides the expertise of members of the committee. Requires the committee to meet a specified amount of times per year and to communicate any findings or recommendations to the Division.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 226</u> Pavley (D)	Sustainable Groundwater Management Act		Provides for a comprehensive method for determining groundwater rights. Provides that a court shall use the Code of Civil Procedure for determining rights to groundwater. Requires the rights determination process to be available to specified courts. Provides for applicability to Indian tribes and the federal government. Requires the boundaries of a basin to be identified in Bulletin 118. Authorizes certain departments to intervene in specified actions. Provides for expert witness disclosures.	05/26/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 228</u> Cannella (R)	Groundwater Storage: Beneficial Use		Declares that the recharging of a groundwater basin by a local groundwater management agency or a local groundwater sustainability agency for the purposes of repelling saline intrusion and recovering basin groundwater levels constitutes a beneficial use of water if the recharge is consistent with the local agency's groundwater management plan or groundwater sustainability plan.	02/26/2015 - To SENATE Committee on NATURAL RESOURCES AND WATER.
<u>SB 248</u> Pavley (D)	Oil and Gas		Provides for an inspection protocol and schedule of activities regulated pursuant to provisions concerning drilling, operation, maintenance, and abandonment of oil and gas wells and certain tanks and facilities. Requires information on inspections to be reported. Requires the recording of information in a well history, including fluid injection, chemical composition, and waste disposal injection. Provides conditions for shutdown. Relates to Class II wells regulated under the Safe Drinking Water Act.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>SB 258</u> Bates (R)	Local Government		States the intent of the Legislature to enact legislation that would protect the right of the public to participate in open deliberations of the legislative bodies of local agencies by clarifying the appropriate use of special meetings.	02/26/2015 - To SENATE Committee on RULES.
<u>SB 272</u> Hertzberg (D)	State Public Records Act: Local Agencies: Inventory		Requires each local agency, in implementing the State Public Records Act, to create a catalog of enterprise systems, to make the catalog publicly available upon request in the office of the clerk of the agency's legislative body, and to post the catalog on the local agency's Internet Web site. Requires the catalog to disclose a list of the systems utilized by the agency and, among other things, the current system vendor and product.	05/22/2015 - To ASSEMBLY Committees on JUDICIARY and LOCAL GOVERNMENT.
<u>SB 317</u> De Leon (D)	Safe Neighborhood Parks, Rivers, and Coastal Protection		Enacts the Safe Neighborhood Parks, Rivers, and Coastal Protection Bond Act of 2016, which, if adopted by the voters, would authorize the issuance of bonds in a specified amount pursuant to the State General Obligation Bond Law to finance a safe neighborhood parks, rivers, and coastal protection program.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 350</u> De Leon (D)	Clean Energy and Pollution Reduction Act of 2015		Establishes the quantity of electricity products from eligible renewable energy resources be procured by each retail seller for specified periods. Requires the boards of local publicly owned electric utilities to ensure that specified quantities of such products be procured to achieve a specified percentage by a specified date. Excludes combustion from municipal waste as eligible renewable energy sources. Requires submission of renewable energy procurement plans. Relates to reducing motor vehicle emissions.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 360</u> Cannella (R)	Biomethane		Authorizes the Public Utilities Commission to consider providing the option to all corporations to engage in competitive bidding and direct investment in ratepayer financed biomethane collection equipment.	03/05/2015 - To SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS.
<u>SB 385</u> Hueso (D)	Primary Drinking Water Standards: Hexavalent Chromium		Authorizes the State Water Resources Control Board to grant a period of time to achieve compliance with the primary drinking water standard for hexavalent chromium by approving the compliance plan. Requires a public water system to provide specified notice regarding the plan to its customers and to send status reports to the Board. Authorizes the Board to direct revisions to the plan and to implement, interpret, or make specific provisions by	05/26/2015 - From SENATE Committee on APPROPRIATIONS: To second reading without further hearing pursuant to Senate Rule 28.8.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			means of criteria, published on its Internet Web site.	
<u>SB 454</u> Allen (D)	Water Quality: Oil and Gas: Exempt Aquifer		Relates to water quality, oil and gas wells and exempt aquifers. Prohibits the Division of Oil, Gas, and Geothermal Resources from submitting a proposal for an aquifer exemption to the United States Environmental Protection Agency unless the division and the State Water Resources Control Board concur in writing that the aquifer meets specified conditions. Relates to the Clean Water Act. Relates to an aquifer that is hydrocarbon bearing. Provides for injection zones separated from beneficial waters.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 471</u> Pavley (D)	Water, Energy, Reduction of Greenhouse Gas		Requires the development of an emissions inventory of greenhouse gas emissions from the water system in the State. Includes reduction of greenhouse gas emissions associated with water treatment among the investments that are eligible for funding from the Greenhouse Gas Reduction Fund.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 485</u> Hernandez (D)	County of Los Angeles: Sanitation Districts		Authorizes specified sanitation districts in the County of Los Angeles, to acquire, construct, operate, maintain, and furnish facilities for the diversion, management, and treatment of stormwater and dry weather runoff, the discharge of the water to the stormwater drainage system, and the beneficial use of the water. Makes legislative findings and declarations as to the necessity of a special statute for the County of Los Angeles.	05/18/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 487</u> Nielsen (R)	Sustainable Groundwater Management Act: Exemptions		Relates to the California Environmental Act (CEQA). Exempts from the requirements of CEQA the formation of a groundwater sustainability agency, the amendment of a groundwater sustainability plan or coordinated groundwater sustainability plan, and the implementation of those plans, except to the extent that the implementation requires the construction or installation of a new facility.	03/12/2015 - To SENATE Committee on ENVIRONMENTAL QUALITY.
<u>SB 551</u> Wolk (D)	State Water Policy: Water and Energy Efficiency	Seek Amendments	Declares the policy of the state that water use and water treatment shall be as energy efficient as in feasible and energy use and generation shall be as water efficient as is feasible. Requires all relevant state agencies to consider this state policy when revising, or establishing policies, regulations, and grant criteria when pertinent to these uses of water and energy.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
<u>SB 552</u> Wolk (D)	Disadvantaged Communities Drinking Water Standards		Requires the State Water Resources Control to develop a report identifying specific funding and enforcement mechanisms necessary ensure that disadvantaged communities have water systems that are in compliance with state and federal drinking water standards. Requires the report to identify specific legislative and administrative actions necessary to bring disadvantaged communities into compliance with safe drinking water standards.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 553</u> Wolk (D)	Water Conservation		Requires the Department of General Services to identify each public property in the department's state property inventory where it is feasible for water consumption to be reduces and water efficiencies to be achieved through implementation of the relevant recommendations made in the model water efficient landscape ordinance and would require the department to implement the relevant recommendation where feasible.	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 554</u> Wolk (D)	Water Commission Disqualifying Financial Interest		Removes a member of the California Water Commission from office if after trial a court finds that the commission member has knowingly participated in any commission decision in which the member has a disqualifying financial interest in the decision.	04/21/2015 - In SENATE Committee on ELECTIONS AND CONSTITUTIONAL AMENDMENTS: Not heard.
<u>SB 555</u> Wolk (D)	Urban Retail Water Suppliers: Water Loss Management		Require each urban retail water supplier to submit a completed and validated water loss audit report for the previous calendar year. Requires the Department of Water Resources of post a reports on its Internet Web site and to develop metrics for reporting year-over-year progress on water loss reduction. Requires rules requiring urban retail water suppliers to meet performance standards for the volume of water losses.	04/27/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 556</u> De Leon (D)	Victims of Crime: Indemnification: Applications		Relates to indemnification of victims of crime. Defines the time of processing applications. Requires the Victim Compensation and Government Claims Board to post on its Internet Web site its progress and current average time of processing applications, the number of applications approved and denied, and incomplete applications received. Relates to the period of time, including all calendar days, that begins when the board first receives an application and ends when a check is mailed to an eligible victim.	05/26/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 568</u>	Groundwater Management		Relates to the Sustainable Groundwater Management Act.	03/12/2015 - To SENATE Committee

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
Fuller (R)			Authorizes the State Water Resources Control Board to designate a basin as a probationary basin if the state board makes a certain determination and authorizes the state board to develop an interim plan for the probationary basin.	on RULES.
<u>SB 615</u> Berryhill (R)	Waste Discharge: Waivers: Managed Wetlands		Relates to waste discharge requirements, waivers and managed wetlands. Requires each regional board to prescribe waste discharge requirements that implement relevant water quality control plans. Provides for waivers. Amends monitoring of wetlands unless results of downstream monitoring demonstrate a violation of water quality discharge standards.	04/29/2015 - In SENATE Committee on ENVIRONMENTAL QUALITY: Not heard.
<u>SB 625</u> Galgiani (D)	Water Management: Synthetic Plastic Microbeads		Prohibits the selling, or offering for promotional purposes a person care product containing synthetic plastic microbeads. Exempts from this prohibition the sale or promotional offer of a product containing a specified amount of such microbeads. Makes a violator liable for a civil penalty for each violation. Authorizes the penalty to be recovered in a civil action brought by the Attorney General. Prohibits any local ordinance, resolution, or rule relating to the sale of such microbeads.	04/22/2015 - Re-referred to SENATE Committees on ENVIRONMENTAL QUALITY and JUDICIARY.
<u>SB 687</u> Allen (D)	Renewable Gas Standard		Requires the State Air Resources Board to adopt a carbon-based renewable gas standard that requires all gas sellers to provide specified percentages of renewable gas meeting certain deliverability requirements, to retail end-use customers for use in the state that increases over specified compliance periods, and to issue an analysis of the lifecycle emissions of greenhouse gases and reductions for different biogas types and end uses. Requires a renewable gas assessment.	05/18/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.
<u>SB 704</u> Gaines T (R)	Public Officers and Employees: Conflicts of Interest		Relates to conflicts of interest of public officers and employees. Provides for an updated definition of remote interest when dealing with seeking and awarding public entity contracts.	05/22/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SB 758</u> Block (D)	Atmospheric Rivers Research and Mitigation Program		Establishes the Atmospheric Rivers Research and Mitigation Program in the State Department of Water Resources to research the causes and effects of such rivers, and to take actions to capture water generated by such rivers to increase the water supply and reliability of water resources in the State and to operate reservoirs in a manner	05/11/2015 - In SENATE Committee on APPROPRIATIONS: To Suspense File.

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Bill No. Author	Title	IRWD Position	Summary/Effects	Status
			that improves flood protection in the State. Establishes a related fund for funding the program.	
<u>SB 768</u> Wieckowski (D)	Water-Conserving Plumbing Fixtures		Makes technical, nonsubstantive changes to existing law that requires the replacement of plumbing fixtures that are not water conserving in residential and commercial real property built and available for use on or before a specified date.	03/19/2015 - To SENATE Committee on RULES.
<u>SB 772</u> Stone (R)	Bay Delta Conservation Plan: Judicial Review		States the intent of the Legislature to enact legislation establishing judicial review procedures for the Bay Delta Conservation Plan.	03/19/2015 - To SENATE Committee on RULES.
<u>SB 798</u> Pavley (D)	Natural Resources		Provides provisions regarding natural resources to include sport fishing regulations, the automated fishing and hunting license data system, the retrocession of jurisdiction by the United States over land within the State, the conveyance of certain State lands to the United States for a lighthouse, membership of the Range Management Advisory Committee, membership on the Coastal Commission, violations of water use and diversion provisions, temporary water diversion permits, and small irrigation water usage.	05/22/2015 - In SENATE. Read third time. Passed SENATE. *****To ASSEMBLY.
<u>SJR 1</u> Beall (D)	Social Security: Retirement Benefits: Public Employees		Requests the President and the Congress of the United States to pass legislation repealing the Government Pension Offset and the Windfall Elimination Provisions from the Social Security Act.	04/16/2015 - In SENATE. Read third time. Adopted by SENATE. *****To ASSEMBLY.

EXHIBIT "B"

AMENDED IN ASSEMBLY MAY 18, 2015

AMENDED IN ASSEMBLY APRIL 30, 2015

AMENDED IN ASSEMBLY MARCH 26, 2015

CALIFORNIA LEGISLATURE—2015–16 REGULAR SESSION

ASSEMBLY BILL

No. 1390

Introduced by Assembly Members Alejo, Gomez, and Perea
(Principal coauthors: Assembly Members Bigelow, Gray, Olsen,
and Salas)

(Principal coauthors: Senators Cannella, *Hueso*, and Vidak)
(Coauthors: Assembly Members Cooley, Cooper, Eggman, Frazier,
Gallagher, Ridley-Thomas, and Wilk, and Wood)
(Coauthors: Senators Fuller, Galgiani, and Nielsen)

February 27, 2015

An act to add Chapter 7 (commencing with Section 830) to Title 10 of Part 2 of the Code of Civil Procedure, relating to groundwater.

LEGISLATIVE COUNSEL'S DIGEST

AB 1390, as amended, Alejo. Groundwater: adjudication.

The California Constitution requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable. Under the Sustainable Groundwater Management Act, which applies to all groundwater basins in the state, all basins designated as high- or medium-priority basins by the Department of Water Resources as basins that are subject to critical conditions of overdraft, as specified, are required to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020.

This bill would establish special procedures for an adjudication action, which is defined as an action filed in superior court to determine the

rights to extract groundwater within a basin or store water from a basin, as specified. The bill would authorize the court to determine all rights to groundwater in a basin whether based on appropriation, overlying right, or other basis of right. The bill would require these special procedures to govern all adjudication actions except in specified cases not involving allocation of a basin's groundwater supply.

This bill would require a complaint filed in an adjudication action to name certain defendants, including all counties or cities that provide water service and overlie the basin in whole or in part, and to be served and published in a specified manner. The bill would require the complaint to be accompanied by a draft notice and draft form answer, as specified, and would require the court to hold a preliminary hearing within 180 days of the filing of the complaint to determine if the action should proceed to comprehensively determine groundwater rights in the basin in accordance with the special procedures for adjudication actions. If the court makes that determination, based on a finding that at least one of 4 specified conditions is met, the bill would require the court to issue an order declaring the case an adjudication action and authorizing the service of the landowners of the basin. After the court order authorizing service of the landowners of the basin, the bill would require the plaintiff to file an ex parte application seeking court approval of the draft notice and draft form answer filed with the complaint. If the court approves the draft notice and draft form answer, the bill would require the assessor or assessors of the county or counties in which the basin to be adjudicated lies to include the court-approved notice and form answer with the next property tax bill sent to each landowner in the basin. The bill would require the plaintiff to reimburse the assessor or assessors for the costs of including the court-approved notice and form answer with the property tax bills and, after those materials have been included with the property tax bills, would require the plaintiff to file a declaration under penalty of perjury with the court attesting to the completion of the mailing. By expanding the scope of an existing crime, the bill would impose a state-mandated local program. The bill would deem fulfillment of the service and publication provisions as effective service of process of the complaint and notice on all interested parties of the adjudication action for purposes of establishing in rem jurisdiction and the comprehensive effect of the adjudication action.

This bill would authorize the court to convene an initial case management conference within 60 days of completion of service of the complaint and notice, as described above, after which the court could

divide the adjudication action into phases. The bill would require the court to define the scope of any phase of the adjudication action by written order and would provide that the court's discretion is not limited in ordering as many phases as the court deems appropriate for the expeditious and appropriate resolution of competing claims to the groundwater basin. In a phase of an adjudication action, the bill would require discovery to be strictly limited to the scope of the phase and would authorize the court to issue a written statement of decision at the completion of each phase. In addition, the bill would require each party to make, under penalty of perjury, specified initial disclosures within 60 days after the initial case management conference, except a plaintiff would be required to make the initial disclosures at the time it files the complaint. By expanding the scope of an existing crime, the bill would impose a state-mandated local program. The bill would authorize the court to appoint a special master in an adjudication action, and would provide that the special master's duties could include, among other things, initiating a technical committee to conduct joint factfinding regarding the basin and would require the special master to compile a technical report of the findings, as specified. On or before January 1, 2017, the bill would require the Department of Water Resources to establish and maintain a list of individuals who may serve as special masters in adjudication actions and would prescribe the experience needed for an individual to be placed on the list.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: yes.

The people of the State of California do enact as follows:

- 1 SECTION 1. Chapter 7 (commencing with Section 830) is
- 2 added to Title 10 of Part 2 of the Code of Civil Procedure, to read:

CHAPTER 7. ACTIONS RELATING TO GROUNDWATER RIGHTS

Article 1. General Provisions

830. (a) The Legislature finds and declares all of the following:

(1) Diverse economic, environmental, and social interests are implicated by sustainable groundwater management.

(2) Efficient resolution of conflicts concerning the right to use and manage groundwater will promote beneficial use of the waters of the state consistent with Section 2 of Article X of the California Constitution, the state water policies mandated in Chapter 1 (commencing with Section 100) of Division 1 of the Water Code, and as intended by the Sustainable Groundwater Management Act (Part 2.74 (commencing with Section 10720) of Division 6 of the Water Code).

(3) Previous groundwater adjudication actions have taken more than a decade before issuance of a final judgment by the court in an adjudication action.

(4) In light of the scope and complexities of groundwater adjudication actions, the state's welfare will be promoted by the development of specially tailored legal procedures to efficiently process groundwater adjudication actions.

(b) It is the intent of the Legislature to do all of the following:

(1) Develop procedures to provide a more streamlined and expeditious groundwater adjudication process, while at the same time fully respecting established principles of water rights law and providing participants appropriate due process.

(2) Establish procedures by which courts may conduct comprehensive determinations of all rights to groundwater in a basin.

(3) Encourage early resolution of groundwater rights disputes.

(4) Substantially reduce the time and expense of groundwater adjudications, while ensuring fair procedures to protect all parties' rights to groundwater.

(5) Ensure the judicial process is not used to unnecessarily delay or thwart the goal of managing groundwater in a sustainable manner.

(6) Reduce the burdens placed on the judiciary under the current adjudication process.

1 830.5. For purposes of this chapter, the following definitions
2 apply:

3 (a) “Adjudication action” means an action filed in superior court
4 to determine the rights to extract groundwater within a basin or
5 store water from a basin, including, but not limited to, ~~actions an~~
6 *action* to quiet title respecting rights to extract or store groundwater
7 or an action brought to impose a physical solution on a basin.

8 (b) “Basin” means a groundwater basin or subbasin identified
9 pursuant to Section 839.

10 (c) “Bulletin 118” means the department’s report entitled
11 “California’s Groundwater: Bulletin 118” updated in 2003, as it
12 may be subsequently updated or revised.

13 (d) “Complaint” means a complaint filed in superior court to
14 determine rights to extract groundwater and includes any
15 cross-complaint that initiates an adjudication action in response
16 to a plaintiff’s complaint or other cross-complaint.

17 (e) “Department” means the Department of Water Resources.

18 (f) “Groundwater” means water beneath the surface of the earth
19 within the zone below the water table in which the soil is
20 completely saturated with water, but does not include water that
21 flows in known and definite channels.

22 (g) “Groundwater extraction facility” means a device or method
23 for extracting groundwater from within a basin.

24 (h) “Groundwater recharge” means the augmentation of
25 groundwater, by natural or artificial means.

26 (i) “Person” includes, but is not limited to, counties, local
27 agencies, state agencies, federal agencies, tribes, business entities,
28 and individuals.

29 (j) “Plaintiff” means the person filing the complaint initiating
30 an adjudication action and includes a cross-complainant who
31 initiates an adjudication action by cross-complaint.

32 (k) “Sustainable Groundwater Management Act” means the
33 provisions of Part 2.74 (commencing with Section 10720) of
34 Division 6 of the Water Code.

35 831. (a) This chapter establishes special procedures for an
36 adjudication action. This chapter shall not alter groundwater rights
37 or the law concerning groundwater rights. The other provisions of
38 this code apply to procedures in an adjudication action to the extent
39 they do not conflict with the provisions of this chapter.

1 (b) In an adjudication action subject to this chapter, the court
2 may determine, in the proceedings provided for in this chapter, all
3 rights to groundwater in a basin whether based on appropriation,
4 overlying right, or other basis of right.

5 (c) The court's final judgment in an adjudication action, as to
6 the right to groundwater of each party, may declare the priority,
7 amount, purposes of use, extraction location, and place of use of
8 the water, together with appropriate injunctive relief, subject to
9 terms adopted by the court to implement a physical solution in the
10 adjudication action.

11 (d) The procedures of this chapter shall govern all adjudication
12 actions, unless the court finds either of the following, in which
13 case the action shall proceed in accordance with other provisions
14 of law:

15 (1) The action concerns only claims that the operation of a
16 party's groundwater extraction facility is interfering with the
17 physical availability of groundwater to one or more other parties'
18 groundwater extraction facility or facilities and does not involve
19 an allocation of the basin's groundwater supply.

20 (2) The action concerns only claims to extract, or to prevent
21 interference with extractions of, a specific source of groundwater
22 recharge and does not involve an allocation of the basin's
23 groundwater supply.

24 (e) In implementing this chapter and applying the other
25 provisions of this code in an adjudication action, the court should
26 expedite resolution of the adjudication action and, where a
27 groundwater sustainability plan is required pursuant to the
28 Sustainable Groundwater Management Act, the court should
29 encourage the parties to cooperatively develop a groundwater
30 sustainability plan that may serve as the basis of a stipulated
31 judgment setting forth a physical solution for management of the
32 basin.

33 Article 2. Commencement of Action

34
35 832. (a) Unless a court orders otherwise for good cause, the
36 complaint in an adjudication action shall name all of the following
37 persons as defendants:

38 (1) All counties or cities that provide water service and overlie
39 the basin in whole or in part.
40

1 (2) All general or special districts empowered to manage or
2 replenish groundwater resources of the basin in whole or in part.

3 (3) The operator of a public water system that uses groundwater
4 from the basin to supply water service.

5 (4) The operator of a state small water system that uses
6 groundwater from the basin to supply water service.

7 (b) Within 30 days of the filing of the complaint, all of the
8 following shall occur:

9 (1) The plaintiff shall serve the complaint on all persons named
10 as defendants pursuant to subdivision (a) in the manner prescribed
11 by Article 3 (commencing with Section 415.10) of Chapter 4 of
12 Title 5.

13 (2) The plaintiff shall publish notice of the complaint pursuant
14 to Section 6066 of the Government Code.

15 (3) The plaintiff, or its representative, shall personally appear
16 at a meeting of the board of supervisors of each county overlying
17 the basin at least in part, and announce that the plaintiff has filed
18 the adjudication action and where copies of the complaint may be
19 obtained.

20 (4) The court shall allow any person to intervene in the
21 adjudication action upon an ex parte application that demonstrates
22 that the person holds fee simple ownership in a parcel in the basin.
23 A person filing the ex parte application shall give notice to the
24 plaintiff consistent with the California Rules of Court.

25 832.5. (a) Within 180 days of the filing of a complaint to
26 adjudicate groundwater rights, the court shall conduct a preliminary
27 hearing to determine if the action should proceed to
28 comprehensively determine groundwater rights in the basin in
29 accordance with this chapter. At the preliminary hearing the court
30 may hear expert or lay testimony and the plaintiff shall demonstrate
31 one of the following:

32 (1) There is substantial evidence that declining groundwater
33 levels may cause an undesirable result in the basin.

34 (2) The court cannot provide adequate relief among the potential
35 claimants to a groundwater right in the basin subject to the
36 adjudication action unless the adjudication action is completed.

37 (3) The parties sufficient to comply with Section 847 have
38 agreed to a proposed judgment in the adjudication action.

39 (4) Consistent with Section 2 of Article X of the California
40 Constitution, the interests of groundwater rights holders will be

1 expeditiously and effectively served by the completion of the
2 adjudication action.

3 (b) If, after the preliminary hearing, the court finds that any
4 condition described in paragraphs (1) to (4), inclusive, of
5 subdivision (a) is met, the court shall issue an order declaring that
6 the case is an adjudication action subject to this chapter and
7 authorizing service of landowners in accordance with Section 833.

8 (c) If, after the preliminary hearing, the court finds that no
9 condition described in paragraph (1) to (4), inclusive, of
10 subdivision (a) is met, the court shall either dismiss the adjudication
11 action without prejudice, or find that the action is not subject to
12 this chapter under Section 831 and permit the action to proceed
13 pursuant to the other provisions of this code.

14 (d) Before the preliminary hearing the court may allow expedited
15 discovery consistent with this chapter. The court shall actively
16 manage the expedited discovery to prevent delays in order to
17 enable, to the greatest extent possible and pursuant to Section 833,
18 service of landowners through the next mailing of property tax
19 bills within the basin.

20 833. (a) Together with the filing of the complaint, the plaintiff
21 shall file both of the following:

22 (1) A draft notice titled "NOTICE OF COMMENCEMENT OF
23 GROUNDWATER BASIN ADJUDICATION" in no less than
24 20-point font and the following text printed immediately below
25 the draft notice title in no less than 14-point font:

26 "THIS NOTICE IS IMPORTANT. ANY RIGHTS YOU CLAIM
27 TO PUMP OR STORE GROUNDWATER FROM THE BASIN
28 IDENTIFIED IN THIS NOTICE MAY BE AFFECTED BY A
29 LAWSUIT INITIATED BY THE COMPLAINT SUMMARIZED
30 BELOW.

31 A copy of the complaint may be obtained by contacting the
32 plaintiff or the plaintiff's attorney identified in this notice. If you
33 claim rights to pump or store groundwater within the basin, either
34 now or in the future, you may become a party to this lawsuit by
35 filing an answer to the lawsuit on or before the deadline specified
36 in this notice by completing the attached form answer and filing
37 it with the court indicated in this notice and by sending a copy of
38 the form answer to the plaintiff or the plaintiff's attorney.

39 Failing to participate in this lawsuit could have a significant
40 adverse effect on any right to pump or store groundwater that you

1 may have. You may seek the advice of an attorney in relation to
2 this lawsuit. Such attorney should be consulted promptly. A case
3 management conference in this groundwater basin adjudication
4 proceeding shall occur on the date specified in this notice. If you
5 intend to participate in the groundwater adjudication proceeding
6 to which this notice applies, you are advised to attend the initial
7 case management conference in person or have an attorney
8 represent you at the initial case management conference.

9 Participation requires the production of all information regarding
10 your groundwater use. You must provide this information by the
11 date identified in this notice.

12 A form answer is provided for your convenience. You may fill
13 out the form answer and file it with the court. Should you choose
14 to file the form answer, it will serve as an answer to all complaints
15 and cross-complaints filed in this case.”

16 (2) (A) A draft form answer titled “ANSWER TO
17 ADJUDICATION COMPLAINT” in no less than 20-point font
18 and the following text printed immediately below the draft form
19 answer title in no less than 14-point font:

20 “The undersigned denies all material allegations in the complaint
21 or cross-complaint in this action that seeks to adjudicate rights in
22 the groundwater basin and asserts all applicable affirmative
23 defenses to that complaint.”

24 (B) Notwithstanding any other law, the filing of an answer in
25 the form described in subparagraph (A) in an adjudication action
26 is sufficient to put at issue all material allegations and applicable
27 affirmative defenses to the complaint in the adjudication action.
28 If a party intends to seek adjustment of the basin’s boundaries, it
29 shall disclose that intention in the form answer described in
30 subparagraph (A).

31 (b) The draft notice described in paragraph (1) of subdivision
32 (a) shall include the following information immediately following
33 the text described in paragraph (1) of subdivision (a):

34 (1) The name of the basin that is the subject of the adjudication
35 action.

36 (2) A space to be completed with the case number assigned to
37 the adjudication action, and the name and address of the court and
38 department to which the action is assigned.

1 (3) The name, address, telephone number, and email address of
2 the plaintiff, or plaintiff's attorney, from which the complaint may
3 be obtained.

4 (4) A space to be completed with a date upon which the court
5 will hold a case management conference. The court shall determine
6 the date for the case management conference.

7 (5) The date an answer must be filed with the court.

8 (6) A summary of the causes of action alleged in the complaint
9 and the relief sought. The summary shall not exceed 25 lines.

10 (c) Within 15 days of a court order authorizing service of
11 landowners pursuant to this section, the plaintiff shall file an ex
12 parte application that seeks the court's approval of plaintiff's draft
13 notice and draft form answer filed pursuant to subdivision (a). The
14 plaintiff shall give at least 24 hours' notice of the hearing on the
15 ex parte application to all parties identified in subdivision (a) of
16 Section 832 and any other party the plaintiff has served. The
17 plaintiff's notice of the ex parte application shall include a copy
18 of the draft notice and draft form answer filed pursuant to
19 subdivision (a).

20 (d) Once the court approves the draft notice, the draft notice
21 shall substitute for the summons otherwise provided for in civil
22 actions pursuant to Section 412.20.

23 (e) Following a court order authorizing service of landowners
24 pursuant to this section, the plaintiff shall identify, as expeditiously
25 as possible and using the records of the assessor or assessors of
26 the county or counties in which the basin to be adjudicated lies,
27 the names and addresses of all holders of fee title to real property
28 within the basin. The plaintiff shall provide the court and all parties
29 notice of its acquisition of, or sufficient access to, this information.
30 Upon receipt of the court order authorizing service of landowners
31 pursuant to this section and the plaintiff's draft notice and draft
32 form answer, as approved by an order of the court, the assessor or
33 assessors shall include the court-approved notice and form answer
34 with the next property tax bill sent to each landowner in the basin.
35 The plaintiff shall reimburse the assessor or assessors for the costs
36 of including the court-approved notice and form answer, unless
37 otherwise ordered by the court. The assessor or assessors may
38 appear at any court proceeding concerning the costs associated
39 with including the court-approved notice and form answer with
40 the property tax bills.

1 (f) After the assessor or assessors include the court-approved
2 notice and form answer with the property tax bills pursuant to
3 subdivision (e), the plaintiff shall file with the court a declaration
4 under penalty or perjury attesting to the completion of the mailing.

5 (g) Notwithstanding any other law, the fulfillment of the service
6 provisions of this section, the publication provisions of paragraph
7 (2) of subdivision (b) of Section 832, and the remaining service
8 and notice provisions of this chapter shall be deemed effective
9 service of process of the complaint and notice on all interested
10 parties of the adjudication action for purposes of establishing in
11 rem jurisdiction and the comprehensive effect of the adjudication
12 action.

13 834. Within 15 days of the service of a complaint against or
14 by a local agency in an adjudication action, and upon the motion
15 of any party, the court shall either transfer the adjudication action
16 for all purposes to a neutral county or request the chairperson of
17 the Judicial Council to assign a disinterested judge from a neutral
18 county to hear the adjudication action for all purposes. For purposes
19 of this section, "local agency" has the same definition as that term
20 is defined in subdivision (m) of Section 10721 of the Water Code.

21 835. In an adjudication action there may only be two
22 disqualifications of judges pursuant to Section 170.6,
23 notwithstanding the provisions of Section 170.6 concerning sides
24 in an action. A request or motion to disqualify a judge under
25 Section 170.6 shall be filed within 30 days of completion of service
26 pursuant to Section 833, or within 30 days of a transfer or
27 assignment pursuant to Section 834.

28 836. An adjudication action is presumed to be a complex case
29 within the meaning of Rule 3.400 of the California Rules of Court
30 unless a party demonstrates that the adjudication action is not
31 complex.

32 837. Service of pleadings in an adjudication action, other than
33 the complaint initiating an adjudication action, shall occur
34 electronically to the greatest extent possible. If available, service
35 shall occur through a court-provided electronic service system. If
36 a court-provided electronic service system is unavailable, the
37 parties shall serve documents by email or other equivalent
38 electronic means to the greatest extent possible. To enable
39 electronic service of pleadings, the attorneys of record or parties

1 representing themselves shall include their email address in the
2 captions of pleadings they file in the adjudication action.

3
4 Article 3. Conduct of Action
5

6 838. (a) In managing an adjudication action, the court may,
7 notwithstanding any other law, convene a case management
8 conference within 60 days after service is completed pursuant to
9 Section 833.

10 (b) After the initial case management conference the court may
11 divide the adjudication action into phases. This section shall not
12 limit the court's discretion to order as many phases as the court
13 deems appropriate for the expeditious and appropriate resolution
14 of competing claims to the groundwater basin. The court shall
15 define the scope of any phase of the adjudication action by written
16 order and shall revisit that definition only upon a demonstration
17 that continuing with the phase as previously defined would
18 substantially impede the expeditious resolution of the adjudication
19 action.

20 (c) In a phase of an adjudication action, discovery shall be
21 strictly limited to the scope of the phase, as defined in the court's
22 written order. The court may make any appropriate orders to ensure
23 that discovery during a phase remains within the scope of the phase
24 and, unless an injustice would otherwise result, shall impose
25 monetary sanctions on parties, attorneys, or both parties and
26 attorneys, who, during the phase, propound discovery outside the
27 scope of the phase.

28 (d) Pursuant to Section 632, a court may issue a written
29 statement of decision at the completion of each phase of the
30 adjudication action. If the court issues a written statement of
31 decision, that written statement of decision shall be considered a
32 resolution of the phase and shall be binding for the remainder of
33 the adjudication action unless reversed or modified by an appellate
34 court. Appellate review of a court's written statement of decision
35 that concludes a phase of the adjudication action may be by writ
36 only and a party may only appeal the court's final judgment.

37 (e) A court may facilitate the formation of a class or classes of
38 overlying groundwater rights holders pursuant to the criteria
39 specified in Section 382.

1 839. (a) Subject to subdivision (b), the initial basin boundaries
2 for an adjudication action shall be the basin boundaries identified
3 in Bulletin 118 as of the date the complaint initiating the
4 adjudication action is filed. Based on these boundaries, the court
5 and the parties shall initiate the procedures to serve the complaint
6 in an adjudication action in accordance with Section 833.

7 (b) The court may consider adjusting a basin's boundaries at
8 the initial phase of an adjudication action. The court may refer
9 consideration of adjustment of a basin's boundaries to the
10 department for recommendations in accordance with the procedures
11 described in Section 10722.2 of the Water Code. The court may
12 stay any proceedings in the adjudication action pending the
13 department's resolution of any boundary adjustments, except the
14 court shall not stay the parties' initial disclosures made pursuant
15 to Section 840.

16 (c) If a court, based on department recommendations, adjusts
17 the basin's boundaries after completion of the initial phase of an
18 adjudication action, the basin's boundaries, as determined by the
19 court, shall be the basin's boundaries for all purposes in all
20 subsequent phases of the adjudication action. Appellate review of
21 a court's determination of the basin's boundaries after completion
22 of the initial phase of the adjudication action may be by writ only
23 and shall not be subject to any later writ or appeal.

24 840. (a) Except as otherwise stipulated by the parties or ordered
25 by the court, and without waiting for a discovery request, a party
26 shall provide the court or special master initial disclosures that
27 include all of the following information:

28 (1) The name, address, telephone number, and email address of
29 the party completing the form developed pursuant to subdivision
30 (b).

31 (2) The quantity of any groundwater extraction from the basin
32 by the party, or the party's representative or agent, during each of
33 the 10 calendar years immediately preceding the filing of the
34 complaint.

35 (3) The beneficial purpose of any use of groundwater from the
36 basin or the beneficial use of any alternative water use that the
37 party claims as its use of groundwater.

38 (4) The location of any extraction of groundwater from the basin
39 by the party, or the party's representative or agent.

- 1 (5) The location of any beneficial use of groundwater from the
2 basin or beneficial use of any alternative water use that the party
3 claims as its use of groundwater.
- 4 (6) The quantity of any beneficial use of any alternative water
5 use that the party claims as its use of groundwater under any
6 applicable law, including, but not limited to, Section 1005.1,
7 1005.2, or 1005.4 of the Water Code.
- 8 (7) Identification of all surface water rights and contracts that
9 the party claims provides the basis for its water right claims in the
10 adjudication action.
- 11 (8) The quantity of any replenishment of water to the basin that
12 augmented the basin's native water supply, resulting from the
13 intentional storage of imported or non-native water in the basin,
14 managed recharge of surface water, or return flows resulting from
15 the use of imported water or non-native water on lands overlying
16 the basin by the party, or the party's representative or agent, during
17 each of the 10 calendar years immediately preceding the filing of
18 the complaint.
- 19 (9) The names, addresses, telephone numbers, and email
20 addresses of all persons possessing information that supports the
21 party's disclosures.
- 22 (10) Any other information deemed appropriate by the court
23 for initial disclosure in an adjudication action.
- 24 (b) The Judicial Council shall develop a form for initial
25 disclosures made pursuant to subdivision (a) to facilitate the
26 consistent, independent, impartial, and accessible administration
27 of adjudication actions.
- 28 (c) (1) Unless otherwise stipulated by the parties or ordered by
29 the court, and not including the plaintiff that initiates the
30 adjudication action, a party shall make the initial disclosures
31 described in subdivision (a) within 60 days after the initial case
32 management conference in the adjudication action.
- 33 (2) A plaintiff that initiates the adjudication action shall make
34 the initial disclosures described in subdivision (a) at the time it
35 files the complaint by lodging the required information with the
36 court in an electronic format. The plaintiff shall serve the required
37 information on the defendants or cross-defendants that it names
38 when it serves the complaint.
- 39 (3) The court may order, after the initial case management
40 conference, any supplemental disclosures, other than those

1 described in subdivision (a), that may expedite resolution of the
2 adjudication action.

3 (d) Unless otherwise ordered by the court, a party that is first
4 served, or otherwise joined to the adjudication action, after the
5 initial case management conference shall make the disclosures
6 described in subdivision (a) within 30 days after being served or
7 joined, unless a different time is set by stipulation of the parties
8 or an order of the court. The court shall liberally consider any
9 motions or applications to extend the time for a newly-served or
10 -joined party to make the disclosures described in subdivision (a).

11 (e) A party shall make its initial disclosures based on the
12 information then reasonably available to it. A party is not excused
13 from making its initial disclosures because it has not fully
14 investigated the case, because it challenges the sufficiency of
15 another party's disclosures, or because another party has not made
16 its disclosures.

17 (f) A party that has made its initial disclosures, as described in
18 subdivision (a), or that has responded to another party's discovery
19 request, shall supplement or correct a disclosure or response in
20 either of the following situations:

21 (1) In a timely manner if the party learns that in some material
22 respect the disclosure or response is incomplete or incorrect and
23 the additional or corrective information has not otherwise been
24 made known to the other parties during the disclosure or discovery
25 process.

26 (2) As ordered by the court.

27 (g) To the greatest extent possible, a party shall serve his or her
28 initial disclosures electronically through a court-provided electronic
29 service system, email, or another method of electronic transmission.
30 If it is not possible for the party to serve his or her disclosures
31 electronically, he or she shall serve the disclosures in an electronic
32 format saved on a portable storage media device such as a compact
33 disc or flash drive.

34 (h) A party's obligations under this section may be enforced by
35 a court on its own motion or the motion of a party pursuant to
36 Section 2030.300.

37 (i) A party's disclosures under this section shall be verified
38 under penalty of perjury as being true and correct to the best of
39 the party's knowledge.

1 841. (a) In addition to all other disclosures required by this
2 chapter, a party shall disclose to the other parties the identity of
3 any expert witness it may use at trial to present evidence. For
4 purposes of this chapter, "expert witness" means a witness qualified
5 pursuant to Section 720 of the Evidence Code.

6 (b) Unless otherwise stipulated by the parties or ordered by the
7 court, the disclosure made pursuant to subdivision (a) shall be
8 accompanied by a written report prepared and signed by the expert
9 witness if the witness is retained or specially employed by the
10 party offering the expert witness to testify as an expert in the action,
11 or if the expert witness's duties as the party's employee regularly
12 involves giving expert testimony. The report shall include all of
13 the following:

14 (1) A complete statement of all opinions the witness will express
15 and the basis and reasons for those opinions.

16 (2) The facts or data considered by the witness in forming his
17 or her opinions.

18 (3) Any exhibits the witness will use to summarize or support
19 his or her opinions.

20 (4) The witness's qualifications, including a list of all
21 publications authored by the witness in the previous 10 years.

22 (5) A list of all other cases in which the witness testified as an
23 expert at trial or by deposition in the last five years.

24 (6) A statement of the compensation to be paid for the witness's
25 work and testimony in the adjudication action.

26 (c) If subdivision (b) does not apply to an expert witness because
27 of a stipulation by the parties or an order of the court, the witness's
28 disclosure shall include both of the following:

29 (1) The subject matter on which the witness is expected to
30 present evidence.

31 (2) A summary of the witness's opinions, and the facts or data
32 considered by the witness in forming his or her opinions.

33 (d) Unless otherwise stipulated by the parties, a party shall make
34 the disclosures of any expert witness it intends to present at trial,
35 except for an expert witness presented solely for purposes of
36 impeachment or rebuttal, at the times and in the sequence ordered
37 by the court. If there is no stipulation or court order, the disclosures
38 of an expert witness shall be made as follows:

1 (1) At least 30 days after the court's entry of an order
2 establishing the scope of the relevant phase of the adjudication
3 action.

4 (2) Except for a supplemental expert witness described in
5 paragraph (3), at least 60 days before the date set for trial of the
6 relevant phase of the adjudication action.

7 (3) For a supplemental expert witness who will express an
8 opinion on a subject to be covered by another expert witness
9 designated by an adverse party that was not among the subjects
10 covered by an expert witness initially disclosed by the party
11 offering the supplemental expert witness, no more than 20 days
12 after the initial expert witness disclosure date.

13 (e) The court may modify the disclosure requirements of
14 subdivisions (b) to (d), inclusive, for expert witnesses presented
15 solely for purposes of impeachment or rebuttal. In modifying the
16 disclosure requirements, the court shall adopt disclosure
17 requirements that expedite the court's consideration of the issues
18 presented and shall ensure that expert testimony presented solely
19 for purposes of impeachment or rebuttal is strictly limited to the
20 scope of the testimony that it intends to impeach or rebut.

21 (f) (1) A party whose expert witness has made a disclosure
22 pursuant to this section shall promptly supplement or correct the
23 expert witness's disclosure in either of the following instances:

24 (A) In a timely manner if the party learns that in some material
25 respect the disclosure is incomplete or incorrect, if the additional
26 or corrective information has not otherwise been made known to
27 the other parties during the disclosure or discovery process.

28 (B) As ordered by the court.

29 (2) A party's duty to supplement or correct its expert witness's
30 disclosure includes the information included in the report and the
31 information given during the expert witness's deposition. Unless
32 otherwise stipulated by the parties or ordered by the court, any
33 supplementation or correction shall occur at least 14 days before
34 trial of the applicable phase of the adjudication action.

35 (3) The court may authorize a supplemental deposition of an
36 expert witness based on a supplemental disclosure made pursuant
37 to this subdivision. The court shall appropriately condition the
38 authorization of a supplemental deposition of an expert witness to
39 ensure the expeditious completion of the applicable phase of the
40 adjudication action. The court may require the party whose expert

1 makes the supplemental disclosure to pay some or all of the costs
2 associated with the supplemental deposition.

3 (g) To the greatest extent possible, the parties shall serve expert
4 witness disclosures electronically through a court-provided
5 electronic service system, email, or another method of electronic
6 transmission. If it is not possible for the party to serve his or her
7 expert witness disclosures electronically, he or she shall serve the
8 expert witness disclosures in an electronic format saved on a
9 portable storage media device such as a compact disc or flash
10 drive.

11 (h) If a party or its expert witness fails to comply with this
12 section, the court may exclude the expert witness's testimony from
13 trial, authorize additional depositions of the expert witness at the
14 party's expense, or take other appropriate action upon the noticed
15 motion, or ex parte application, of a party.

16 842. (a) A court in an adjudication action may require the
17 parties to submit written testimony of relevant witnesses in the
18 forms of affidavits or declarations under penalty or perjury in lieu
19 of presenting live testimony. The required written testimony may
20 include, but is not limited to, expert witness opinions and testimony
21 that authenticates documentary evidence. The court may order that
22 the written testimony constitutes the entirety of the witness's direct
23 testimony, require the written testimony to include any exhibits
24 offered in support of the written testimony, and, in the case of
25 written testimony of an expert witness, require a statement of the
26 witness's qualifications.

27 (b) If the court requires the submission of written testimony
28 pursuant to subdivision (a), a complete copy of the direct testimony
29 shall be served at least 21 days before trial of the applicable phase
30 of the adjudication action. A complete copy of any rebuttal
31 testimony shall be served no later than the first day of trial of the
32 applicable phase of the adjudication action. The court shall ensure
33 the rebuttal testimony is strictly limited to the scope of the direct
34 testimony to which it responds.

35 (c) If the contents of the written testimony would have been
36 admissible if the witness testified orally, the written testimony
37 shall be received by the court as a documentary exhibit if, at the
38 trial of the applicable phase of the adjudication action, the witness
39 whose written testimony is being offered is made available for
40 cross-examination by all parties.

1 843. (a) In an adjudication action, the court may appoint a
2 special master whose duties may include the following:

3 (1) Initiating a technical committee consisting of the parties,
4 the parties' designated representatives, or both, to conduct joint
5 factfinding as to the basin's safe yield of groundwater, water
6 demand, and any other technical issues, as directed by the court.
7 The special master shall compile a technical report of the findings
8 in accordance with Section 844.

9 (2) Conducting or facilitating mediation or settlement
10 discussions.

11 (3) Performing other tasks the court may deem appropriate.

12 (b) The special master may be employed by the court as a
13 full-time or part-time employee, or retained as an independent
14 contractor. A special master's compensation and other expenses
15 related to the conduct of an adjudication action shall be fixed by
16 the court, apportioned pro rata to the extent reasonably feasible to
17 do so, and paid by all parties unless the parties agree to another
18 allocation or the court determines that, in the interests of justice,
19 another allocation is necessary. The court may provide for the
20 collection and disbursement of special master fees as it deems
21 appropriate.

22 (c) (1) To assist trial courts in selecting special masters the
23 department shall, on or before January 1, 2017, establish and
24 maintain a list of individuals who may serve as special masters in
25 adjudication actions. To be placed on the list an individual shall
26 have at least 10 years experience as either of the following:

27 (A) A licensed professional engineer, professional hydrologist,
28 or professional geologist.

29 (B) An attorney licensed to practice law in the state.

30 (2) The department shall establish any other qualifications that
31 may be appropriate to ensure that individuals placed on the list are
32 qualified to assist a court in an adjudication action.

33 844. (a) If a technical committee is established pursuant to
34 Section 843, the special master shall provide all parties with a copy
35 of a draft technical report he or she prepares and a notice setting
36 a day at least 60 days after the draft technical report has been
37 provided to all parties before which the parties may submit to the
38 special master written objections to the draft technical report.

39 (b) An objection to the draft technical report shall identify the
40 specific grounds and evidence on which the objection is based.

1 Within 10 days after the close of the period for filing objections,
2 the special master shall provide copies of the objections to all
3 parties.

4 (c) The special master may notice and hold hearings, as he or
5 she deems appropriate, to gather information or address issues
6 raised in the objections to the draft technical report.

7 (d) The special master shall consider the objections to the draft
8 technical report and develop a final certified copy of the technical
9 report that shall be filed with the court, together with a certified
10 copy of all evidence considered by the special master in preparing
11 the draft technical report, all evidence identified in the objections
12 to the draft technical report, and all evidence considered by the
13 special master in preparing the final technical report.

14 845. Chapter 2 (commencing with Section 1115) of Division
15 9 of the Evidence Code shall apply to all mediations, settlement
16 conferences, and other similar out-of-court negotiations in
17 adjudications actions subject to this chapter.

18 846. (a) It is the policy of the state to encourage the
19 compromise and settlement of adjudication actions.

20 (b) Upon the motion of any party to an adjudication action, a
21 court may do any of the following:

22 (1) Stay an adjudication action for a period of up to one year,
23 subject to renewal in the court's discretion upon a showing of good
24 cause, in order to facilitate any of the following:

25 (A) (i) Timely development of a groundwater sustainability
26 plan under the Sustainable Groundwater Management Act that
27 may serve as the basis of a stipulated judgment setting forth a
28 physical solution for management of the basin.

29 (ii) If the court stays an adjudication action for purposes of
30 facilitating timely progress on a groundwater sustainability plan,
31 the court may direct the parties to provide the court with regular
32 updates on the progress in developing the groundwater
33 sustainability plan.

34 (B) Technical studies that may be useful to the parties in
35 developing a stipulated judgment or physical solution.

36 (C) Voluntary mediation on all, or a portion of, the subject
37 matters or legal questions identified in the adjudication action or
38 any phase of the adjudication action.

1 (D) Compromise and settlement of the adjudication action, a
2 phase of the adjudication action, or any subject matter of the
3 adjudication action or a phase of the adjudication action.

4 (2) Schedule mandatory mediation and appointment of a neutral
5 mediator concerning the adjudication action, a phase of the
6 adjudication action, or any subject matter of the adjudication action
7 or a phase of the adjudication action.

8 (3) Schedule phases of trial in combination with mandatory
9 mediation for purposes of fostering compromise concerning the
10 adjudication action, a phase of the adjudication action, or any
11 subject matter of the adjudication action or a phase of the
12 adjudication action.

13 (c) A stay may be extended for up to one year at a time. If a
14 party opposes an extension of a stay, a stay may only be granted
15 after a showing that there is good progress being made on the
16 issues that were identified as the reasons for the stay. The total
17 time period an adjudication action may be stayed shall not exceed
18 3 years.

19 (d) A stay pursuant to this section shall not stay, or otherwise
20 delay, the parties' obligations to provide initial disclosures pursuant
21 to Section 840 unless the court determines the initial disclosures
22 will not benefit resolution of the adjudication action.

23 847. (a) If a party, or a group of parties, submits a proposed
24 stipulated judgment that is supported by (1) more than 50 percent
25 of all named parties in the adjudication action and (2) groundwater
26 rights holders holding title to at least 75 percent of the groundwater
27 production during the past 10 years in the basin, the court shall
28 impose any physical solution that is part of the stipulated judgment
29 as a component of the final judgment in the adjudication action if
30 the physical solution satisfies all of the following criteria:

31 (1) It furthers the interests of the state in ensuring that the water
32 resources of the state are put to beneficial use to the fullest extent
33 that they are capable, as required by Section 2 of Article X of the
34 California Constitution.

35 (2) It is consistent with all water right priorities in the basin.

36 (3) It treats all objecting parties equitably as compared to the
37 stipulating parties.

38 (b) A party objecting to a proposed stipulated judgment shall
39 demonstrate, by a preponderance of the evidence, that the proposed
40 stipulated judgment does not satisfy the criteria described in

1 paragraphs (1) to (3), inclusive, of subdivision (a). If the objecting
2 party is unable to make this showing, the court may impose the
3 proposed stipulated judgment on all parties.

4 SEC. 2. No reimbursement is required by this act pursuant to
5 Section 6 of Article XIII B of the California Constitution because
6 the only costs that may be incurred by a local agency or school
7 district will be incurred because this act creates a new crime or
8 infraction, eliminates a crime or infraction, or changes the penalty
9 for a crime or infraction, within the meaning of Section 17556 of
10 the Government Code, or changes the definition of a crime within
11 the meaning of Section 6 of Article XIII B of the California
12 Constitution.

O

EXHIBIT "C"

AMENDED IN SENATE MAY 5, 2015

AMENDED IN SENATE APRIL 6, 2015

SENATE BILL

No. 226

Introduced by Senator Pavley

February 13, 2015

An act to amend Sections 10721 and ~~10735.8~~, *10735.8 of*, and to add Chapter 12 (commencing with Section 10737) to Part 2.74 of Division 6, ~~of 6 of~~, the Water Code, relating to groundwater.

LEGISLATIVE COUNSEL'S DIGEST

SB 226, as amended, Pavley. Sustainable Groundwater Management Act: groundwater rights.

Existing law, the Sustainable Groundwater Management Act, requires all groundwater basins designated as high- or medium-priority basins by the Department of Water Resources that are designated as basins subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020, and requires all other groundwater basins designated as high- or medium-priority basins to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2022, except as specified.

Existing law specifies the jurisdiction of the courts. Under existing law, courts may adjudicate rights to produce groundwater and exercise other powers relating to the supervision of a groundwater basin.

This bill would find and declare that it establishes a timely and comprehensive method for determining rights to groundwater. The bill would provide that a court shall use the Code of Civil Procedure for determining rights to groundwater, except as provided by the special

procedures established in the bill. This bill would require the process for determining rights to groundwater to be available to any court of competent jurisdiction. The bill would provide that it applies to Indian tribes and the federal government. The bill would require the boundaries of a basin to be as identified in Bulletin 118, unless other basin boundaries are established, as specified. The bill would authorize the Department of Water Resources and the Department of Fish and Wildlife to intervene in an action or proceeding if they claim an interest relating to the action or proceeding, as provided. The bill would specify service and notice procedures. The bill would require a party to provide specified initial disclosures to the other parties, including, among other disclosures, information relating to expert witnesses.

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

- 1 SECTION 1. Section 10721 of the Water Code is amended to
2 read:
3 10721. Unless the context otherwise requires, the following
4 definitions govern the construction of this part:
5 (a) "Adjudication action" means an action filed in the superior
6 or federal district court to determine the rights to extract
7 groundwater from a basin or store water within a basin, including,
8 but not limited to, actions to quiet title respecting rights to extract
9 or store groundwater or an action brought to impose a physical
10 solution on a basin.
11 (b) "Basin" means a groundwater basin or subbasin identified
12 and defined in Bulletin 118 or as modified pursuant to Chapter 3
13 (commencing with Section 10722).
14 (c) "Bulletin 118" means the department's report entitled
15 "California's Groundwater: Bulletin 118" updated in 2003, as it
16 may be subsequently updated or revised in accordance with Section
17 12924.
18 (d) "Coordination agreement" means a legal agreement adopted
19 between two or more groundwater sustainability agencies that
20 provides the basis for coordinating multiple agencies or
21 groundwater sustainability plans within a basin pursuant to this
22 part.

1 (e) “De minimis extractor” means a person who extracts, for
2 domestic purposes, two acre-feet or less per year.

3 (f) “Expert witness” means a witness qualified pursuant to
4 Section 720 of the Evidence Code.

5 (g) “Governing body” means the legislative body of a
6 groundwater sustainability agency.

7 (h) “Groundwater” means water beneath the surface of the earth
8 within the zone below the water table in which the soil is
9 completely saturated with water, but does not include water that
10 flows in known and definite channels.

11 (i) “Groundwater extraction facility” means a device or method
12 for extracting groundwater from within a basin.

13 (j) “Groundwater recharge” means the augmentation of
14 groundwater, by natural or artificial means.

15 (k) “Groundwater sustainability agency” means one or more
16 local agencies that implement the provisions of this part. For
17 purposes of imposing fees pursuant to Chapter 8 (commencing
18 with Section 10730) or taking action to enforce a groundwater
19 sustainability plan, “groundwater sustainability agency” also means
20 each local agency comprising the groundwater sustainability
21 agency if the plan authorizes separate agency action.

22 (l) “Groundwater sustainability plan” or “plan” means a plan
23 of a groundwater sustainability agency proposed or adopted
24 pursuant to this part.

25 (m) “Groundwater sustainability program” means a coordinated
26 and ongoing activity undertaken to benefit a basin, pursuant to a
27 groundwater sustainability plan.

28 (n) “Local agency” means a local public agency that has water
29 supply, water management, or land use responsibilities within a
30 groundwater basin.

31 (o) “Operator” means a person operating a groundwater
32 extraction facility. The owner of a groundwater extraction facility
33 shall be conclusively presumed to be the operator unless a
34 satisfactory showing is made to the governing body of the
35 groundwater sustainability agency that the groundwater extraction
36 facility actually is operated by some other person.

37 (p) “Owner” means a person owning a groundwater extraction
38 facility or an interest in a groundwater extraction facility other
39 than a lien to secure the payment of a debt or other obligation.

1 (q) “Personal information” has the same meaning as defined in
2 Section 1798.3 of the Civil Code.

3 (r) “Planning and implementation horizon” means a 50-year
4 time period over which a groundwater sustainability agency
5 determines that plans and measures will be implemented in a basin
6 to ensure that the basin is operated within its sustainable yield.

7 (s) “Public water system” has the same meaning as defined in
8 Section 116275 of the Health and Safety Code.

9 (t) “Recharge area” means the area that supplies water to an
10 aquifer in a groundwater basin.

11 (u) “Sustainability goal” means the existence and
12 implementation of one or more groundwater sustainability plans
13 that achieve sustainable groundwater management by identifying
14 and causing the implementation of measures targeted to ensure
15 that the applicable basin is operated within its sustainable yield.

16 (v) “Sustainable groundwater management” means the
17 management and use of groundwater in a manner that can be
18 maintained during the planning and implementation horizon
19 without causing undesirable results.

20 (w) “Sustainable yield” means the maximum quantity of water,
21 calculated over a base period representative of long-term conditions
22 in the basin and including any temporary surplus, that can be
23 withdrawn annually from a groundwater supply without causing
24 an undesirable result.

25 (x) “Undesirable result” means one or more of the following
26 effects caused by groundwater conditions occurring throughout
27 the basin:

28 (1) Chronic lowering of groundwater levels indicating a
29 significant and unreasonable depletion of supply if continued over
30 the planning and implementation horizon. Overdraft during a period
31 of drought is not sufficient to establish a chronic lowering of
32 groundwater levels if extractions and recharge are managed as
33 necessary to ensure that reductions in groundwater levels or storage
34 during a period of drought are offset by increases in groundwater
35 levels or storage during other periods.

36 (2) Significant and unreasonable reduction of groundwater
37 storage.

38 (3) Significant and unreasonable seawater intrusion.

1 (4) Significant and unreasonable degraded water quality,
2 including the migration of contaminant plumes that impair water
3 supplies.

4 (5) Significant and unreasonable land subsidence that
5 substantially interferes with surface land uses.

6 (6) Depletions of interconnected surface water that have
7 significant and unreasonable adverse impacts on beneficial uses
8 of the surface water.

9 (y) “Water budget” means an accounting of the total
10 groundwater and surface water entering and leaving a basin
11 including the changes in the amount of water stored.

12 (z) “Watermaster” means a watermaster appointed by a court
13 or pursuant to other law.

14 (aa) “Water year” means the period from October 1 through the
15 following September 30, inclusive.

16 ~~(bb)~~

17 (ab) “Wellhead protection area” means the surface and
18 subsurface area surrounding a water well or well field that supplies
19 a public water system through which contaminants are reasonably
20 likely to migrate toward the water well or well field.

21 SEC. 2. Section 10735.8 of the Water Code is amended to read:

22 10735.8. (a) The board, after notice and a public hearing, may
23 adopt an interim plan for a probationary basin.

24 (b) The interim plan shall include all of the following:

25 (1) Identification of the actions that are necessary to correct a
26 condition of long-term overdraft or a condition where groundwater
27 extractions result in significant depletions of interconnected surface
28 waters, including recommendations for appropriate action by any
29 person.

30 (2) A time schedule for the actions to be taken.

31 (3) A description of the monitoring to be undertaken to
32 determine effectiveness of the plan.

33 (c) The interim plan may include the following:

34 (1) Restrictions on groundwater extraction.

35 (2) A physical solution.

36 (3) Principles and guidelines for the administration of rights to
37 surface waters that are connected to the basin.

38 (d) Except as provided in subdivision (e), the interim plan shall
39 be consistent with water right priorities, subject to Section 2 of
40 Article X of the California Constitution.

1 (e) The board shall include in its interim plan a groundwater
2 sustainability plan, or any element of a plan, that the board finds
3 complies with the sustainability goal for that portion of the basin
4 or would help meet the sustainability goal for the basin. Where,
5 in the judgment of the board, an adjudication action can be relied
6 on as part of the interim plan, either throughout the basin or in an
7 area within the basin, the board may rely on, or incorporate
8 elements of, that adjudication into the interim plan adopted by the
9 board.

10 (f) In carrying out activities that may affect the probationary
11 basin, state entities shall comply with an interim plan adopted by
12 the board pursuant to this section unless otherwise directed or
13 authorized by statute and the state entity shall indicate to the board
14 in writing the authority for not complying with the interim plan.

15 (g) (1) After the board adopts an interim plan under this section,
16 the board shall determine if a groundwater sustainability plan or
17 an adjudication action is adequate to eliminate the condition of
18 long-term overdraft or condition where groundwater extractions
19 result in significant depletions of interconnected surface waters,
20 upon petition of either of the following:

21 (A) A groundwater sustainability agency that has adopted a
22 groundwater sustainability plan for the probationary basin or a
23 portion thereof.

24 (B) A person authorized to file the petition by a judicial order
25 or decree entered in an adjudication action in the probationary
26 basin.

27 (2) The board shall act on a petition filed pursuant to paragraph
28 (1) within 90 days after the petition is complete. If the board, in
29 consultation with the department, determines that the groundwater
30 sustainability plan or adjudication action is adequate, the board
31 shall rescind the interim plan adopted by the board for the
32 probationary basin, except as provided in paragraphs (3) and (4).

33 (3) Upon request of the petitioner, the board may amend an
34 interim plan adopted under this section to eliminate portions of
35 the interim plan, while allowing other portions of the interim plan
36 to continue in effect.

37 (4) The board may decline to rescind an interim plan adopted
38 pursuant to this section if the board determines that the petitioner
39 has not provided adequate assurances that the groundwater
40 sustainability plan or judicial order or decree will be implemented.

1 (5) This subdivision is not a limitation on the authority of the
2 board to stay its proceedings under this section or to rescind or
3 amend an interim plan adopted pursuant to this section based on
4 the progress made by a groundwater sustainability agency or in
5 an adjudication action pursuant to Chapter 12 (commencing with
6 Section 10737), even if the board cannot make a determination of
7 adequacy in accordance with paragraph (1).

8 (h) Before January 1, 2025, the state board shall not establish
9 an interim plan under this section to remedy a condition where the
10 groundwater extractions result in significant depletions of
11 interconnected surface waters.

12 (i) The board's authority to adopt an interim plan under this
13 section does not alter the law establishing water rights priorities
14 or any other authority of the board.

15 SEC. 3. Chapter 12 (commencing with Section 10737) is added
16 to Part 2.74 of Division 6 of the Water Code, to read:

17
18 CHAPTER 12. DETERMINATION OF RIGHTS TO GROUNDWATER

19
20 Article 1. General Provisions

21
22 10737. (a) The Legislature finds and declares that this chapter
23 establishes a timely and comprehensive method for determining
24 rights to groundwater in furtherance of the objectives of this part.

25 (b) This chapter establishes special procedures for court use in
26 determining rights to groundwater. Unless otherwise provided in
27 this chapter, a court shall determine rights to groundwater using
28 the procedures codified in the Code of Civil Procedure.

29 (c) *Nothing contained in this chapter shall be deemed to repeal*
30 *or preclude an action to determine rights to groundwater in*
31 *accordance with the common law.*

32 10737.2. In making its determination of rights to groundwater,
33 a court shall avoid an undesirable—~~results~~ *result* as defined in
34 Section 10721.

35
36 Article 2. Application

37
38 10738. The process defined in this chapter shall be available
39 to any court of competent jurisdiction.

1 10738.2. (a) Consistent with subdivision (b) of Section
2 10720.3, this chapter applies to an Indian tribe and to the federal
3 government, to the extent authorized under federal law.

4 (b) Section 389 of the Code of Civil Procedure shall not apply
5 to any failure to join an Indian tribe or the United States to an
6 action or proceeding brought under this chapter.

7 10738.4. An action requesting a court to determine water rights
8 under this chapter shall be deemed provisionally complex within
9 the meaning provided in Rule 3.400 of Title 3 of the California
10 Rules of Court.

11 12 Article 3. Basin Boundaries

13
14 10739. Unless other basin boundaries are established pursuant
15 to Section 10722.2 or subdivision (b) of Section 12924, the
16 boundaries of a basin shall be as identified in Bulletin 118.

17 18 Article 4. Parties

19
20 10740. Upon timely motion, the court shall permit the
21 department or the Department of Fish and Wildlife, or both, to
22 intervene in an action or proceeding brought under this chapter if
23 the movant claims an interest relating to the action or proceeding
24 and is so situated that disposing of the action or proceeding may,
25 as a practical matter, impair or impede the movant's ability to
26 protect its interest.

27 28 Article 5. Service and Notice

29
30 10741. (a) All known defendants shall be served in the manner
31 provided in Chapter 4 (commencing with Section 413.10) of Title
32 5 of Part 2 of the Code of Civil Procedure.

33 (b) (1) All unknown defendants shall be served by publication
34 as provided in Section 415.50 of the Code of Civil Procedure.

35 (2) In addition to other requirements of Section 415.50 of the
36 Code of Civil Procedure, the publication shall describe the
37 groundwater basin that is the subject of the action. The publication
38 shall describe the groundwater basin as identified pursuant to
39 Section 10739, the Internet address for a map depicting the basin,

1 and any other identifying information that the court deems
2 appropriate.

3
4 Article 6. Discovery

5
6 10742. (a) Except as otherwise stipulated or ordered by the
7 court, a party shall, without awaiting a discovery request, provide
8 to the other parties all of the following:

9 (1) The name and, if known, the address and telephone number
10 of each individual likely to have discoverable information, along
11 with the subjects of that information, who the disclosing party may
12 use to support its claims or defenses, unless the use would be solely
13 for impeachment.

14 (2) A copy or a description by category and location, of all
15 documents, electronically stored information, and tangible things
16 that the disclosing party has in its possession, custody, or control
17 that it may use to support its claims or defenses, unless the use
18 would be solely for impeachment.

19 (3) A quantification of claims to water in the basin by the
20 disclosing party. The disclosing party shall also make available
21 for inspection and copying any documents or other evidentiary
22 material, unless privileged or protected from disclosure, on which
23 each claim is based, including materials bearing on the nature and
24 extent of those claims.

25 (b) A party shall make all disclosures required by this article at
26 or within 14 days after the parties' initial case management
27 conference unless a different time is set by stipulation or court
28 order, or unless a party objects during the conference that initial
29 disclosures are not appropriate in this action and states the objection
30 in a proposed discovery plan. In ruling on the objection, the court
31 shall determine what disclosures, if any, are to be made and shall
32 set the time for disclosure.

33 (c) A party that is first served or otherwise joined after the initial
34 case management conference shall make its initial disclosures
35 within 30 days after being served or joined, unless a different time
36 is set by stipulation or court order.

37 (d) A party shall make its initial disclosures based on the
38 information then reasonably available to it. A party is not excused
39 from making its disclosures because it has not fully investigated

1 the case or because it challenges the sufficiency of another party's
2 disclosures or because another party has not made its disclosures.

3
4 Article 7. Expert Witnesses
5

6 10743. (a) In addition to the other disclosures required by this
7 chapter, a party shall disclose to the other parties the identity of
8 any expert witness it may use at trial to present evidence.

9 (b) Unless otherwise stipulated or ordered by the court, this
10 disclosure shall be accompanied by a written report, prepared and
11 signed by the expert witness, if the expert witness is retained or
12 specially employed to provide expert testimony in the case or
13 whose duties as the party's employee regularly involve giving
14 expert testimony. The report shall contain all of the following:

15 (1) A complete statement of all opinions the expert witness will
16 express and the basis and reasons for them.

17 (2) The facts or data considered by the expert witness in forming
18 his or her opinions.

19 (3) Any exhibits that will be used to summarize or support the
20 opinions of the expert witness.

21 (4) The expert witness' qualifications, including a list of all
22 publications authored in the previous 10 years.

23 (5) A list of all other cases in which, during the previous four
24 years, the expert witness testified as an expert at trial or by
25 deposition.

26 (6) A statement of the compensation to be paid to the expert
27 witness for the study and testimony in the case.

28 (c) Unless otherwise stipulated or ordered by the court, if the
29 expert witness is not required to provide a written report, the
30 disclosure shall state both of the following:

31 (1) The subject matter on which the expert witness is expected
32 to present evidence.

33 (2) A summary of the facts and opinions to which the expert
34 witness is expected to testify.

35 (d) A party shall make the required disclosures at the times and
36 in the sequence that the court orders. Absent a stipulation or a court
37 order, the disclosures shall be made at either of the following times:

38 (1) At least 90 days before the date set for trial or for the case
39 to be ready for trial.

- 1 (2) If the evidence is intended solely to contradict or rebut
- 2 evidence on the same subject matter identified by another party,
- 3 within 30 days after the other party's disclosure.

O



Short-Lived Climate Pollutant Reduction Strategy

CONCEPT PAPER

California Environmental Protection Agency
 **Air Resources Board**

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Preface

California must achieve deep reductions in short-lived climate pollutant (SLCP) emissions by 2030 to meet future greenhouse gas emission targets and air quality goals. In addition, intensified, global action to reduce these emissions is the only way to immediately slow global warming and is necessary to keep warming below 2°C through at least 2050, which is a critical threshold to manage the damaging effects of climate change. Short-lived climate pollutants, which include methane, fluorinated gases (F-gases), black carbon, and tropospheric ozone, are among the most harmful to both human health and global climate.

Significant reductions in SLCP emissions can be achieved globally using cost-effective technologies and strategies, some of which have already been demonstrated effectively in California. Over the past several decades, the State's efforts in controlling harmful emissions have prevented thousands of premature deaths in California, saved the State many tens of billions of dollars in energy and health costs, and have occurred alongside strong economic growth throughout our diverse economy. Applying California's experiences to reduce SLCPs globally would help prevent millions of premature deaths; boost agricultural productivity; limit disruption of historic rainfall patterns; slow the melting of glaciers, snowpack, and sea ice; reduce sea level rise; and provide trillions of dollars in economic benefit each year.

California has taken significant steps in reducing SLCP emissions, especially black carbon from transportation, methane from oil and gas operations and landfill emissions, and F-gas emissions from refrigerants, insulating foams, and aerosol propellants. Still, more remains to be done to reduce emissions from these and other sources in the State, including methane from waste management and dairies, black carbon from fossil-fuel combustion and biomass burning, and F-gas emissions from refrigeration and air conditioning systems. The State is committed to further reducing SLCP emissions.

The Legislature recognized the critical role that SLCPs must play in the State's climate efforts with the passage of Senate Bill 605 (Lara, Chapter 523, Statutes of 2014), which requires the Air Resources Board (ARB) to develop a strategy by the end of 2015 to further reduce SLCP emissions. In his 2015 Inaugural Address, Governor Brown reinforced this commitment and called on California to show the world the path to limiting global warming below 2°C through 2050, while highlighting the role that action to cut SLCPs must play in this effort. In April, the Governor set a target for reducing greenhouse gas emissions to 40 percent below 1990 levels by 2030, which the actions identified in the Strategy will support.

This Concept Paper presents initial ideas that will be considered and evaluated in the coming months by ARB, in coordination with other agencies, as it develops a SLCP Strategy pursuant to SB 605. The Concept Paper will be discussed at a May 27, 2015, public workshop. Comments received on the Concept Paper will inform the development of a draft Strategy that ARB expects to release later this summer for public review. ARB welcomes broad participation among stakeholders, experts and interested

parties throughout this process, which will be important to the development of an effective Strategy. The workshop notice, along with any other additional material related to the development of the Strategy, will be posted on ARB's SLCP website at: <http://www.arb.ca.gov/cc/shortlived/shortlived.htm>.

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Significant Benefits from Accelerated Action on Short-Lived Climate Pollution

Short-lived climate pollutants (SLCPs) include methane (CH₄), tropospheric ozone (O₃), black carbon (soot), and fluorinated gases (F-gases, including hydrofluorocarbons, or HFCs). They are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants, including carbon dioxide (CO₂), which is the primary pollutant regulated under AB 32. Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO₂. SLCPs may be responsible for about 40 percent or more of global warming experienced to date.^{1,2,3,4}

Cutting emissions of these pollutants is the *only* way to immediately slow global warming and reduce the impacts of climate change. While CO₂ is the most abundant well-mixed greenhouse gas (GHG) and primarily responsible for global warming, it has an average lifetime of 100 years or more, and CO₂ emissions today will continue to warm the planet for decades to come. On the other hand, about 90 percent of the decrease in the global mean temperature that would accrue from cutting emissions of SLCPs would occur within about a decade.⁵ Ultimately, immediate and significant cuts in emissions of both short-lived and long-lived climate pollutants, especially CO₂, are needed to keep average warming below 2°C this century.

Cutting emissions of SLCPs can also often be accomplished quickly and effectively, by putting emission control devices on existing equipment and infrastructure. Therefore, it is within our grasp to significantly cut emissions of SLCPs from worldwide sources by 2030.

While some sources will remain difficult to control over the next 15 years – especially natural sources – existing strategies can cost-effectively reduce global methane emissions an estimated 40 percent and black carbon an estimated 80 percent below reference levels in 2030.⁶ Additionally, a new global phase-down of HFCs under the Montreal Protocol and other efforts could cut the expected use of F-gases by more than 50 percent in 2030.^{7,8}

Achieving these levels of global reductions would deliver significant climate benefits. It would cut the expected rate of global warming in half by 2050, or by about 0.6°C,^{9,10} which is about four times more than the reductions in warming that may come by 2050 from action on CO₂ alone.¹¹ It would also increase the probability of staying below the 2°C threshold to more than 90 percent through 2050.^{12,13}

The benefits could be even greater in the Arctic, which is especially vulnerable to black carbon emissions and is warming twice as fast as the rest of the world.¹⁴ The current rate of warming there could be slowed by two-thirds by 2040, or 0.7°C, due to these levels of emission reductions.¹⁵ This could be critically important for stabilizing climate change and its impacts, as the Arctic is an important driver of sea level rise and weather patterns throughout the Northern Hemisphere, with changes there potentially affecting drought in California and extreme snow and cold in the upper Midwest and New England, although such links have not been definitively proven.^{16,17} Accelerated

warming in the Arctic could also lead to irreversible climate “tipping points,” such as release of vast quantities of CO₂ and methane from melting permafrost.¹⁸

Global mean sea level will continue to rise during the twenty-first century, and the rate of sea level rise will exceed that observed during 1971 to 2010 due to increased ocean warming and increased loss of mass from glaciers and ice sheets. Sea level rise is an important impact of climate change on California due to the long coastline and large population that lives near coastal waters. A recent study shows that SLCP mitigation can have significant benefits for limiting sea level rise. It can slow down the rate of sea level rise by roughly 25-50 percent this century.¹⁹

Black carbon is a component of fine particulate matter (PM_{2.5}) resulting from combustion sources such as biomass burning and diesel emissions; diesel emissions are also carcinogenic. Recent studies suggest that deploying existing, cost-effective technologies to reduce SLCP emissions can also cut global emissions of PM_{2.5} by 50 percent, oxides of nitrogen (NO_x) emissions by 35 percent, and carbon monoxide (CO) emissions by 60 percent.²⁰ If these measures were fully in place by 2030, an estimated 2.4 million premature deaths and 53 million metric tons of crop losses could be avoided globally, per year. The economic value of these climate, crop, and health benefits is estimated to be about \$5.9 trillion annually.²¹

In addition to its climate and health impacts, black carbon (as a component of PM) disrupts cloud formation, precipitation patterns, water storage in snowpack and glaciers, and agricultural productivity.²² In California, State and international action to reduce emissions of SLCPs can improve air quality and reduce related health risks, hospitalizations and medical expenses, especially in disadvantaged communities. Other benefits to California include reducing damage to forests and crops, reducing background ozone and particulate levels to help meet federal air quality standards, and reducing disruption of historic rainfall patterns. California is working with a set of national and subnational partners throughout the world to fight air pollution and climate change, which will help deliver these benefits to our State while providing significant benefits where emission reductions occur.

Strengthening California Climate Leadership

Prompt global action to reduce emissions of SLCPs offers tremendous global climate, economic, food security, and health benefits, and will help us achieve our international goal of stabilizing global warming at or below 2°C this century. Modeling results suggest that delaying global efforts to cut methane emissions until 2030 or black carbon emissions until 2040 would lead to crossing the 2°C threshold by 2050.^{23,24}

California is already a leader on reducing emissions of SLCPs:

- *Black carbon:* California has cut anthropogenic sources of black carbon emissions by more than 90 percent since the 1960s, and will cut them in half again by 2020. These efforts prevent an estimated 5,000 premature deaths in the State each year, and deliver important climate benefits. If the world

replicated this success, it would slow global warming by an estimated 15 percent,²⁵ essentially offsetting one to two decades' worth of CO₂ emissions.²⁶

- *Methane*: California has the nation's strongest standards for limiting methane emissions from landfills, has existing or proposed offset protocols under our Cap-and-Trade program to reduce methane emissions from dairies, coal mines, and rice cultivation, and has rules under development and being implemented that should create a comprehensive approach to limit methane leaks from the oil and gas sectors.
- *F-gases*: California is the only subnational jurisdiction in the world with an inventory for F-gas emissions, a Cap-and-Trade offset protocol incentivizing the capture and destruction of ozone depleting substances (which are also F-gases), and regulations in place that will cut emissions of F-gases by 25 percent below projected levels in 2020.

Still, more remains to be done. California is home to some of the highest levels of air pollution in the country, and although the State has substantially reduced particulate matter and black carbon emissions from on-road transportation, vehicles still pollute the air in our communities and harm the lungs of some of our most vulnerable populations. Methane is responsible for about 25 percent of current global warming, and its emissions continue to increase in California and globally. F-gases, specifically HFCs, are the fastest growing source of GHG emissions in California and globally. California is committed to expanding upon its leading climate and air quality policies with a targeted effort to significantly cut emissions of SLCPs.

The Legislature and Governor Brown further solidified the State's commitment to addressing short-lived climate pollution by passing and signing Senate Bill 605 (Lara, Chapter 523, Statutes of 2014). Accordingly, ARB will develop a plan in 2015, in coordination with other state and local agencies, to integrate planning, ongoing efforts, and identify new measures to help overcome obstacles and significantly cut SLCP emissions through 2030.

Many of the benefits of cutting SLCP emissions in California will accrue in the most disadvantaged parts of the State, where pollution levels and their health impacts are often highest, and where further economic development may be most needed. For example:

- Further cutting black carbon emissions from the transportation sector and building a sustainable freight system would have health and economic benefits for communities in Southern California and the Inland Empire along freight corridors and near ports and railyards where diesel particulate matter concentrations are high;
- Investments to cut methane and black carbon emissions as part of an integrated strategy to reduce emissions from agriculture and waste and support healthy soils and a resilient and competitive agricultural sector, can support jobs and economic growth, and improved public health throughout the Central Valley;

- Improving management and health of forests and rural landscapes to mitigate black carbon emissions from wildfires and biomass burning can help bring investment, economic, and climate resiliency benefits throughout the Sierra and other rural parts of California; and
- Switching to low-global warming potential (GWP) refrigerants in air conditioning systems can also improve their energy efficiency, which can help to cut transportation fuel consumption and electricity bills throughout the State, especially in the hottest climate zones, including the Central Valley and San Bernardino, Imperial, Inyo, and Riverside counties.

By highlighting the critical role that SLCPs play in addressing climate change, the significant benefits associated with strong action to reduce them, and committing to strong action to reduce emissions of both SLCPs and CO₂ in 2020, 2030, and beyond, California can strengthen its climate leadership and accelerate global progress to limit global warming and the impacts of climate change.

Foster International Action to Significantly Reduce SLCP Emissions and Impacts

California is already fostering broad action to reduce SLCP emissions. California is actively engaged with national and subnational governments in China, India, Mexico, U.S. states, Canadian provinces, and elsewhere in efforts to reduce GHG emissions and air pollution. Many of these efforts will help reduce emissions of black carbon from the transportation sector and emissions of other SLCPs, including activities with Mexico pursuant to a Memorandum of Understanding signed in 2014. Additionally, last September at the United Nations (UN) Climate Summit, ARB became the first state-level entity to sign onto action statements of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants. At the UN climate negotiations in Lima, California co-sponsored an event with Mexico on SLCPs and their role in an international framework to contribute to national commitments to reduce emissions. We continue to be committed to acting both bilaterally and multilaterally to cooperate with other jurisdictions to cut SLCP emissions.

Building on leadership around SLCPs can provide an important example for action in other countries and jurisdictions, and is one of the most significant opportunities to accelerate international progress to fight climate change. California is in a unique position to serve as a model for action for other countries and jurisdictions to accelerate their progress to reduce emissions of both SLCPs and CO₂, based on our demonstrated leadership on air quality and climate change, commitments to set stringent, science-based targets to reduce emissions of both CO₂ and SLCPs, and integrated planning efforts like this one to develop comprehensive policy frameworks to achieve those goals. As we have done for decades already, California's actions on SLCPs can demonstrate win-win opportunities for both the most developed countries, where reducing SLCP emissions is an important element of broad efforts to cut GHG emissions, as well as for the least developed countries, where SLCP reductions have tremendous benefits for air quality and human health.

“At national and sub-national scales many of the identified [SLCP] measures could be implemented under existing policies designed to address air quality and development concerns. Improved cooperation within and between regions would enhance widespread implementation and address transboundary climate and air quality issues.”
– UNEP (2011) *Integrated Assessment of Black Carbon and Tropospheric Ozone*

In developing the Strategy, California will look to build on its international leadership position on climate change and air quality. The Strategy will identify and prioritize opportunities to expand action on SLCPs beyond our borders, and look to learn from others who are implementing programs new to us, including landfill diversion and anaerobic digestion. The State will also explore additional opportunities to further reduce air pollution, greenhouse gas, and SLCP emissions through its existing partnerships, perhaps including collaborative pilot programs or other efforts to collectively reduce emissions.

Ultimately, each state, region, or country has its own mix of SLCP sources, needs, and opportunities to reduce emissions. While we are developing a Strategy to address our own, we will also look to highlight the critical role that this type of planning and goal setting plays in helping to successfully reduce emissions and maximize local and global benefits. We will share this planning effort with others, and encourage them to adopt specific SLCP reduction targets and plans to achieve them. A few already have – President Obama has set specific targets to cut methane emissions from the oil and gas sector, Mexico has included targets to cut black carbon emissions in its Intended Nationally Determined Contribution to the United Nations Framework Convention on Climate Change, and Norway has developed an SLCP action plan of its own.²⁷ But these types of commitments and planning efforts need to be adopted much more broadly, and by developing a comprehensive plan to achieve necessary SLCP reductions in an effective and beneficial way, California will continue to foster broader action beyond its borders, and demonstrate effective processes and strategies to address climate change.

Process for Developing a Short-Lived Climate Pollutant Strategy

The 2014 Scoping Plan Update identified SLCPs as an important aspect of a comprehensive approach to addressing climate change. It committed ARB to develop a short-lived climate pollutant strategy in 2015 as part of a broad effort to reduce emissions of all GHGs from all sources – including CO₂ from energy-related activities, as well as emissions from natural and working lands, and N₂O.

Senate Bill 605 reaffirmed and codified that commitment. The bill requires ARB to “develop a comprehensive strategy to reduce emissions of SLCPs in the state” by January 1, 2016, and in developing the strategy to:

- Complete an inventory of sources and emissions of SLCPs in the State based on available data;
- Identify research needs to address any data gaps;

- Identify existing and potential new control measures to reduce emissions;
- Prioritize the development of new measures for SLCPs that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities, as identified pursuant to Section 39711;
- Coordinate with other state agencies and districts to develop and implement measures identified as part of the comprehensive strategy;
- Consult with experts in academia, industry, and the community on SLCPs. The topics shall include, but not be limited to, all of the following:
 - Assessment of the current status of controls that directly or indirectly reduce emissions of SLCPs in the State.
 - Identification of opportunities and challenges for controlling emissions.
 - Recommendations to further reduce emissions.
- Hold at least one public workshop during the development of the strategy.

Pursuant to these requirements, ARB will develop a Short-Lived Climate Pollutant Strategy (Strategy), in coordination with other state agencies and local air districts, which will be presented to the Board in the fall of 2015. An estimated timeline for development of the Strategy and public engagement is provided in Table 1. Public engagement will include public workshops and Board meetings, as well as input and review by climate science, industry experts, and other interested stakeholders.

Table 1: Estimated Timeline and Process for Developing a Short-Lived Climate Pollutant Strategy.

May	Release SLCP Concept Paper / Public workshop
Summer	Release initial draft of Strategy / Public workshop
Fall	Release draft proposed Strategy
Fall	Present draft proposed Strategy to Board
Spring 2016	Present final Strategy to Board for approval

This Concept Paper describes initial ideas that will be explored over the next several months as the Strategy is developed. The concepts included in this discussion draft do not represent commitments at this time, nor do they comprise an exhaustive list of elements or considerations that may be included in the Strategy or shape its development.

Indeed, the intention of this paper – and the public process that follows – is to elicit new ideas and refine strategies to reduce emissions of SLCPs throughout the State. ARB welcomes broad participation among stakeholders, experts, and interested parties throughout this process.

Strategy Scope

The Strategy will explore opportunities to reduce emissions from all major sources of methane, black carbon, and F-gases. Regarding F-gases, the Strategy will primarily focus on reducing emission of HFCs, but may explore opportunities and research needs to reduce emissions of some other F-gases. Tropospheric ozone will not be considered independently, as it is not directly emitted.

The Strategy will aim to identify and develop systems-level solutions that move beyond individual projects and enable deep, sector-wide emission reductions. For example, developing a comprehensive approach for utilizing organic waste from a number of sources for energy, soil amendment, or other purposes will require coordinating a broad array of tools – including regulatory measures, incentives, and public investment – that work across sectors to address various economic, institutional, or technological issues.

For some sectors, further research efforts are critical to understanding costs and benefits associated with reducing SLCP emissions. The Strategy will identify ongoing research and additional research needs to further advance the science regarding inventory methods and reduction measures, determine expected reductions from mitigation strategies, and account for the climate impacts of SLCPs in California.

In accounting for the climate impacts of SLCP emissions, ARB will evaluate inventories based on 20-year and 100-year GWP values (see Table 2). Global warming potentials account for the lifetime of different greenhouse gases in the atmosphere, and the amount of energy they absorb on a per-kilogram basis, relative to CO₂, to represent the relative climate forcing of a kilogram of emissions when averaged over a time period of interest (for example, 20 years or 100 years). Current practice in most of the world for developing GHG emission inventories, including California's inventory, is to use 100-year GWP values from the 4th Assessment Report of the Intergovernmental Panel on Climate Change, which was released in 2007. The 4th Assessment did not include GWP values for black carbon, however, so values from the 2013 5th Assessment Report are used here.

The latest scientific consensus, as reflected by GWPs included in the 5th Assessment Report, suggests that methane emissions have an even greater impact on climate change than previously understood. While developing the Strategy, including in consultations with experts and stakeholders, ARB will consider the best methods to account for the costs and benefits associated with proposed measures to reduce emissions of SLCPs.

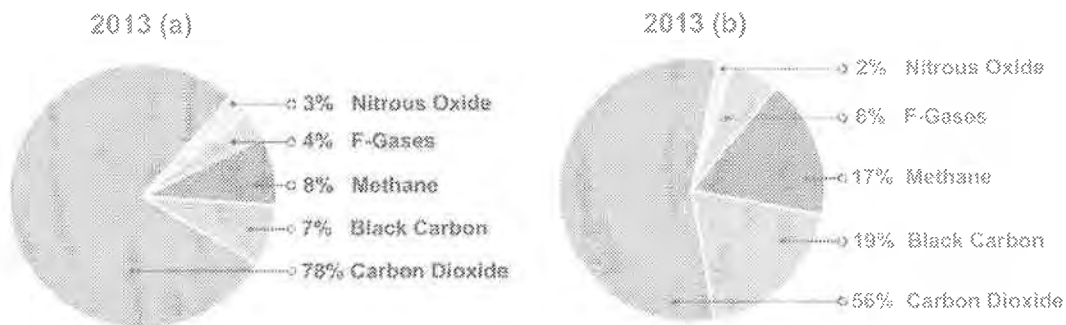
Table 2: Global Warming Potential for SLCPs to be used in the Strategy

Pollutant	Lifetime (years)	GWP time horizon	
		20 years	100 years
Carbon dioxide	100	1	1
Methane	12	72	25
F-Gases (Hydrofluorocarbons)*	1.4 – 52	437 – 6350	124 – 4470
Black carbon	Days to weeks	3,200	900

* Does not include two long-lived HFCs with negligible emissions.

Figure 1 presents California's greenhouse gas inventory, using 100-year and 20-year GWPs. The impact of SLCPs on global warming more than doubles, to just over 40 percent of California's inventory, when GWPs are computed over 20 years, rather than 100 years.

Figure 1: California's 2013 Greenhouse Gas Inventory Using (a) 100-year and (b) 20-Year Global Warming Potential Values



In addition to minimizing climate risks, immediate action to reduce emissions of SLCPs can deliver a broad array of benefits throughout California. A wide range of benefits will be accounted for when considering potential measures related to short-lived climate pollution, and as called for in Senate Bill 605, the Strategy will identify and prioritize measures that complement and accelerate progress to meet other economic, health, social equity, and environmental objectives.

The Strategy fits within a wide range of ongoing planning efforts throughout the State to advance economic and environmental priorities. Integrated planning to achieve multiple objectives requires coordination among planning agencies and across sectors, systems, and government jurisdictions. Development of the Strategy will be closely coordinated with other relevant planning efforts. For example, new SLCP emission reduction concepts for California's freight system will align with strategies identified in the Sustainable Freight Strategy. That plan is currently being developed by ARB and other state agencies, and will identify strategies that will further reduce black carbon emissions throughout the freight sector. Other concurrent planning efforts in the State

could also identify additional activities that may serve to reduce SLCP emissions. For example, CEC's Integrated Energy Policy Report, the State Implementation Plan, the Healthy Soils Initiative, and the Forest Carbon Plan are all ongoing efforts that intersect with many of the concepts described in this paper. ARB will collaborate with other agencies developing those plans to identify and prioritize activities to reduce SLCP emissions that would also support other State priorities and integrated planning efforts. Climate action planning efforts by city, county, and other local government entities will also play a role in reducing SLCP emissions.

State Plans that Will Assist the State in Meeting the SLCP Emission Reduction Goals	
✓ Sustainable Freight Strategy ✓ 2014 Scoping Plan Update ✓ Additional Scoping Plan Updates ✓ Three Year Auction Proceeds Investment Plan ✓ Funding Plan for the Air Quality Improvement Program (AQIP) and Low Carbon Transportation Greenhouse Gas Reduction Fund Investments	✓ 2016 State Implementation Plan ✓ ARB's Annual Research Plan ✓ CAT Climate Change Research Plan for California ✓ Water Action Plan ✓ DWR's Climate Action Plan ✓ Caltrans Strategic Management Plan for 2015-2020 ✓ Forest Carbon Plan ✓ Healthy Soils Initiative

Framing the Strategy

A number of overarching concepts will frame the development of the Strategy, which are described below.

Achieve Scientific-Based Targets

The Strategy will identify and recommend measures to achieve SLCP emission reductions that scientific studies suggest are necessary – globally, and in conjunction with immediate and significant reductions in CO₂ emissions – to limit global warming to less than 2°C, as well as to support Governor Brown's new climate goal of reducing California's GHG emissions to 40 percent below 1990 levels by 2030.* Specifically, the Strategy will:

- Describe ongoing and developing efforts (e.g., Sustainable Freight Strategy, Diesel Risk Reduction Plan, State Implementation Plan, Forest Carbon Plan) that have achieved significant black carbon reductions already or seek to reduce black carbon emissions further; these efforts and others that will be identified, are

* Executive Order B-30-15

expected to reduce black carbon emissions by at least 50 percent below 2012 levels from transportation sources by 2020, and from all sources by 2030;

- Identify existing and potential new measures to reduce methane emissions by at least 20 percent by 2020 and 40 percent by 2030, below forecasted emission levels; and
- Identify existing and potential new measures to reduce F-gas emissions by at least 25 percent in 2020 and 50 percent in 2030, below forecasted emission levels.

Prioritize Actions with Diverse Benefits

The direct benefits of cutting SLCP emissions will be immediately tangible, and can be substantial. As part of an integrated strategy to not only reduce emissions of SLCPs, but also to develop renewable sources of energy and strengthen the competitiveness and resiliency of our agricultural, forestry, freight and other sectors, they can deliver even greater benefits, including:

- Reduced asthma risk, hospitalization, premature death, and associated medical costs from air pollution;
- Reduced global and localized climate change impacts, including sea level rise and disrupted precipitation patterns, and associated costs;
- Reduced crop losses from air pollution;
- Healthier forests, wildlife habitats, and watersheds;
- Healthier soils that are more sustainable and resilient to climate change, sequester GHGs, require less synthetic amendments, and improve water retention;
- Increased availability of renewable fuels and energy, to stabilize energy costs and reduce emissions from buildings, industry, power plants, and transportation; and
- Stronger agricultural and freight sectors that are well positioned to continue competing globally and growing as a source of jobs and economic development in California.

Clearly, there are a number of drivers and benefits to reducing SLCP emissions that extend beyond mitigating the impacts of climate change. The Strategy will frame these broad benefits and identify priority measures to provide a wide array of climate, health, and economic benefits throughout the State.

Put Organic Waste to Its Most Beneficial Use

In most cases, organic material can be a potential resource, not a waste stream. By treating and utilizing organic waste streams in better ways, we can significantly cut methane emissions from existing or new landfill, dairy, wastewater treatment, or other waste management operations, as well as black carbon emissions from agricultural burning or prescribed burns and wildfires. We can also create new sources of jobs and economic activity, renewable power or natural gas, clean transportation fuels, and

expand the production and use of compost and other beneficial soil amendments in the State. Many renewable fuels from organic waste streams have the lowest carbon intensity in the Low Carbon Fuel Standard, which provides an economic incentive for utilizing those resources for expanded fuel production. Soil amendments may improve soil health and water retention and reduce the use of synthetic amendments in agriculture. Indeed, strategies to improve management and utilization of organic waste throughout the State may have the ability to help reduce emissions throughout the agricultural sector, from avoided methane emissions from manure, CO₂ emissions from fuel use, and N₂O emissions (a very potent, but *long-lived*, GHG) from fertilizer use and soils.

Wherever possible, and as soon as possible, we should be utilizing organic waste in order to both reduce SLCP emissions and produce maximum value from the energy and nutrients that remain in these sources. Toward those ends, in developing the Strategy, the State will work with researchers and stakeholders to identify the cost, feasibility, and potential funding mechanisms, incentives, regulations and other strategies – on the supply and demand side – to maximize the beneficial use of organic waste.

Identify Practical Solutions to Overcome Barriers

Achieving the SLCP emission reduction targets identified above will require overcoming stubborn barriers, and in some cases, modifying operations and updating best practices, to significantly reduce SLCP emissions from sources that may have been difficult to control in the past. For example, cheap and abundant landfill capacity makes organics diversion and utilization difficult. Developing projects that not only generate renewable energy, but also improve air quality and protect water quality may require additional investments in the cleanest technology and management practices, while navigating through various permitting processes. Collection and utilization of dispersed woody biomass resources, such as agricultural wastes or forest thinnings, may suffer from poor economies of scale, which limit the feasibility of extracting energy from these resources. Utility engagement and interconnection – getting electricity onto the grid or renewable gas into the pipeline – remains an unnecessarily long and costly process in many parts of the State. Technology or market barriers also remain in some sectors, such as developing cleaner engine and fuel options for off-road equipment and other vehicles and operations throughout the goods movement supply chain. In other sectors, such as those using refrigerants, cleaner, low-GWP options are just beginning to emerge, and markets for these options need to be supported and scaled.

These barriers are not insurmountable. Through coordinated planning to align priorities and streamline permitting, targeted investment and incentives to overcome cost barriers to clean technologies and practices, and direct engagement with farmers and ranchers, landfill operators, waste haulers, and other stakeholders, we can overcome these barriers and significantly cut SLCP emissions and improve the health and vibrancy of communities throughout California.

For example, the Strategy will identify strategies and funding mechanisms to encourage and streamline the use of the cleanest technologies to advance the State's air quality,

water quality, climate change, and other environmental objectives. Such technologies or strategies may include fuel conditioning of biogas to remove contaminants before vehicle use, injection into the natural gas pipeline, or fuel cells for electric generation. Several existing programs already provide potentially significant incentives to convert waste streams to various forms of energy, but others will be considered to further encourage the use of energy from organic waste, including potential mechanisms that could increase the share of renewable natural gas used in California buildings, industry, and transportation.

Efforts to increase composting and anaerobic digestion should be accompanied by efforts to promote and account for the benefits of utilizing compost, manure, and other soil amendments that come from these processes. Increasing demand for compost and other soil amendments may be key to financing projects to utilize organic waste and cut emissions of SLCPs. ARB will coordinate with the California Department of Food and Agriculture (CDFA) and other agencies working on the Healthy Soils Initiative to identify additional research needs to inform the science and accounting methods necessary to quantify the various benefits of using compost and other soil amendments and address any potential problems such as buildup of salts or heavy metals in soil. Collaboration among state agencies, water districts, and local governments will help improve quantification of benefits and impacts that could enable greater use of compost in urban storm water management, remediation of fire-degraded lands, water conservation measures, and other beneficial uses. Agencies will also consider potential mechanisms to encourage the use of compost and other soil amendments in agriculture and various other applications in California, in ways that protect air quality, water supplies, and provide other benefits.

Finally, the State already has a number of research projects and multi-agency working group efforts underway to overcome barriers to accelerating deployment of compost and anaerobic digestion facilities, scrape systems and digesters at dairies, renewable natural gas generation at wastewater treatment facilities, and other technologies and strategies to reduce SLCP emissions. The Strategy will pull from all of these efforts and suggest measures to overcome barriers that may exist throughout the supply chain – including feedstock, technology, market/economics, permitting, technical feasibility, infrastructure/logistics, and user behavior.

Advance the Science of SLCP Sources and Emissions

Data related to SLCPs and their sources is often less available or of lower quality than it is for CO₂. One reason is that energy-related emissions of CO₂ are often easier to quantify than emissions of other GHGs, which may form through complex biological or other processes where existing reporting guidelines and procedures may not apply. But there has also been less of a focus on collecting additional data that could help to quantify GHG emissions from some non-CO₂ sources. While improving data access and quality is not prerequisite for many actions to reduce emissions of SLCPs, it is important for informing ongoing efforts to reduce emissions to necessary levels from these sources.

In addition to identifying current research efforts underway to advance the understanding of sources and emissions of SLCPs in California, the Strategy will explore potential reporting methods and requirements that could improve understanding of SLCP emissions and impacts in California. This may include activities to improve understanding of methane emissions from natural gas and oil supplied to California, dairy operations, landfills, as well as various sources of F-gas and black carbon emissions. Additionally, research needs to further understanding around the climate forcing impact of light-absorbing particles known as “brown carbon” (which mostly come from biomass burning), its sources in California, and potential mitigation options will be explored.

Invest in SLCP Emission Reductions

Achieving significant reductions in SLCPs will require substantial investments to provide incentives and direct funding for priority sectors, sources, and technologies. Significant investments of private capital, supported by targeted, priority investments of public funding, are necessary to scale deployment of technologies and strategies to significantly cut emissions of SLCPs throughout California and to maximize the benefits of doing so. Public investments should be smart and strategic, to leverage private investment and accelerate market transitions to cleaner technologies that foster significant, system-wide solutions to cut emissions of SLCPs, maximize resource recovery from organic waste streams, and provide economic and health benefits in agricultural, disadvantaged, and rural parts of the State. Examples may include targeted support to reduce emissions of SLCPs and CO₂ through integrated strategies at dairies, landfills and in organic waste management; throughout the freight system; in commercial refrigeration applications; and from the management of woody waste materials in the agricultural and forestry sectors.

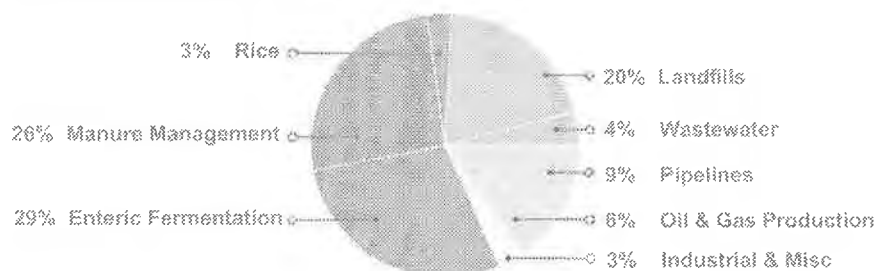
The State will need to continue coordinating and utilizing funding sources such as the Greenhouse Gas Reduction Fund (Cap-and-Trade auction proceeds),²⁸ the Alternative and Renewable Fuel and Vehicle Technology Program (AB 118), Electric Program Investment Charge (EPIC) Program, Carl Moyer program, Air Quality Improvement Program, and the Proposition 39: Clean Energy Job Creation Fund to expand investments in California’s clean economy and further reductions in SLCPs and other GHG emissions. Strategies identified during the development of the SLCP Strategy will help inform the recommendations in the Cap and Trade Auction Proceeds three-year Investment Plan that is currently being updated.

Potential new funding mechanisms and incentive structures will also be considered during the course of developing the Strategy. These could include adjusting the tipping fee structure to account for the true cost of managing organic materials and landfills, state procurement contracts for renewable natural gas and other fuels in buildings or vehicles, or labeling programs to recognize leading companies in the market place, including those producing milk with low levels of dairy methane emissions.

Methane Emission Reduction Concepts

Methane is the second largest, and a growing, component of GHG emissions in California (see Figure 2 for California's methane emission sources). The State has taken important steps to reduce methane emissions from all of its major sources, but more needs to be done to more fully control methane emissions, especially from organic waste streams going to landfills and at dairies.

Figure 2: California 2013 Methane Emission Sources



Methane is the principal component of natural gas and is also produced biologically under anaerobic conditions in ruminant animals, landfills and waste handling. Since methane emissions come from many sources, including complex biological processes, it can be difficult to measure emissions from major sources. Coordinated research efforts between ARB and the California Energy Commission to refine emission estimates have led to the development of the only subnational methane monitoring network in the world. In addition, researchers at ARB and at NASA's Jet Propulsion Laboratory are currently collaborating to identify large "hot spot" methane sources in the San Joaquin Valley. This research will aid in future control and regulatory plans to reduce GHG emissions in California. The Strategy will catalog ongoing research efforts related to methane emission detection and highlight remaining research gaps.

Methane also contributes to global background levels of ozone in the lower atmosphere (troposphere). Ozone itself is a powerful SLCP as well as a regional ground level air pollutant. Ozone negatively impacts human health, and can lead to asthma attacks, hospitalizations, and even premature death. It impairs the ability of plants to absorb CO₂, thereby suppressing crop yields and harming ecosystems. Ozone also affects evaporation rates, cloud formation, and precipitation levels. In addition to the direct climate benefits of cutting methane emissions, it can also reduce global background levels of ozone pollution and provide additional climate, health, and other benefits. ^{29,30,31}

Regional ozone concentrations reflect contributions from ozone formed from emissions (oxides of nitrogen (NO_x), and volatile organic compounds (VOCs)) on a regional scale, as well as ozone transported on hemispheric scales (global background levels of ozone). Due to its low reactivity, methane emissions do not affect regional scale ozone production that occurs over hours to days. However, regional methane emissions which are fairly well-mixed in the atmosphere contribute to the global abundance of methane,

which in turn contributes to global background levels of ozone. About two-thirds of the rise in global levels of tropospheric background ozone can be attributed to methane emissions. Studies have also shown that the global background ozone concentrations can approach 40 ppb and have been increasing in recent years. Increases in background ozone raise the baseline upon which local-to-regional ozone builds.

Over the past 50 years, ARB and local air districts have implemented a comprehensive regulatory control strategy to continually reduce regional ozone formation in order to comply with health-based ambient air quality standards set under the federal Clean Air Act. Many rules and amendments have been adopted, which have more than cut in half the emissions of VOCs and NO_x, and significantly reduced ozone concentrations throughout California. Because the regulatory definition of VOCs does not include methane due to its relatively low reactivity and lack of impact on regional ozone production, methane emissions have not fallen at similar rates as VOCs over the past decades.

In California, agriculture and landfills are the primary sources of methane emissions. Including manure from agricultural operations, organic waste is responsible for more than half of the State's methane emissions. The Strategy will explore potential methane emission reductions from all sources, but will specifically look to significantly reduce emissions from the waste and agricultural sectors in the State, through integrated strategies that fully utilize organic waste streams to recover their maximum value.

Minimize Fugitive Methane Emissions from all Infrastructure and Equipment

Natural gas is currently California's largest source of electricity generation, energy for industrial operations, and GHG emissions from residential and commercial buildings. Its use in the transportation sector is also increasing, and it could potentially play an important role in helping many parts of the State comply with federal air quality standards over the next 20 years, especially if "ultra-low NO_x" natural gas engines become commercially available for heavy-duty trucks within the next few years.

As California continues to rely on natural gas for a large fraction of its energy supply, it is critical to increase supplies of renewable natural gas and minimize fugitive emissions of methane from natural gas infrastructure. Renewable natural gas can be captured at landfills, wastewater treatment plants, commercial food waste facilities, agricultural operations, or other sources, treated, and used as a renewable energy source to displace fossil fuel consumption. Due to its high global warming potential, relatively small levels of methane emissions throughout the supply chain can overwhelm any reduction in CO₂ emissions from the use of fossil or renewable natural gas, compared to oil or coal. In California, which uses little coal, the important comparison is to diesel fuel used in transportation. As we increase the number of facilities producing and using renewable supplies of natural gas, hydrogen, or any other potential source of methane emissions in a cleaner energy economy, we must also take steps to minimize potential methane leaks from those facilities.

Based on existing models and accounting frameworks, the use of conventional natural gas in the transportation and other sectors is reducing emissions in California, compared to the use of oil or coal. California also has ongoing efforts to further reduce fugitive methane emissions from oil and gas production. ARB is developing a regulation to reduce methane emissions from oil and gas production, processing, and storage operations, and the California Public Utilities Commission is developing rules, per SB 1371 (Leno, Chapter 525, Statutes of 2014), to reduce emissions from gas transmission and distribution pipeline leaks throughout the State. Together, these rules should create a comprehensive approach to limit methane leaks from oil and gas operations. However, about 90 percent of our natural gas comes from out-of-state suppliers, so the State will continue to advocate for strong national methane standards to ensure potential climate benefits from our use of gas in the State.

In developing the Strategy, ARB and other state agencies will consider additional data, measurement, and reporting needs and tools in order to improve the characterization of fugitive methane emissions from natural gas supplies to California. The Strategy will also consider potential measures to ensure climate benefits associated with the use of natural gas in all sectors of California's economy. To the extent that ultra-low NO_x natural gas trucks enter the market in the next few years and play an important role in the State's approach to meet future air quality and climate goals, it will be important to already have these potential reporting requirements and measures in place.

Ultimately, a key driver of fugitive emissions is our demand for oil and natural gas, which will likely have to decline significantly to meet our climate and air quality targets. As state policies continue pushing our evolution away from conventional oil and natural gas, they will also help to reduce emissions of methane from the production and distribution of fossil fuels. In particular, efforts to improve efficiency or electrify appliances, buildings, and vehicles will not only reduce energy use and CO₂ emissions, but also serve to reduce or avoid fugitive methane emissions from the production, and potentially transmission and distribution, of natural gas. In developing the Strategy, ARB and other agencies will consider whether fugitive methane emissions should be accounted for in cost/benefit calculations for various state energy and efficiency programs, and appropriate methods for potentially doing so.

Effectively Eliminate Disposal of Organic Materials at Landfills

Organic waste constitutes more than one-third of California's waste stream. Food waste alone accounts for about five million tons of landfilled organics each year. Efforts to divert organics from landfills, and to develop an organics infrastructure that makes best use of the material, are a key element of integrated strategies to increase production and access to renewable energy, reduce air pollution, improve agricultural soil health, and reduce GHG emissions from a broad array of sources throughout California.

California has clear goals to reduce waste, and to divert organic material from landfills and put it to beneficial use. The State has a target to reduce landfilling of solid waste by 75 percent in 2020 through the use of recycling, composting, and source reduction.

Additionally, the 2014 Scoping Plan Update called for eliminating disposal of organic materials at landfills, which has the potential to virtually eliminate methane emissions from landfills over time, once existing organic “waste-in-place” has decomposed. The Legislature has taken steps to increase organics diversion from landfills, through AB 1826 (Chesbro, Chapter 727, Statutes of 2014) and AB 1594 (Williams, Chapter 719, Statutes of 2014). This legislation represents important steps forward.

Building on this foundation, the Strategy will explore additional measures to accelerate organics diversion and GHG emission reductions to meet an initial goal of diverting 75 percent of organics from landfills through source reduction and organics recycling by 2020. This amounts to a 50 percent additional reduction from current levels, and is in line with existing goals set forth in AB 341 (Chesbro, Chapter 476, Statutes of 2011). Further, the Strategy will consider measures to meet a goal of diverting 90 percent of organics from landfills through source reduction and organics recycling by 2025 (80 percent reduction from current levels). Achieving these levels of diversion would effectively eliminate the disposal of organic materials in landfills in California, as called for in the Scoping Plan Update, by the middle of the next decade.

An important step, and an effective way to meet these targets, is to avoid wasting food or other organic material in the first place. The Strategy will explore research opportunities and potential approaches to reduce food waste. In addition to reducing GHG emissions, avoiding food waste saves money, effectively conserves the amount of energy and water that would have been used to produce the food, and conserves fuel in delivery and removal of waste.

The next step is to support the development of infrastructure for utilizing the additional organic waste. Achieving these targets will likely require at least 100 new or expanded facilities for utilizing diverted organic waste from landfills – through composting, anaerobic digestion, or other methods that advanced the State goals related to air quality, climate, energy, and soil sustainability. The Strategy will explore funding mechanisms, incentives, and other measures to expedite these facilities and phasing out organic disposal at landfills. One mechanism that will be considered is reforming CalRecycle’s solid waste tipping fee to incentivize the diversion of organic material away from landfills and support the development of compost and anaerobic digestion facilities.

Finally, additional regulatory measures may be necessary to achieve these levels or complement potential state incentives or funding for organic waste infrastructure. In developing the Strategy, agencies will consider potential regulatory measures as an element of a comprehensive approach to effectively eliminate organics from landfills.

Even if we eliminate new organics in landfills, existing organic waste in landfills will remain a source of methane emissions for years to come. In developing the Strategy, ARB will work with CalRecycle, stakeholders, and experts to identify research needs and other efforts to develop potential measures to expand the use of best management practices and further reduce methane emissions from landfills by 2020 and through

2030. These measures could include upgrading landfill gas collection systems, improved post-closure maintenance, improved monitoring, and phased closure.

Significantly Cut Methane Emissions from Dairies

Agriculture, primarily dairies, is responsible for about 60 percent of California's methane emissions.[†] About equal levels of emissions come from manure management (primarily in flushwater lagoon systems at dairies) and the digestive processes of cows and other ruminant animals (enteric fermentation). Any potential strategies to reduce agricultural methane emissions should be based on a whole-system perspective in the California context, taking into account the lifecycle of emissions, energy and water use, economics, animal health/welfare, soil health, and water quality.

Methane emissions from manure management can be significantly reduced by capturing and destroying or utilizing methane from lagoons, switching from lagoon systems to solid manure management "scrape" systems (to avoid generating methane in the first place), and/or converting manure into renewable energy in anaerobic digesters. Anaerobic digesters can be used with manure from lagoons or scrape systems and may provide renewable electricity or natural gas that can be used to power farm equipment and vehicles, including milk trucks, which would further reduce air pollution and GHG emissions. Dairy manure can also be mixed with other organic materials – diverted from landfills or at wastewater treatment facilities, for example – and "co-digested," which may improve the performance or economics of anaerobic digestion projects in certain cases. Switching to scrape systems could potentially deliver significant water savings, along with improvements in water quality and soil health.

In developing the Strategy, ARB will work with CDFA, stakeholders, and experts to better understand the potential costs or environmental tradeoffs and broad array of benefits associated with various options to reduce methane emissions at dairies. The Strategy will identify necessary investments and other strategies to control manure methane emissions from the largest sources as quickly as possible – and no later than 2025. Those measures will likely include developing a methane capture or abatement standard, as called for in the Scoping Plan Update, as well as incentives and state funding to bring as many projects as possible online ahead of any potential regulation on existing sources.

Methane is also produced by the microorganisms involved in the digestive processes in the stomachs of ruminants, such as sheep, goats, buffalo and cattle – which is referred to as "enteric fermentation." Achieving the methane targets identified in this Concept Paper may be difficult or infeasible if emissions from enteric fermentation increase. Research on strategies to reduce methane emissions from enteric fermentation has

[†] The Animal Legal Defense Fund has petitioned ARB to measure and control animal agriculture methane emissions via ARB's Mandatory Reporting Rule and Cap-and-Trade Regulation. ARB continues to investigate this option and welcomes feedback on it as the planning process moves forward.

increased significantly in the past few years. Potential strategies may include breeding for lower methane-producing animals, microbial interventions, and nutrition and animal management.³² The Strategy will describe existing research in this area and remaining gaps.

Maximize Resource Recovery from Wastewater Treatment Facilities

Wastewater treatment plants are used to treat or reclaim sewage or liquid waste streams from residential, commercial and industrial sources. These plants represent a relatively small amount of California's methane inventory (four percent). Most wastewater treatment plants already use anaerobic digestion in their processing, and many have large amounts of spare capacity to potentially take in new sources of waste. As such, wastewater treatment presents a tremendous opportunity to divert organics from landfills and utilize them for producing energy and soil amendments. Many of the treatment plants are located fairly close to population centers and could utilize potentially significant amounts of food and other organic waste streams that come from cities and towns.

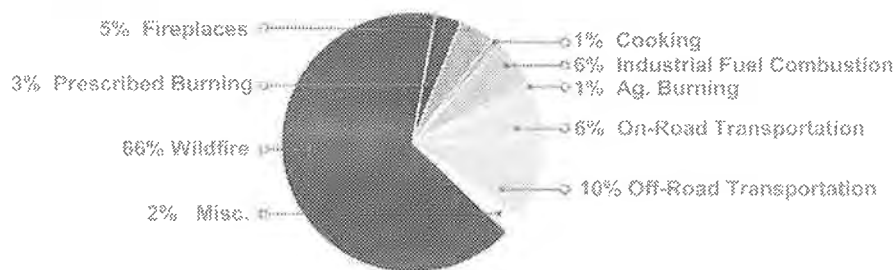
Existing barriers limit or discourage wastewater treatment facilities from more fully recovering the energy and nutrient value that remains in organic waste. The Strategy will build on existing efforts to overcome these barriers and identify opportunities to expand the role that wastewater treatment plants can play in diverting organic waste from landfills and putting it to beneficial use while minimizing methane emissions.

Additionally, much of California's wastewater infrastructure is aging and vulnerable to climate change impacts, and due for renewal, retooling, and/or replacement before 2030. Many tens of billions of dollars will be invested in new infrastructure over that time frame, which could transform the wastewater sector and its business model into one that focuses not only on water quality, but also on maximum resource recovery from a wide array of waste streams and potential end products. ARB will work with the Water Resources Control Board to identify potential options to increase the role that wastewater treatment can play in reducing emissions of SLCPs.

Black Carbon Emission Reduction Concepts

Black carbon emissions are the State's third largest component of GHG emissions (see Figure 3 for California's black carbon emission sources), and as a component of diesel particulate matter, is among the most toxic and harmful air pollutants affecting health in our communities. Globally, black carbon emissions are responsible for millions of premature deaths each year. In California, health impacts are valued at tens of billions of dollars from smog-forming emissions such as NOx, black carbon and diesel particulate matter, every year.

Figure 3: California 2013 Black Carbon Emission Sources



California has done more than any other jurisdiction to reduce the emissions of particulate matter (PM) and black carbon. ARB and local air districts have developed programs to comply with federal air quality standards for PM. These include mandatory and voluntary rules to restrict residential wood-burning in fireplaces and wood stoves, as well as incentive programs to switch to cleaner burning devices. Additionally, district rules regulating commercial cooking and smoke management programs addressing agricultural, forest, and rangeland burning operations have reduced PM emissions. California has achieved significant emission reductions from diesel-fueled engines and vehicles through the implementation of the Diesel Risk Reduction Plan. California's clean fuel and in-use vehicle requirements for on- and off-road sources and complementary incentive programs have accelerated the switch to cleaner diesel equipment and cleaner vehicles, directly contributed to diesel PM emission reductions. As a result, ambient levels of black carbon in California are now 90 percent lower than in the early 1960s, despite the use of diesel fuel more than tripling over the same time period. Existing rules will cut them in half again by 2020.

If the rest of the world achieved similar levels of reductions, it would prevent millions of premature deaths each year and slow global warming by 15 percent. But the State still suffers from the nation's worst air quality, and many regions remain out of compliance with federal health-based ambient air quality standards. Complying with federal air quality standards and protecting public health in our State will require virtually eliminating smog-forming and particulate matter emissions from mobile sources in Southern California and the Central Valley by 2031.

Non-anthropogenic black carbon emissions (wildfires) account for more than half of the State's total black carbon emissions. While this source is difficult to control, it is critical to address as part of integrated climate and forest planning.

The impacts of black carbon on climate change vary by location and source, which complicates climate modeling and understanding of the climate forcing role that black carbon plays. Particulate matter emissions that include black carbon also inevitably include "brown carbon" (the light absorbing component of organic carbon, which is abundant in biomass burning), sulfur, and other particles that have varying impacts on regional climate. ARB is sponsoring research to advance the science on black carbon, as well as brown carbon. Results from this research will improve our understanding of

its impact on the climate, and inform ongoing efforts to further reduce emissions, address climate change, and improve public health.

In developing the Strategy, ARB will provide information on current research efforts, and lay out a research agenda that will identify additional actions to advance the science on black and brown carbon and incorporate this into our efforts to address SLCPs, as appropriate.

Continue to Lead on Reducing Diesel Black Carbon Emissions

California has done more than any jurisdiction in the world to reduce diesel emissions, but many areas in the State still suffer from poor air quality. According to the American Lung Association, California cities still rank as the top five in the country for ozone and particle pollution.³³

State and local efforts will continue reducing diesel particulate matter emissions to comply with federal air quality standards and further protect public health, which will further reduce black carbon emissions, as well. ARB is working with the State's transportation and energy agencies, as well as its economic development office, local partners, and stakeholders to develop a comprehensive, integrated plan – the California Sustainable Freight Strategy – that will enhance system efficiency; deploy zero and near-zero emission freight equipment powered by renewable energy sources; provide reliable velocity while increasing safety, mobility and capacity; and improve the competitiveness of our logistics system. Additionally, ARB continues to update the State Implementation Plan, including a plan in 2016 that will outline actions to achieve federal air quality standards by 2032. Emission reduction measures identified in these ongoing processes will be incorporated in the SLCP Strategy.

In developing the Strategy, ARB will work with other agencies to align efforts to improve air quality and reduce black carbon emissions, and identify any additional diesel black carbon-specific measures that may not otherwise be captured through existing efforts. While existing policies and processes effectively target particulate matter and black carbon emissions from on-road sources, additional efforts are needed to drive reductions from off-road sources, including farm and construction equipment, trains and railroad operations, cargo handling equipment, and shipping.

Reduce Black Carbon Emissions from Biomass Burning

The State and local air districts have a number of measures in place to reduce particulate matter emissions from biomass burning, which have also resulted in significant reductions of black carbon. State law restricts agriculture burning in specific parts of California. All large air districts in the State have adopted mandatory and voluntary rules restricting wood-burning in residential fireplaces and heaters. In fact, the Bay Area Air Quality Management District is considering a new rule to ban all wood burning devices in new construction and restrict the sale of buildings with old fireplaces, stoves or other wood-burning devices that fail to meet United States Environmental

Protection Agency (U.S. EPA) emission standards. Air districts also administer incentive programs for residents to replace their old wood burning devices with new, cleaner options. ARB will coordinate with local agencies and identify potential options to further reduce particulate matter and black carbon emissions from biomass burning from major sources, including wildfire, agricultural burning, open pile burning, and commercial and residential cooking and fireplaces, among others. ARB will explore research related to how we can most effectively prioritize areas where the use of prescribed fire will have the greatest reduction in wildfire risk, and associated net black carbon impacts, at the lowest cost, and with the least impact to residents at the urban-wildland interface.

Wildfires account for the majority of black carbon emissions in California. No single wildfire may be preventable, but improved management can reduce the incidence and severity of wildfires in California, which can offer climate benefits by both strengthening our forests as carbon stocks and sinks, and reducing black carbon (and brown carbon) emissions from wildfires. Additionally, the impacts of climate change are expected to make wildfires more frequent and severe, and our forests need to increasingly be managed with climate change impacts in mind.

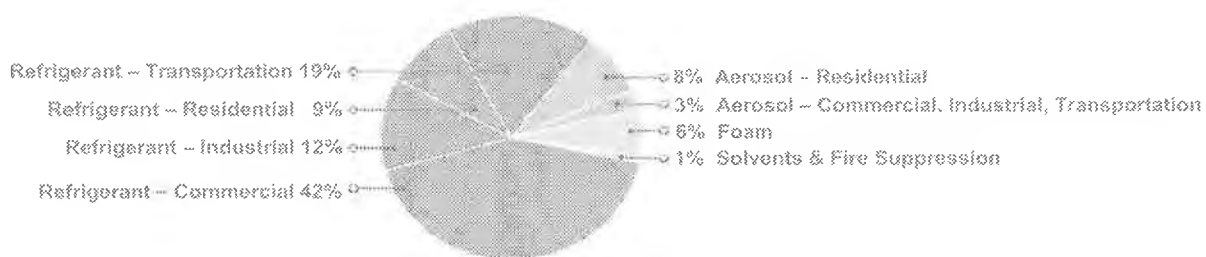
The Scoping Plan Update called for developing a “Forest Carbon Plan” in 2016 to set quantitative greenhouse gas planning targets for the State’s forests and identify actions to meet them. ARB is part of an inter-agency working group of Federal and State agencies that is currently developing the Plan. The working group is reviewing forest practice regulations and recommendations for best management practices and potential additional regulatory actions to minimize GHG emissions and enhance carbon storage associated with silvicultural treatments. Potential management practices to minimize GHG emissions could include measures that would enhance wild land fire prevention and suppression, resulting in avoidance of direct black carbon emissions.

Improved management of woody biomass in general – from forest residues, agricultural waste, or other sources – can reduce black carbon emissions and provides an opportunity to generate renewable energy and economic development in rural parts of the State. As for other organic waste streams, the Strategy will explore options to put woody biomass to beneficial use and avoid black carbon emissions that would otherwise result from burning. One option may be pyrolysis of woody biomass, which generates energy and biochar, and which can be used to sequester carbon in soils and improve soil fertility.^{34,35,36,37} Current analyses suggest that biochar could be used to sequester significant volumes of CO₂ globally,³⁸ but the benefits of large-scale projects have not been demonstrated or quantified, and several research gaps remain. Despite the uncertainty, several carbon trading entities have developed or are developing protocols for biochar projects.^{39,40} The potential benefits from these projects will be investigated, and additional research or demonstration projects will be identified to improve our understanding of the potential role biochar may play in addressing an integrated set of air pollution, climate, energy, soil and resource issues.

F-Gas Emission Reduction Concepts

Fluorinated gases are the fastest growing source of GHG emissions both globally and in California (see Figure 4 for California's F-gas emission sources). They include ozone-depleting substances that are being phased out under the Montreal Protocol, and their primary substitute, hydrofluorocarbons (HFCs). Most F-gas emissions come from leaks of these gases in refrigeration and air-conditioning systems. F-gases are also emitted when used in aerosol propellants and fire suppressants at the time of application, and slowly emitted from polyurethane foam insulation when used as foam-expanding agents.

Figure 4: California 2013 F-gas (Hydrofluorocarbons)* Emission Sources



* Does not include two long-lived HFCs with negligible emissions.

Many F-gases are hundreds, or thousands, of times more potent than CO₂. For an increasing number of them, low-GWP alternatives are entering the market and becoming more cost-effective. Many of them can be easily captured or destroyed at the end-of-life, and are even required to be, but due to the lack of incentive and difficulty of enforcement, they often are not. Reducing F-gas emissions from many sources are among the most cost-effective opportunities to reduce GHG emissions.

California is among the leaders in reducing F-gas emissions. It is the only subnational entity with an inventory of F-gas emissions, and early action measures adopted under AB 32, including the Refrigerant Management Program for stationary sources, will reduce F-gas emissions by an estimated six million metric tonnes of CO₂-equivalent (MMTCO₂-e) by 2020.

California's efforts to reduce emissions of F-gases are part of a broader set of national and international commitments to phase down the production and use of HFCs. President Obama, China President Xi Jinping, and leaders of the G-20 countries have agreed to work together and through the Montreal Protocol to phase down the production and consumption of HFCs. The U.S. EPA can impose federal bans on F-gases under the Significant New Alternatives Policy (SNAP) Program. The agency has proposed, but not yet adopted, bans on specific HFCs with very high GWPs used in new commercial refrigeration systems, the manufacture of polyurethane foam, and in new light-duty motor vehicle AC systems. The European Union has adopted leading F-gas regulations that will phase down the production and import of HFCs by almost 80 percent from 2015 levels in 2030.^{41,42}

Given this national and international context, California can accelerate broader action on F-gas emissions by continuing to build on its leading efforts. New measures developed in California can grow markets for low-GWP alternatives, and can provide an important national and international signal to build the case for action. The Strategy will consider several additional efforts to reduce the use and emissions of high-GWP F-gases from several sources.

Reduce the Use of HFCs in New Refrigeration and Air-Conditioning Equipment by At Least 80 Percent by 2030

The Scoping Plan Update called for California to work with the U.S. Environmental Protection Agency and other partners to develop programs to phase-down HFC production and import by about 80 percent by 2030. This aligns with commitments by the U.S., Mexico, Canada, China, European Union, India, and others to phase-down the production of HFCs under the Montreal Protocol. Proposed amendments to the Montreal Protocol are currently under negotiation.^{43,44}

A global phase-down under the Montreal Protocol is necessary to alleviate much of the burden that the use of these gases imposes on our climate, and California will support international efforts to address the issue. Still, California can lead by taking its own steps to reduce the use of HFCs in the State as quickly as possible. Existing measures adopted under AB 32 are projected to reduce HFC emissions in California by 30 percent below “business as usual” levels in 2030. Proposed federal rules would reduce HFC emissions by another 10 percent in California in 2030.

The Strategy will explore additional steps that California can take to reduce the use of HFCs in the State by at least 80 percent by 2030. HFC emission reductions could be achieved through sector specific prohibitions, where feasible and cost effective alternatives are available, by imposing a mitigation fee on sales of high-GWP HFCs, or other potential options. (Note that F-gas emission reductions partially lag reductions in their use, due to the long life of the existing stock of equipment that still contain high-GWP F-gases. Therefore, an 80 percent reduction in the use of F-gases by 2030 would not reduce their emissions by as much as 80 percent in that same year.)

Remove High Global Warming Potential Gases from Foams, Aerosols, and Transportation

In particular, the use of HFCs in foams, aerosols, and transportation could be quickly addressed. The majority of insulating foam and aerosol propellants that have historically used high-GWP F-gases has already transitioned to low-GWP substitutes. ARB regulations currently ban consumer product aerosol propellants with a GWP greater than 150 in most products, and the U.S. EPA has proposed federal prohibitions on the use of high-GWP HFCs in certain insulating foam applications and aerosol propellants.

In developing the Strategy, ARB will consider measures, including bans, to transition the remaining insulating foams and aerosol propellant consumer products using HFCs to low-GWP alternatives as soon as possible. Additionally, ARB will consider developing regulations to prohibit the use of high-GWP refrigerants in air conditioning and refrigeration systems for heavy-duty motor vehicles, if such prohibitions are not enacted at the federal level.

Reduce Leaks from Existing Equipment and at End-of-Life

Phasing out the use of these highly potent gases is necessary to reduce their emissions, but even then, strong measures are needed to ensure best practices are employed during the use and end-of-life of appliances, in order to prevent the release of F-gases for decades to come. Leakier systems may have lower upfront capital costs, but higher operating costs – due to the greater need for repairs and to replenish leaking refrigerant. At the end of life, while requirements exist for scrappers to capture F-gases, it is often easier to just “cut-the-line,” and vent the gas. These are problems that may not be easily solved through regulation.

ARB will consider stronger regulations and enforcement as part of the Strategy to reduce F-gas emissions, and will also consider additional incentives, funding, and collaborative efforts that can be taken with the private sector to significantly reduce emissions from F-gases during their use and end-of-life. This will include reviewing utility-based incentive programs, and considering the costs and benefits of measures that could be taken to strengthen them, expand them, link them with energy efficiency programs in cases where the use of low-GWP refrigerants can also reduce energy use, or otherwise adjust them to ensure that appliances with low-GWP gases are incentivized, and gases from old and leaking appliances are increasingly captured, recycled, or destroyed.

Target Early Action to Significantly Reduce F-gas Emissions from Commercial Refrigeration

Commercial refrigeration, which is the source of about 40 percent of California's F-gas emissions, may provide a ready test case for a productive, collaborative approach to significantly reduce F-gas emissions. President Obama recently announced a coordinated set of public and private sector commitments to reduce HFC emissions,⁴⁵ mainly from the commercial sector, and cost-effective alternatives (including CO₂) are available for many applications in many locations.⁴⁶ Emission reductions in California on the order of several MMTCO₂-e per year may be available at a cost of a few dollars per tonne.

But the requirements, incentives and funding mechanisms need to align with the commitment of the private sector, in order to capture this opportunity. In developing the Strategy, ARB will work with other agencies, stakeholders, experts, and others to identify potential mechanisms to accelerate the transition to the use of recycled refrigerant or low-GWP alternatives as quickly as possible. While commercial

refrigeration operations cover a wide array of businesses and applications, ARB will look to identify collaborative approaches to overcome barriers and transition large commercial refrigeration systems to low-GWP alternatives as soon as possible, and no later than 2025.

ARB will consider developing regulatory requirements to use low-GWP refrigerants in new commercial refrigeration systems by feasible effective dates, as well as potential future bans or other regulatory requirements or programs for existing systems. Additionally, the Strategy will explore the potential scope and cost-effectiveness of potential incentives to:

- Remove high-GWP refrigerants from existing equipment and replace (retrofit) with low-GWP refrigerants in the same equipment.
- Offset some or all of the higher cost that might be associated with replacing older high-GWP refrigeration equipment with new, low-GWP refrigeration systems.
- Install low-GWP refrigeration systems at new facilities.
- Link with energy efficiency programs in cases where low-GWP refrigerants can reduce energy use. For example, low-GWP refrigerants such as ammonia, carbon dioxide, and hydrocarbons have been shown to reduce energy consumption between 5 and 35 percent compared to HFC refrigerants, with a corresponding decrease in electricity use and GHG emissions.⁴⁷
- Encourage the greater use of recycled refrigerants for air conditioning and refrigeration buildings.
- Recover and destroy F-gas refrigerants no longer produced.

Showing the Way to 2°C

California is committed to building on its ongoing leadership to cut air pollution and greenhouse gas emissions by developing a comprehensive, effective plan to significantly reduce SLCP emissions in the State through 2030. Doing so, in conjunction with strong action to immediately cut emissions of CO₂, is the only way to stabilize global warming below 2°C and provide near-term climate benefits that can help reduce the disproportionate climate impacts that are likely to be felt in the developing world. Accordingly, in his 2015 Inaugural Address, Governor Brown called for California to “reduce the relentless release of methane, black carbon and other potent pollutants across industries,” as a key part of his plan to show the world the path to limiting global warming to no more than 2°C.⁴⁸

The concepts described in this paper represent an initial set of ideas that deserve conversation and exploration, but it is not meant to be exhaustive. We welcome comments that will advance California's goal of demonstrating that emission reductions can be achieved in ways that are not only affordable, but also beneficial to the State economy and the well-being of its residents.

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June 8, 2015

Prepared and

submitted by: P. Sheilds

Approved by: Paul Cook



CONSENT CALENDAR

2014-2015 ORANGE COUNTY GRAND JURY REPORT RESPONSE

SUMMARY:

The Orange County Grand Jury released a report, “*Increasing Water Recycling: A Win-Win for Orange County*” to the public on May 1, 2015. The Grand Jury was tasked with inventorying the volume of secondary treated sewage from Orange County facilities currently being discharged to the ocean, and evaluating the viability of how these flow streams could be recycled for beneficial reuse. As part of the process, the Grand Jury interviewed staff from IRWD and seven other water agencies. The Grand Jury report identified eight findings, one of which, Finding F.4 requires a response from the IRWD Board of Directors.

Staff recommends the Board authorize the General Manager to respond to the Grand Jury that the Board agrees with Finding F.4 in the report which states:

The Irvine Ranch Water District processes 21.9 million gallons per day of wastewater and recycles 20.2 million gallons per day for purple pipe use.

BACKGROUND:

The Grand Jury was given an assignment to inventory the total amount of sewage collected and treated in Orange County, determine the ultimate destination/use of the treated sewage (ocean outfall, recycled water applications, indirect potable reuse, etc.), and assess the unit treatment costs in dollars per million gallons. The stated reason for the study as outlined in the report is as follows:

“Given the fact that California is facing a serious, extended drought, the guaranteed supply of imported water and local groundwater is very vulnerable. The primary purpose of this study was to compare the cost of recycling more water with the cost of buying imported water. The Grand Jury needed to research each wastewater processor to determine the volume of wastewater that might be available for recycling. Based on the possible availability of more wastewater to recycle, what plans does Orange County have to do more recycling of this precious resource rather than discharging it into the ocean?”

As part of the process, the Grand Jury interviewed staff from IRWD and several other agencies including: Orange County Sanitation District, Orange County Water District, Metropolitan Water District of Southern California, Santa Margarita Water District, South Orange County Wastewater Authority, Trabuco Canyon Water District, and El Toro Water District as part of the process which began in 2014.

The Grand Jury inventoried the volume of treated sewage currently discharged from Orange County into the ocean that could be recycled for beneficial reuse. The amount of treated discharges identified 147 million gallons per day of treated sewage going into the ocean. The

results of the investigation by the Grand Jury were detailed in a report, *"Increasing Water Recycling: A Win-Win for Orange County"* which was released to the public on May 1, 2015. A copy of the report is attached as Exhibit "A".

Based on the investigation, the Grand Jury arrived at eight principle findings (F.1 through F.8), and four recommendations (R.1 through R.4). In accordance with the California Penal Code sections 933 and 933.05, the 2014-2015 Grand Jury requires responses from each agency affected by the findings. The responses are to be submitted to the Presiding Judge of the Superior Court. IRWD is required to respond to Finding F.4 which states:

The Irvine Ranch Water District processes 21.9 million gallons per day of wastewater and recycles 20.2 million gallons per day for purple pipe use.

Staff has confirmed the accuracy of this finding and recommends that the Board agree with Finding F.4 and authorize the General Manager to notify the Presiding Judge of the Superior Court in writing acknowledging this agreement, in the form of Exhibit "B", which is attached.

The report also contained the following commendation to IRWD:

"The 2014-2015 Grand Jury commends the Irvine Ranch Water District for the years of recycling water for landscape irrigation leadership. Last year they recycled over 92% of the wastewater they received."

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

RECOMMENDATION:

THAT THE BOARD AGREE WITH FINDING F.4 CONTAINED IN THE 2014-2015 ORANGE COUNTY GRAND JURY REPORT—"INCREASING WATER RECYCLING: A WIN-WIN FOR ORANGE COUNTY" AND AUTHORIZE THE GENERAL MANAGER TO NOTIFY THE PRESIDING JUDGE IN WRITING OF THE BOARD'S AGREEMENT.

LIST OF EXHIBITS:

Exhibit "A" – 2014-2015 Orange County Grand Jury Report—*Increasing Water Recycling: A Win-Win for Orange County*

Exhibit "B" – Response Letter to Orange County Grand Jury

Increasing Water Recycling: A Win-Win for Orange County



GRAND JURY 2014-2015

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EXECUTIVE SUMMARY

Given the series of droughts in California affecting both the Sierra Nevada water supply and Orange County's ground water supply, the 2014-2015 Grand Jury inventoried the volume of treated wastewater currently discharged into the ocean that could be recycled for beneficial use. Orange County has a long history of working to recycle treated wastewater; however, the County still discharges 147 million gallons per day of wastewater into the ocean (Table 1). This precious water has the potential to be reused or recycled (replacing imported water) for irrigation and in some cases for drinking water. The majority of the treated water costs less to produce than the cost of imported water by 43.5% (Table 2).

The Santa Ana River Basin water is a blend of "free" water (treated wastewater from Riverside and San Bernardino counties, rainfall water, and water runoff) with non-"free" water (recycled Orange County wastewater and imported water). The Grand Jury found that the blending of "free" water with expensive imported water and recycled water resulted in groundwater costing 58% less than imported water (Table 2). The County has wastewater available to recycle that would be cheaper than buying imported water during these years of continuing drought conditions.

BACKGROUND

Southern California is a semi-desert region, where the historical average rainfall is 12.8 inches a year (*State of Water*, 2013). In 2013, there were 3.6 inches of rainfall in Southern California. Rainfall in 2014 was only 4.7 inches (*State of Water*, 2013). If 2015 continues to have a shortage of rainfall, the amount of water retrieved from certain sources may need to be reduced or alternatives created. Water availability in Orange County (OC) depends on a diversified water supply portfolio. OC water supply comes from local and imported sources. Local water sources in OC include a mix of groundwater and recycled wastewater. The Metropolitan Water District of Orange County indicates that 45% of OC's water is imported (*State of Water*, 2013). The Metropolitan Water District of Southern California (MET) supplies imported water from the Colorado River and from the northern Sierra Nevada Mountains (*State of Water*, 2013). Many water distribution and wastewater recycling terms used in this report can be found in the Appendix.

As a result of the recent and drastic decreases in rainfall, water levels and availability of these local sources are quickly falling. When rainfall is below average, local water sources experience different impacts.

Groundwater comes from the local Santa Ana River groundwater basin (the Basin). This local source is always available, but the amount that can be extracted without adverse consequences is largely dependent on the annual rainfall received. The less rainfall, the less groundwater is available for extraction.

Recycled water is a relatively stable source because the amount of available recycled water remains fairly constant. When there is less rainfall, there is less groundwater, which causes more of a demand for putting water back into the Basin to resupply the ground water source. Groundwater recovery is the means by which

groundwater is kept at an acceptable level. The water storage is adversely affected because less rainfall results in less water to store. OC water is typically stored underground in the Santa Ana River Basin or in above ground catch basins, lakes, or ponds. Water storage is more limited in the southern portions of OC than in the northern and central regions. The storage is drawn down to critical levels when the rainfall is too low to replenish it.

Annual snowfall and rainfall also affect the two imported water sources. The northern Sierra Nevada Mountains provide water to OC from the snow accumulated during the winter months. The Colorado River Aqueduct System is one of the most dependable sources but it also has limitations. The Colorado River upstream water sources are also adversely affected by below- average rainfall. Even though it is less affected, the reliability of this source could also be reduced if the drought continues for years to come. Some areas in the southern part of the county depend as much as 95% on imported water for their potable water needs (*State of Water*, 2013).

OC is extremely fortunate to have the Basin and the Groundwater Replenishment System (GRS). The Basin and the GRS make OC less vulnerable to drought compared to other California communities. The Basin is the most cost effective source of water because most of the storage, some of the purification, and most of the replenishment are done by nature with very little human intervention. Again, rainfall does affect how much water can be pumped out of the Basin without replenishment. The GRS recycles wastewater and injects it into the Basin using various methods.

Since recycled water is a local source of water, it is the one part of the system that can be improved and provide economic savings. Recycled water is wastewater that has been treated to remove solids and impurities. The resulting water can be further processed and used to create potable water or used for sustainable landscape irrigation. This irrigation water is called “purple pipe” water.

REASON FOR THE STUDY

Given the fact that California is facing a serious, extended drought, the guaranteed supply of imported water and local groundwater is very vulnerable. The primary purpose of this study was to compare the cost of recycling more water with the cost of buying imported water. The Grand Jury needed to research each wastewater processor to determine the volume of wastewater that might be available for recycling. Based on the possible availability of more wastewater to recycle, what plans does Orange County have to do more recycling of this precious resource rather than discharging it into the ocean?

METHODOLOGY

The Grand Jury gathered information for this report from interviews, site visits, district production reports, and research. On-site interviews were conducted at the Orange County Sanitation District (OCSD), the Orange County Water District (OCWD), the Irvine Ranch Water District, and the South OC Wastewater Authority. The Grand Jury conducted telephone interviews with the remaining water districts. Each interview was with the most senior executive, often followed up with an interview with the person

in charge of production. Production data and information were submitted to the Grand Jury by fax or email. Imported water rates came from the Municipal Water District of Orange County (Municipal, 2014).

INVESTIGATION AND ANALYSIS

OC water supply comes from local water sources and imported water sources. Local water sources in OC include a mix of groundwater and recycled wastewater. These local sources provide about one-half of OC's water. The other half is imported and supplied to OC by the Metropolitan Water District of Southern California from the Colorado River and from the northern Sierra Nevada Mountains. Assuming the drought continues, OC will have to recycle more wastewater or buy more imported water, which may be much more expensive if all sources are adversely affected by the drought. An analysis of all the data shows that recycling more wastewater is less expensive and more dependable.

The Grand Jury obtained all of the production data from the agencies and analyzed and determined the amount of wastewater volumes and costs. A summary of results are provided in the tables below, with details presented in the following paragraphs.

Table 1: Wastewater Volume

District/Authority	WW Volume In		WW Volume Out		
	Total In (mgpd)	(%)	Ocean (mgpd)	Purple Pipe (mgpd)	Potable (mgpd)
El Toro Water District (ETWD)	3.7	1.4%	3.3	0.4	
Irvine Ranch Water District (IRWD)	21.9	8.4%	1.7	20.2	
Metropolitan Water District of SoCal (MET)	0	0.0%			
Orange County Sanitation District (OCSD) *, **	198.0	75.6%	121.0		
Orange County Water District (OCWD) ***				7	70
City of San Clemente (SC)	4.0	1.5%	3.0	1.0	
Santa Margarita Water District (SMWD)	11.0	4.2%	3.2	7.8	
South OC Wastewater Authority (SOCWA)	22.7	8.7%	14.7	8	
Trabuco Canyon Water District (TCWD)	0.6	0.2%		0.6	
TOTAL	261.9	100%	146.9	45.0	70

Notes:

mgpd = millions of gallons per day

* OCSD's Total In (198mgpd) = OCSD Plant 1 (96mgpd) + OCSD Plant 2 (102mgpd)

** OCSD's Total In (198mgpd) = OCSD ocean discharge (121mgpd) + OCWD purple pipe (7mgpd) + OCWD potable (70mgpd)

*** OCWD has 92mgpd (15mgpd + 7mgpd + 70mgpd) that is already accounted for in OCSD's throughput, including 15mgpd returned to OCSD for Ocean discharge

Table 2: Water Costs (\$/mg)

IRWD Purple Pipe	\$1,653	Cost to treat to purple pipe standards
OCSD Ocean Discharge	\$1,926	Cost to treat for ocean discharge
OCWD Groundwater	\$1,083	Cost of Santa Ana River Basin water
OCWD Purple Pipe	\$1,503	Cost to treat to purple pipe standards
OCWD Potable	\$1,468	Cost to treat to potable standards
SMWD Ocean Discharge	\$1,103	Cost to treat for ocean discharge
SMWD Purple Pipe	\$1,488	Cost to treat to purple pipe standards
SOCWA Ocean Discharge	\$2,655	Cost to treat for ocean discharge
SOCWA Purple Pipe	\$3,326	Cost to treat to purple pipe standards
MET Wholesale	\$2,601	Cost of imported water

North & Central Orange County Wastewater Processing

OC Sanitation District

OC Sanitation District (OCSD) receives and processes the wastewater for all of the cities and unincorporated land in north and central OC, which represents 75.6% of all of OC's wastewater. Last year it processed an average of 198 million gallons per day (mgpd) of wastewater. The OCSD's treatment of wastewater results in a water product that meets federal water safety and state water quality standards for ocean discharge. OCSD also sends treated wastewater to the OC Water District (OCWD).

OC Water District

OCWD manages the Santa Ana River Basin Aquifer, which supplies groundwater for most of the cities and unincorporated areas in north and central OC. The Aquifer water comes from (1) rainfall captured in catch basins along the Santa Ana River, (2) river water flowing from San Bernardino and Riverside, (3) treated wastewater from outside of OC, (4) imported water, (5) recycled wastewater, and (6) a small amount of incidental runoff. OCWD receives 92 mgpd of recycled wastewater from OCSD and then further treats it for two valuable uses: irrigation (purple pipe water), or potable water (drinking water). The amount recovered from this processing or recycling is 7 mgpd of purple pipe water, 70 mgpd of potable water for replenishing the basin aquifer, and 15 mgpd as a byproduct of the treatment process. The majority of this byproduct is returned to OCSD for ocean discharge. OCWD is currently in the process of increasing their recycled potable water capacity from 70 mgpd to 100 mgpd. The capital cost of the project is \$142 million. The Grand Jury computed the amount of additional potable water this project could produce over 30 years and amortized the capital costs over the same period to find that recycled water would still cost far less than imported water.

South OC Wastewater Processing

South OC wastewater is processed by the El Toro Water District, the City of San Clemente, the Santa Margarita Water District, the South OC Wastewater Authority, and the Trabuco Water District. These entities processed an average of 42 mgpd last year, or 16% of OC's daily wastewater volume. From those 42 mgpd, they produced 17.2 mgpd of purple pipe water and discharged the remainder into the ocean.

Irvine Ranch Water District

The Irvine Ranch Water District (IRWD) processes 21.9 mgpd of wastewater. From those 21.9 mgpd, it produced 20.2 mgpd of purple pipe water and 1.7 mgpd of byproduct. IRWD is unique because in addition to using purple pipe water for landscape irrigation, it also uses it for industrial processes and toilet flushing via dual plumbing systems.

Costs and Measurements

The Grand Jury reviewed the various costs of imported water, recycled water, and groundwater. Since all wastewater must be treated before it can be discharged into the ocean, that cost is considered fixed and, while it is noted in Table 2, it is not used in this study. Water agencies and wastewater processors sometimes use different measuring nomenclature. This study uses one common measurement of million gallons (mg). Some production reports used Acre-Feet (AF). One AF equals 325,851 gallons.

FINDINGS

In accordance with California Penal Code sections 933 and 933.05, the 2014-2015 Grand Jury requires (or, as noted, requests) responses from each agency affected by the findings presented in this section. The responses are submitted to the Presiding Judge of the Superior Court.

Based on its investigation of Wastewater Processing in Orange County, the 2014-2015 Orange County Grand Jury has arrived at eight principal findings, as follows:

- F.1.** The Orange County Sanitation District processes an average of 198 million gallons per day of wastewater and sends 121 million gallons per day of secondary treated wastewater to the ocean.
- F.2.** The Orange County Water District receives an average of 92 million gallons per day of treated wastewater from Orange County Sanitation District and recycles 70 million gallons per day of water treated to potable water standards that is then returned to the groundwater basin aquifers.
- F.3.** From the 92 million gallons per day from Orange County Sanitation District the Orange County Water District recycles 7 million gallons per day of water treated to plant irrigation standards.
- F.4.** The Irvine Ranch Water District processes 21.9 million gallons per day of wastewater and recycles 20.2 million gallons per day for purple pipe use.

- F.5.** The South OC Wastewater Authority (SOCWA) processes 22.7 million gallons per day of wastewater, treats 8 million gallons per day to purple pipe standards, and sends 14.7 million gallons per day to the ocean.
- F.6.** The El Toro Water District, the City of San Clemente, the Santa Margarita Water District and the Trabuco Canyon Water District process a combined average total of 19.3 million gallons per day and send to the ocean 9.5 million gallons per day. The remaining 9.8 million gallons per day are used for landscape irrigation.
- F.7.** In north and central Orange County, the cost to create potable recycled water is \$1,468 per million gallons or \$1,133 less than the current cost per million gallons of imported water.
- F.8.** The South OC Wastewater Authority (SOCWA) cost to recycle wastewater currently exceeds the cost of imported water, however the Grand Jury believes that the cost of imported water will increase.

RECOMMENDATIONS

In accordance with California Penal Code sections 933 and 933.05, the 2014-2015 Grand Jury requires (or, as noted, requests) responses from each agency affected by the recommendations presented in this section. The responses are submitted to the Presiding Judge of the Superior Court.

Based on its investigation of Wastewater Processing in Orange County, the 2014-2015 Orange County Grand Jury makes the following four recommendations:

- R.1.** Orange County Sanitation District should conduct a study of possible methods of increasing the amount of processed wastewater sent to Orange County Water District, including timelines and noting any barriers that may prevent increasing flow, and implement the most cost effective method to reduce the amount of imported water to Orange County. (F.1.) (F.2.) (F.7.)
- R.2.** Orange County Water District should conduct a study of possible methods of increasing the amount of processed wastewater and implement the most cost effective method to reduce the amount of imported water to Orange County. (F.2.) (F.3.) (F.7.)
- R.3.** South Orange County Wastewater Authority should conduct a study of possible methods of increasing the amount of processed wastewater and implement the most cost effective method to reduce the amount of imported water to Orange County. (F. 5.) (F. 8.)
- R.4.** The El Toro Water District, the City of San Clemente, the Santa Margarita Water District, and the Trabuco Canyon Water District should conduct a study of possible methods of increasing the amount of processed wastewater and implement the most cost effective method to reduce the amount of imported water to Orange County. (F.6.)

REQUIRED RESPONSES

The California Penal Code section 933 requires the governing body of any public agency which the Grand Jury has reviewed, and about which it has issued a final report, to comment to the Presiding Judge of the Superior Court on the findings and recommendations pertaining to matters under the control of the governing body. Such comment shall be made no later than 90 days after the Grand Jury publishes its report (filed with the Clerk of the Court). Additionally, in the case of a report containing findings and recommendations pertaining to a department or agency headed by an elected County official (e.g. District Attorney, Sheriff, etc.), such elected official shall comment on the findings and recommendations pertaining to the matters under that elected official's control within 60 days to the Presiding Judge with an information copy sent to the Board of Supervisors.

Furthermore, California Penal Code section 933.05 (a), (b), (c), details, as follows, the manner in which such comment(s) are to be made:

(a) As to each Grand Jury finding, the responding person or entity shall indicate one of the following:

(1) The respondent agrees with the finding

(2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefore.

(b) As to each Grand Jury recommendation, the responding person or entity shall report one of the following actions:

(1) The recommendation has been implemented, with a summary regarding the implemented action.

(2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.

(3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the Grand Jury report.

(4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefore.

(c) If a finding or recommendation of the Grand Jury addresses budgetary or personnel matters of a county agency or department headed by an elected officer, both the agency or department head and the Board of Supervisors shall respond if requested by the Grand Jury, but the response of the Board of Supervisors shall address only those budgetary /or personnel matters over which it has some decision making authority. The

response of the elected agency or department head shall address all aspects of the findings or recommendations affecting his or her agency or department.

Comments to the Presiding Judge of the Superior Court in compliance with Penal Code section 933.05 are required from:

Responses Required:

1. Responses to Findings F.1., F.2. and Recommendation R.1. are required from the Board of Directors of the Orange County Sanitation District.
2. Responses to Findings F.1., F.3., F.7., and Recommendation R.2. are required from the Board of Directors of the Orange County Water District.
3. Responses to Findings F.5., F.8., and Recommendation R.3. are required from the Board of Directors of the South Orange County Wastewater Authority.
4. Responses to Findings F.6., and Recommendation R.4. are required from the Board of Directors of the El Toro Water District.
5. Responses to Findings F.6., and Recommendation R.4. are required from the Mayor of the City of San Clemente.
6. Responses to Findings F.6., and Recommendation R.4. are required from the Board of Directors of the Santa Margarita Water District.
7. Responses to Findings F.6., and Recommendation R.4. are required from the Board of Directors of the Trabuco Canyon Water District.
8. Response to Finding F.4. is required from the Board of Directors of the Irvine Ranch Water District.

COMMENDATIONS

The 2014-2015 Grand Jury commends the OC Sanitation District and the OC Water District for the partnership they developed to recycle wastewater for the beneficial use of north and central OC residents. Last year's average of 77 mgpd of recycled water reduces dependence on more expensive imported water at a time when the amounts of external water supplies are stressed by the State's prolonged drought.

The 2014-2015 Grand Jury commends the Irvine Ranch Water District for the years of recycling water for landscape irrigation leadership. Last year they recycled over 92% of the wastewater they received.

REFERENCES

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APPENDIX: GLOSSARY

AF. Acre-Foot. The amount of water needed to cover an acre (approximately a football field) one foot deep, or 325,900 gallons. One acre-foot can support the annual indoor and outdoor needs of between one and two households per year, and, on average, three acre-feet are needed to irrigate one acre of farmland.

Aquifer. A geologic formation of sand, rock and gravel through which water can pass and which can store, transmit, and yield significant quantities of water to wells and springs.

Groundwater. Water that occurs beneath the land surface and fills partially or wholly pore spaces of the alluvium, soil, or rock formation in which it is situated. Does not include water which is being produced with oil in the production of oil and gas or in a bona fide mining operation.

Groundwater basin. A groundwater reservoir defined by all the overlying land surface and the underlying aquifers that contain water stored in the reservoir. Boundaries of successively deeper aquifers may differ and make it difficult to define the limits of the basin.

Groundwater Replenishment System (GRS). An OCWD/OCSD joint project being developed to provide up to 100,000 acre-feet of reclaimed water annually for groundwater replenishment. Treated wastewater will undergo further treatment at OCWD-using the same technology as bottled water companies-before it is piped northward along the Santa Ana River to replenish the groundwater basin in the inland part of the county. Visit the GWR System website (<http://www.gwrsystem.com>).

Imported water. Water that has originated from one hydrologic region and is transferred to another hydrologic region. Metropolitan Water District of Southern California(MET) imports water from the Colorado River and Northern California. MET's agency in OC is the Municipal Water District of OC (MWDOC).

Potable water. Suitable and safe for drinking.

Primary treated water. First major treatment in a wastewater treatment facility, usually sedimentation removal but not biological oxidation.

Recycling. A type of reuse, usually involving running a supply of water through a closed system again and again. Legislation in 1991 legally equates the term "recycled water" to reclaimed water.

Santa Ana River Basin Aquifer. That portion of the Santa Ana River that is located within OC.

Secondary Treatment. Generally, a level of treatment that produces 85 percent removal efficiencies of biological oxygen demand and suspended solids. Usually carried out through the use of trickling filters or by the activated sludge process.

Tertiary treatment. The treatment of wastewater beyond the secondary or biological stage. Normally implies the removal of nutrients, such as phosphorous and nitrogen, and a high percentage of suspended solids.

Wastewater. Water that has been previously used by municipality/residences, industry or agriculture and has suffered a loss of quality as a result of use.

EXHIBIT "B"

(IRWD Letterhead)

June X, 2015

The Honorable Glenda Sanders
Presiding Judge of the Superior Court
700 Civic Center Drive West
Santa Ana, CA 92701

Dear Judge Sanders:

Pursuant to the letter from the Orange County Grand Jury dated April 24, 2015, a response to Finding F.4 is required from the Board of Directors of the Irvine Ranch Water District.

Finding F.4 states: The Irvine Ranch Water District processes 21.9 million gallons per day of wastewater and recycles 20.2 million gallons per day for purple pipe use.

This letter will confirm that the Irvine Ranch Water District Board of Directors agrees with Finding F.4.

I trust this letter will satisfy your request. If you have any questions, please feel free to contact Mr. Patrick Shields, Executive Director of Operations at (949-453-5720 – shields@irwd.com) or me at (949) 453-5590 (cook@irwd.com).

Sincerely,

Paul Cook
General Manager

Separate copy mailed to:
Orange County Grand Jury
700 Civic Center Drive West
Santa Ana, CA 92701

June 8, 2015

Prepared by: Christopher Smithson

Submitted by: Cheryl Clary

Approved by: Paul Cook



ACTION CALENDAR

COST OF SERVICE STUDY AND POLICY CONSIDERATIONS

SUMMARY:

The District's consultant, Carollo Engineering, Inc., in consultation with staff and legal counsel, has developed the Cost of Service Study. Carollo presented a draft of the Study to the IRWD Board at its meeting on May 26, 2015. Input was requested so that changes could be incorporated into the final report; comments have been received incorporated into the report. Staff recommends the Board adopt a resolution receiving the Cost of Service Study subject to non-substantive changes.

BACKGROUND:

The purpose of the Cost of Service Study is to evaluate the District's rate-setting processes and consider rate structure design components. The objectives of the District's rate structure are as follows:

- Provide water, sewer, and recycled service at rates that are fair and equitable;
- Charge rates that are consistent with industry accepted cost of service principles that satisfy future revenue requirements and that meet all state law requirements (including Proposition 218); and
- Provide these services while fairly and equitably allocating costs appropriately to those customers benefitting from them.

While developing the scope of the study, the District determined to retain a consultant that would provide the following:

- *Expertise:* The District would benefit from a consultant's experience in rate studies for other agencies, and
- *Independence:* The District wanted to have an independent analysis to ensure the appropriateness of the District's rate structure and process.

The District retained Carollo Engineering, Inc. to develop the Cost of Service Study, which is attached as Exhibit "A".

Staff has received comments from the Board that have been incorporated into the final report. Staff initially anticipated bringing the final report back to the Board on June 22, 2015 – the same meeting when the Board will be considering the adoption of rates and charges for FY 2015-16. As all comments have been received and incorporated, staff is recommending that the final study be received at this time. Staff recommends that the Board adopt a resolution, which is attached as Exhibit "B", receiving the Cost of Service Study.

FISCAL IMPACTS:

There is no impact to the Fiscal Year 2014-15 Operating Budget. Impacts for the proposals have been incorporated into the Proposed 2015-16 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on December 9, 2014; January 13, 2015; and February 21, 2015 and by the Board on May 26, 2015.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE SUBJECT TO NON-SUBSTANTIVE CHANGES ON THE COST OF SERVICE STUDY:

RESOLUTION NO. 2015 -__

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT RECEIVING THE
DISTRICT'S COST OF SERVICE STUDY

LIST OF EXHIBITS:

Exhibit "A" – Cost of Service Study

Exhibit "B" – Resolution Receiving the Cost of Service Study

EXHIBIT “A”

Carollo Engineers
3150 Bristol St., Suite 500 • Costa Mesa, CA 92626
Tel: 714.593.5100
Fax: 714.593.5101
carollo.com



COST OF SERVICE STUDY

JUNE 2015

Irvine Ranch Water District

The mission of Irvine Ranch Water District is to provide high quality water and sewer services in an efficient, cost effective, and environmentally sensitive manner which produces a high level of customer satisfaction.

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GLOSSARY

TERM	DESCRIPTION
AF	Acre foot / Acre feet, 1 AF = 435.6 ccf, 326,000 gallons
AWWA	American Water Works Association
Carollo	Carollo Engineers, Inc.
ccf	hundred cubic feet, 1 ccf = 748 gallons
CII	Commercial, Industrial, and Institutional customers class
CIP	Capital Improvement Projects
CY	Calendar Year
Domestic	Potable Water
ET	EvapoTranspiration (ET _o) – represents plant water loss through evaporation and transpiration for a reference crop of cool-season turf grass. It is a measure of the amount of water that needs to be replaced to maintain plant health.
ETAF	ET Adjustment Factor – a coefficient that adjusts ET values from reference ET _o based on different crop coefficients (K _c) and irrigation efficiency (IE) factors. $ETAF = K_c / IE$.
F&P	Finance and Personnel Committee
Fixed Costs	Expenses that are not dependent on the level of water production or water sold
FY	Fiscal Year
GPCD	Gallons per capita per day
GPD	Gallons per day
IRWD	Irvine Ranch Water District
LA	The square footage of landscaped area
LAWRP	Los Alisos Water Recycling Plant
M1 Manual	"Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1" published by AWWA
MGD	Million gallons per day
MWD	Metropolitan Water District of Southern California
MWDOC	Municipal Water District of Orange County
MWRP	Michelson Water Recycling Plant
Non-Domestic	Non-Potable Water or Recycled Water
NTS	Natural Treatment System
O&M	Operations and Maintenance
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
Offsetting Revenue	Includes service contract revenue not included in service charges and non-rate

	generated revenue.
OPA	Orange Park Acres
Over-Allocation	Water demands in excess of the base-allocation
Over-Allocation Funds	Revenues generated from over-allocation water sales
PAYGO	Pay-As-You-Go
Potable Water	Water suitable to be consumed for drinking and other uses.
Raw Water	Water in its natural state, prior to any treatment for drinking.
Recycled Water	Sewage that is treated to remove solids and impurities, and used for non-potable irrigation and commercial and industrial water needs
R-GPCD	Residential gallons per capita per day
Semi-Variable	An expense which contains both a fixed-cost component and a variable-cost component. The fixed cost element shall be a part of the cost that needs to be paid irrespective of the level of activity achieved by the entity. On the other hand the variable component of the cost is payable proportionate to the level of activity.
SOCWA	South Orange County Wastewater Authority
Sq. Ft.	Square feet
SWRCB	State Water Resources Control Board
Variable Cost	Costs that change in proportion to volume of water sold or produced
WEF	Water Environment Federation
WRMP	Water Resources Master Plan

EXECUTIVE SUMMARY

Irvine Ranch Water District (IRWD) engaged Carollo Engineers, Inc. (Carollo) to perform an independent technical cost-of-service evaluation to assess the District's water, recycled water, and sewer rate setting methodology. In meeting this scope, Carollo developed an independent rate model to review and evaluate the District's internal cost of service methodology for compliance with American Water Works Association (AWWA) and Water Environment Federation (WEF) cost-of-service standards, industry best practices, Board policies, and other cost of service requirements unique to California. Together, these establish the cost-of-service standard that is referenced throughout this report.

Overview

Irvine Ranch Water District was established in 1961 as a California Water District under the provisions of the California Water Code. As a special district, IRWD focuses on four primary services – providing potable water, collecting sewage, producing and distributing recycled and other non-potable water, and operating urban runoff source control and treatment programs. The District serves a 181 square mile area, which includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange, and Lake Forest, as well as certain unincorporated areas of Orange County.

The sewer system was initially constructed in the 1960s and currently consists of nearly 1,000 miles of sewer pipelines and lift stations. IRWD has two recycled water treatment plants, Michelson Water Recycling Plant in Irvine and Los Alisos Water Recycling Plant in Lake Forest. Sewage treated at these facilities supplies the majority of the recycled water system maintained by IRWD.

Since 1991, IRWD has used an allocation-based, conservation rate structure to encourage water use efficiency and increase conservation. This structure uses property-specific water allocations and tiered pricing to provide customers with an economic incentive to use water efficiently. Each customer receives a base allocation of water that provides a reasonable quantity to meet their needs, and may be adjusted by customer requested variances to address specific needs. Water bills are calculated based upon how much water is used relative to the base allocation for that account. As customers increase their water usage relative to their base allocation, water is billed at increasingly higher rates based on increased costs of service. Revenue generated from these higher billing tiers is used to fund expenses associated with the purchase of additional expensive imported water, urban runoff treatment, targeted water conservation programs, and other costs of water supply and consumption associated with higher levels of demand.

This rate structure is a critical to the District meeting its long-term conservation goals, especially in the face of California's current unprecedented drought. In April 2015, the Governor issued an Executive Order to direct the State Water Resources Control Board (SWRCB) to adopt a regulation to achieve an aggregate statewide 25 percent reduction in potable urban water use through February 2016. The required reductions for each water provider were based on the average residential gallons per capita per day (R-GPCD) from July to August 2014. Based on IRWD's 91.7 R-GPCD, the SWRCB required

IRWD to achieve a 16 percent reduction in potable usage from June 2015- February 2016 compared with 2013 levels. The State mandate has resulted in proposed reductions to the customer water allocations and has been incorporated into the proposed Fiscal Year (FY) 2015-16 rates.

Cost of Service Requirements

In California, water and sewer rates must adhere to cost of service principles. The District rate setting process conforms to cost of service standards set by the AWWA and the WEF for water and sewer respectively. Those standards are as follows:

- In providing adequate service to its customers, each utility must receive sufficient total revenue to ensure proper operation and maintenance, development and perpetuation of the system, and preservation of the utility's financial integrity;
- Development of the general rate structure should recover the cost of providing the service to various classes of customers in an equitable manner; and
- When diverse and competing objectives are well understood and evaluated, a utility has the opportunity to design a rate structure that achieves multiple objectives.

In advance of setting proposed FY 2015-16 rates and this cost of service analysis, the District outlined the following objectives to accommodate the District's cost of service requirements and policy determinations. Within the broader cost of service approach and legal requirements, the District's policy determinations form the basis of the detailed rate structure design elements that are distinct to the District and the community.

The objective of the cost of service analysis is to establish rates which:

- Are cost-based and set at a level that provides funding to meet the District's revenue requirements;
- Are built upon an equitable and reasonable foundation;
- Proportionately allocate the costs of providing service among the customer classes and, for water and recycled water rates, among the tiers;
- Promote water use efficiency through an allocation-based conservation rate structure;
- Are relatively easy to understand and administer; and
- Provide stability, in both the ability to provide adequate revenues to meet financial requirements, and overall rates from year-to-year.

In parallel with each annual budgeting and rate setting process, the District conducts an internal analysis of its revenue requirements and cost of service which is consistent with industry accepted cost of service principles and legal requirements.

Results and Recommendations

Based on our independent analysis and evaluation, Carollo has determined that IRWD's budget and rate setting process provides a reasonable forecast of revenues to be generated through the District's proposed water, recycled water, and sewer rates. Furthermore, the costs allocated to the District's customers bear a fair, reasonable, and logical relationship to the customers' burdens placed on, and

benefits received from the District's services, thus complying with cost-of-service standards, industry best practices, IRWD Board policies, and other requirements as discussed in this report.

This analysis confirms the appropriateness of the District's cost of service framework and annual rate setting process. While this analysis is focused on the FY 2015-16 rate setting process, the review also validates the internal rate setting framework for future rate setting process.

As part of this review, Carollo has developed rate structure refinements for the District's consideration. Several of these policy considerations were prioritized and brought to the District's Finance and Personnel Committee (F&P), which consists of two members of the IRWD Board. Carollo presented several policy considerations to F&P, of which three (Service Charge for Low Volume Users, Revisions to

Sewer Discharge Methodology, and Recycled Water Decoupling) were presented for consideration to the IRWD Board. These policy considerations are further detailed with relevant figures and data in this report. The remaining proposed policy considerations are described in Appendix D: Additional Considerations. Implementation of the remaining considerations will depend on factors such as timing of availability of data or studies necessary for implementation, projected effectiveness in achieving the above-listed objectives, and feasibility and cost of implementation and administration. These policy considerations are refinements at a detail level, and are not required for meeting the cost of service standard or ensuring that the rates proportionately allocate the costs of providing service among the customer classes and water pricing tiers.

1 INTRODUCTION

1.1 STUDY PURPOSE

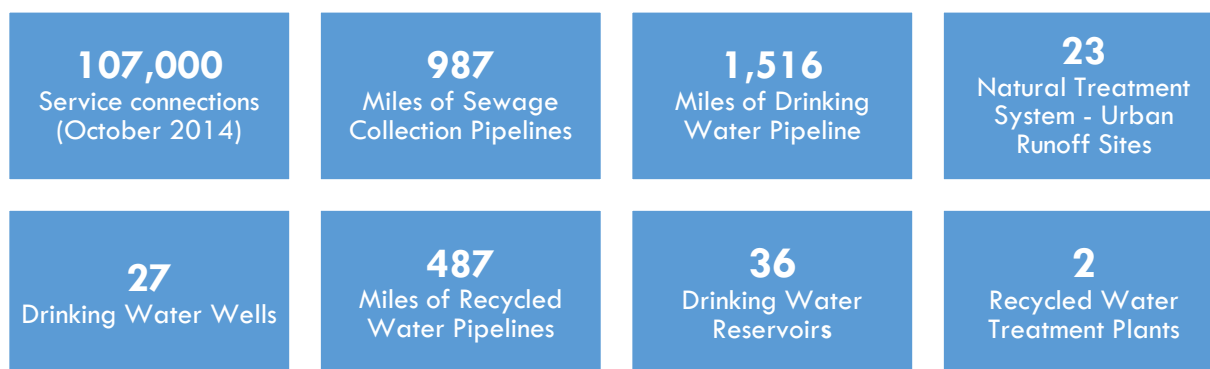
Each year, as part of its annual budget and rate-setting process, the District conducts an internal analysis of its revenue requirements and cost of service methodology in order to determine the District's continued compliance with industry-accepted cost of service principles and State law requirements. In October 2014, Irvine Ranch Water District (IRWD) retained Carollo Engineers to conduct a cost of service review and rate study (Study) of IRWD's water, sewer, and recycled water rates. Carollo has conducted a comprehensive cost of service and rate design review of IRWD's rates and charges, as well as an independent evaluation of the underlying assumptions, inputs, and outputs. Carollo's analysis initially was intended to evaluate the IRWD cost of service methodology for fiscal year (FY) 2014-15. In light of the extraordinary actions taken at the state level to respond to the drought, IRWD asked that Carollo's analysis evaluate the cost of service methodology used by IRWD to develop proposed rates for FY 2015-16. To accommodate this timing, the evaluation was conducted in parallel with the IRWD internal analysis.

IRWD and Carollo worked to review the District's rate and financial assumptions and projections. A key component of the District's efforts has been the use of an allocation-based conservation water rate structure, which discourages wasteful use through meaningful tiered pricing for any inefficient water use. This cost-based rate structure, implemented in 1991 in response to drought conditions, has been an integral component for the District's water conservation program, and has resulted in a 25 percent reduction in per capita water use for residential customers since adoption. The structure has been designed by the District for use on an ongoing basis, as part of its long-term, sustained approach to promoting water use efficiency and financial stability. As the State continues to be in a prolonged drought, and with periodic adjustments as needed to reflect regional and State water availability conditions, this rate structure will be critical in encouraging continued water conservation efforts.

1.2 IRWD BACKGROUND

IRWD provides high-quality drinking water, reliable sewer collection and treatment, recycled water programs, and environmentally sound urban runoff treatment to more than 370,000 residents in Irvine and other nearby surrounding communities.

IRWD's potable water system is forecasted to deliver approximately 50,000 acre-feet in FY 2015-16. Untreated water demand is forecasted to reach approximately 2,000 AF, while sales through the recycled water system are projected at nearly 33,000 AF (including supplemental water from the untreated system and non-potable groundwater). The Natural Treatment System (NTS) is a cost-effective, environmentally sound method for treating dry weather runoff. Treating urban runoff is one of IRWD's core responsibilities. As dry-weather runoff is a direct result of over watering, the cost to provide this service is allocated within the water system.



In addition to providing potable and non-potable water service, IRWD also provides sewer services. The IRWD sewer system was initially constructed in the 1960s and currently includes nearly 1,000 miles of sewer pipelines and lift stations, which convey sewage to the Michelson Water Recycling Plant (MWRP) in Irvine (28 million gallons per day (MGD) capacity), the Los Alisos Water Recycling Plant (LAWRP) in Lake Forest (7.5 MGD capacity) or to the Orange County Sanitation District (OCSD). Sewage treated at the MWRP and LAWRP facilities supplies IRWD's recycled water system. To accommodate the seasonal fluctuations in IRWD's demands and storage capacity for recycled water, MWRP sewer flows can be diverted to OCSD facilities; treated flows from LAWRP that are not recycled are discharged to an ocean outfall operated by the South Orange County Wastewater Authority (SOCWA).

IRWD's future planned water supply sources and demand forecasts are identified in the Water Resources Master Plan (WRMP), a comprehensive planning document. The WRMP incorporates planned growth through build-out in 2035, and provides that IRWD will be able to meet future demands with a reliable water supply. Each year new growth is accounted for in the demand forecast developed as part of the rate-setting process. The IRWD Capital Program supports the needs identified in the WRMP and includes more than 500 active and planned projects with expenditures totaling more than \$800 million over the next 30 years. The District has clearly defined sources for funding new capital (connection fees and ad valorem property taxes used to pay debt service on general obligation bonds) and capital enhancements (user replacement and enhancement fees which are part of the monthly fixed service charges).

Given the complexity of the District's system and California's cost of service laws, the analytical process provides an in-depth review of the District's revenue needs, customer usage characteristics, replacement and enhancement capital needs, and other future cost drivers. This report documents the methodology, policies, and assumptions used to develop the District's rates.

1.3 ALLOCATION-BASED CONSERVATION RATE STRUCTURE

Since 1991, IRWD customer potable water and recycled water bills have been calculated using an allocation-based, conservation rate structure that uses property-specific water allocations and tiered pricing. The rate structure was instituted to promote the efficient use of water, and is designed to

provide customers with a cost based, economic incentive to not exceed the reasonable amount of water required to serve indoor, landscape, commercial/industrial and institutional demands. This is accomplished by setting an allocation for each customer account that is based upon a variety of factors such as: irrigated area, daily weather characteristics, assumed number of residents, business type, and other more unique characteristics such as the presence of a pool, livestock or specialized industrial equipment. Any customer with greater needs can apply for a variance for both indoor and outdoor allocation in accordance with the District's Rules and Regulations. Specific details on the allocations are provided in Appendix C: Basis for Tiers FY 2015-16.

Water bills are calculated based upon how much water is used relative to the individual allocation for that account. As customers increase their water usage in excess of their allocation, water is billed at increasingly higher rates, reflecting the increasing costs to produce more and more water. Revenue generated from these higher billing tiers is considered over-allocation and is used for expenses associated with the purchase of additional imported water (currently the most expensive type of water for IRWD), urban runoff programs, targeted water conservation programs, and other costs of water supply and consumption associated with higher levels of demand. As a result of the allocation-based conservation rate structure and its conservation programs, IRWD has been able to reduce its residential demands by 25 percent and irrigation demands by 50 percent, resulting in lower rates than would otherwise be available.

2 STUDY OBJECTIVES

IRWD retained Carollo Engineers to perform an independent analysis and evaluation of the existing rate setting and methodology for cost recovery, allocations and calculations, and to make recommendations as to any refinements that might meet the objectives. The goal of this analysis is to evaluate the rate setting process. The primary objectives of the study include the following:

1. Confirm the appropriateness of existing financial plans for the water (includes the natural treatment system), recycled water, and sewer enterprises to provide financial sufficiency, meet operation and maintenance (O&M) costs and capital replacement and enhancement (R&E) needs;
2. Review of existing cost-of-service practices for the water, recycled water, and sewer enterprises;
3. Evaluate and develop policy considerations to existing water, recycled water, and sewer rate methodology to achieve the goals and objectives of the District, including ease of understanding, promoting water use efficiency/conservation and continued compliance with cost of service requirements;
4. Calculate and document the functionalization, classification, and allocation of costs, including capital reserves, among appropriate customer classes consistent with industry standards and cost of service requirements; and
5. Provide a rate design framework that proportionately aligns demands, allocations, and costs associated with the operations of the District, with service classes and pricing tiers.

2.1.1 Comprehensive Rate Design

Rates are typically designed to achieve multiple objectives. While industry standards provide a basis for testing reasonableness (governed by or being in accordance with reason or sound thinking; being within the bounds of common sense; not excessive or extreme)¹, this basis does not on its own meet legal requirements – specifically those in California. Within the cost of service approach and legal requirements, a utility agency's policy determinations form the basis of the detailed rate structure design elements that are distinct to the utility and the community. Within the IRWD rate structure, these policies encompass the entire structure including the selection of rate design (allocation-based for water and recycled water, sewage discharge-based block rates for sewer), methodology for allotting the amount of water use within customer allocations

Policy

Industry Standards (M1 Manual)

Legal Requirements

¹ reasonableness. (n.d.) American Heritage® Dictionary of the English Language, Fifth Edition. (2011).

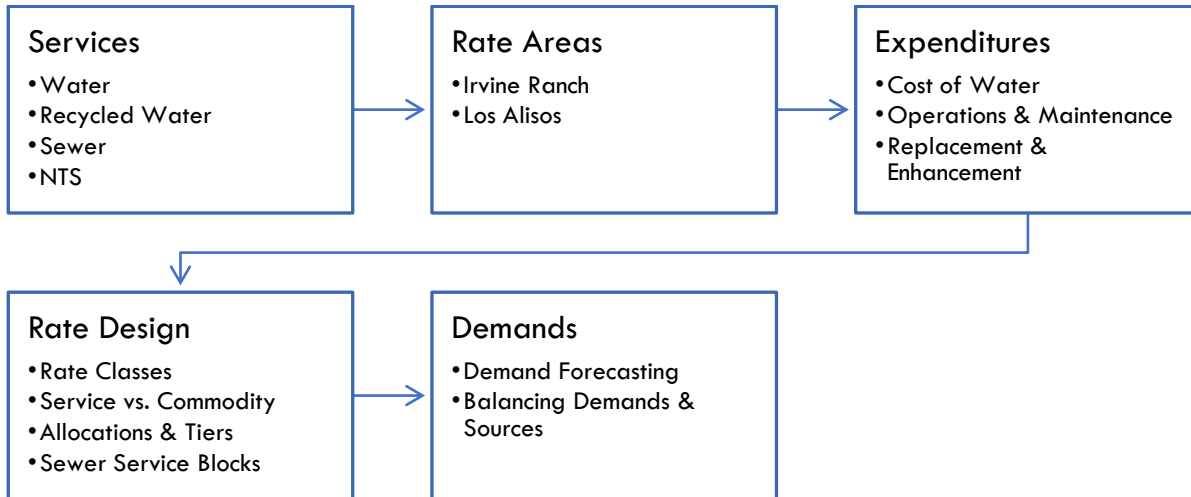
and the over-allocation tiers, and how over-allocation costs are budgeted to target water waste. With its rate structure, the District is able to satisfy its policy objectives and cost-of-service requirements.

2.2 FORWARD-LOOKING STATEMENT

The calculations and forecasts of this analysis are based on the reasonable projection of existing service costs, water demands, and system operations with information available, and on existing legal requirements. Significant changes in the District's operations, changes occurring in California water law, or further regulatory actions by the Governor or SWRCB in regard to water use may require the District to revisit the cost of service analysis.

3 OVERVIEW OF IRWD SERVICES & RATES

Below is an overview of the system services and rate setting process. Although shown as a linear sequence, this is an iterative process to balance revenues, expenditures, demands, and rate design.



The rate setting process begins with an estimate of the costs necessary to provide services at the District's existing levels and an estimate of revenue based on current rates. The estimated costs are scrutinized first by senior staff and then by the Finance and Personnel Committee and the Board of Directors. The revenue estimate considers both fixed and variable revenue sources. The fixed service charge is based on customer counts with estimated growth and capacity demands. The variable component is based on projected usage for both the water and sewer systems.

Estimated expenditures are separated by system, process, and service area to align expenses with revenue requirements. The associated expenses are assumed to be covered by current and projected revenues and any necessary rate increases so that the costs and revenues balance.

The overview will summarize and provide a guide for the detailed discussion of the cost of service evaluation that follows in Section 4.

3.1 SERVICES

IRWD provides water service, including potable (drinking water), untreated (used primarily for irrigation and agriculture), recycled water (sewer flows treated for defined non-potable water uses, primarily irrigation), the natural treatment system (used to treat urban runoff), and sewer service (collection and treatment of sewer flows).

3.2 RATE AREAS

Effective July 1, 2015, IRWD will have two rate areas: the Irvine Ranch rate area, which covers the majority of accounts and the Los Alisos rate area. (A third rate area, the Orange Park Acres Rate Area, will be merged into the Irvine Ranch rate area effective July 1, 2015.)

Over the last two decades, IRWD has consolidated with five retail water service providers. The integrated services of IRWD allow for reduced overhead and administrative costs and lower rates and charges to customers of the consolidated district. When considering consolidation requests, the District looks for increased efficiencies through economies of scale and mutual benefits from combined expertise and resources. Following each consolidation, a unique rate structure has been created to fund any amount necessary to bring the new system to the same level of service as the existing area, such as supply sources, and as provided in any applicable requirements of the consolidation. Once this equitable consideration has been achieved, the unique rate structure is transitioned to the Irvine Ranch rate area's water and sewer rate structures, including the allocation based water conservation rate structure. Any future consolidations will be handled in a similar manner.

3.2.1 Los Alisos Rate Area

In September 2000, the Orange County Local Area Formation Commission approved the consolidation between IRWD and the Los Alisos Water District. The current allocation-based conservation rate structure for the Los Alisos rate area is similar to the IRWD rate structure, but the apportionment of cost takes into account that this part of the service area does not have a major source of local groundwater. Los Alisos is almost wholly dependent upon more expensive imported water purchased from the Metropolitan Water District of Southern California (MWD).

While the Los Alisos rate area has already transitioned to an allocation-based conservation rate structure that encourages efficient water use, it will not have the same water commodity charge as customers in the Irvine Ranch rate area until the Los Alisos rate area has contributed sufficient funds to pay for its fair share of the groundwater infrastructure equivalent to that of customers of the Irvine Ranch rate area. It is anticipated that these funds will be generated from the future sale of a property that was an asset of the former Los Alisos Water District.

3.2.2 Orange Park Acres (OPA) Rate Area

In 2008, the merger between the Orange Park Acres Mutual Water Company and IRWD was approved. Since then, the OPA portion of the District's service area has seen a number of significant improvements to its water infrastructure which will ultimately bring the system up to contemporary standards, including replacement of the substandard 1929 steel pipe utilized throughout the system. The system improvements were financed by IRWD and, pursuant to contractual requirements implemented in the merger, OPA rate area customers paid for the improvements through a "water rate differential" which was the difference between the water rate charged to the former customers of OPA (with a 20 percent rate decrease) and the water rates for IRWD customers. The payment for these improvements will be completed effective July 1, 2015 and IRWD will transition its customers in the OPA area to the

IRWD allocation-based conservation rate structure effective on that date. Most customers in the OPA area use septic systems to treat their sewage.

3.3 EXPENDITURES

3.3.1 Expenditures

In order to provide its services, the District incurs costs on both a fixed and variable basis. Variable costs are those that vary with the amount of water used or purchased. These variable costs are directly tied to the commodity cost of water and vary with demand and source of supply. Alternatively, fixed costs are operation and maintenance costs that do not vary with changes in demand.

Variable Costs

Cost of Water

The cost of water includes all costs necessary to supply water to the end-user. This includes costs associated with producing, purchasing, and delivering the various sources of the supply (i.e. labor, materials, chemicals, treatment, and energy). This also includes an allocable portion of overhead expenses.

Fixed Costs

Operations & Maintenance

These are the routine fixed costs to provide daily operations and maintenance of the various systems. These costs are not directly dependent on the volume of water delivered. . This also includes an allocable portion of overhead expenses.

Replacement & Enhancement

These are the costs associated with the future replacement and enhancement of the existing infrastructure. Setting this money aside in advance helps stabilize rates and avoids significant potential future rate fluctuations.

Sewer Treatment & Recycled Water Production

These are costs to maintain and operate the District's extensive network of gravity sewer, force mains, sewage lift stations, and siphons that convey sewage to two District-owned treatment plants or to OCSD. The District treats sewage to provide recycled water for irrigation and industrial purposes which reduces its reliance on the more expensive sources of supply. Costs to deliver a portion of the sewage to the regional facilities of the Orange County Sanitation District are also included. Sewage treatment costs are considered "semi-variable" as a majority of the costs incurred is associated with the infrastructure and not incremental flows. They also include an allocable portion of overhead expenses.

3.4 RATE DESIGN

3.4.1 Rate Classes

The District maintains various rate classes to reflect both the type of service and type of use. In general, the significant rate classes are defined as: residential (attached, detached and apartments), CII (commercial, industrial, and institutional), irrigation and agriculture.

3.4.2 Service vs. Commodity

The District's rate structure for water use is separated into a commodity charge component and a service charge component. The commodity charges generally fund the cost of the District's water supplies while the service charges fund the fixed operating and maintenance expenses of the District.

Fixed Service Charges

Fixed service charge revenue is generated to cover the cost of operating, maintaining, repairing, and refurbishing the water and sewer systems. Water and sewer fixed service charges include a component for the future funding of replacement and enhancement of infrastructure. Historically, fixed service charges account for approximately 40 percent of IRWD's water rate revenues. The fixed service charges proportionally allocate cost based on meter hydraulic capacity ratios.

Commodity Rates

The commodity rates reflect the costs of the District's various sources of supplies and conservation efforts. In the recycled water system, the commodity rates also fund a portion of the fixed costs.

3.4.3 Allocation & Tiers

To reflect the costs of the District's various sources of supplies and conservation efforts, and to provide an economic incentive to conserve water, water consumption is billed based on an allocation-based conservation rate structure. Water usage at or below a customer allocation is billed at a lower cost, while water consumption exceeding the customer allocation is billed at a higher cost to recover the additional incremental cost to the District of providing this water. Depending on the customer class, the District has up to four tiers. A base use allocation is defined for each customer class that provides an amount of water as determined to meet the needs of the property. Any use in excess of the base use allocation is considered over-allocation. This structure aligns directly to the costs of service within each tier and promotes conservation. Specific allocation methodologies, as well as the methodology for the determination of tier consumption levels, are detailed further in Section 4.4 and Appendix C: Basis for Tiers FY 2015-16.

3.4.4 Sewer Service Blocks

Unlike water, the costs to provide sewer service are semi-variable. Charges vary based on a volumetric block structure of 5 ccf increments for residential and both a fixed (for the first 10 ccf) and variable charge (over 10 ccf) for CII customers. There is no sewer service costs associated with irrigation or landscape customers.

3.5 WATER DEMANDS

3.5.1 FY 2015-16 Demand Forecasting

In order to forecast future water demands, the District used actual June 2014 through December 2014 consumption records as a proxy for baseline FY 2015-16 water demands. This time frame, though limited, was chosen to forecast demands as it reflects the District's most recent rate adjustments (changes to both rates and water allocations). Based on these billings, for the full FY baseline 2015/16, total potable water demand in the then 5 tiers was forecasted for sales of 50,305 AF and 7,271 AF in Irvine Ranch and Los Alisos rate areas respectively.

In May 2015, prior to the District finalizing its FY 2015-16 budget, the SWRCB mandated IRWD to achieve a 16 percent reduction in potable water usage from June 2015-February 2016 compared with 2013 use. For the 2015-16 budget, this equates to a 14 percent reduction from baseline sales. The District believes the reductions can be achieved through a combination of focused conservation messaging and programs as well as a reduction in the base allocations and with price increases. The additional planned conservation efforts will focus on reducing demands within the over-allocation tiers (inefficient and wasteful tiers) **Error! Reference source not found.** details the baseline FY 2015-16 demands and forecasted FY 2015-16 demands for each rate area. In response to the drought and focused conservation efforts, the proposed FY 2015-16 rates no longer include an Excessive tier as its demand is captured in the Wasteful tier.

TABLE 3-1 FORECASTED POTABLE WATER DEMANDS BY SERVICE AREA

TIER	IRVINE RANCH (AF)			LOS ALISOS (AF)		
	BASELINE SALES	FY 2015-16	FORECASTED REDUCTION	BASELINE SALES	FY 2015-16	FORECASTED REDUCTION
Low Volume	15,761	14,618	-7%	2,988	2,803	-6%
Base Rate	29,603	27,360	-8%	3,464	3,252	-6%
Inefficient	2,462	700	-72%	382	105	-73%
Excessive	961	N/A		164	N/A	
Wasteful	1,518	750	-70%	273	125	-71%
Total	50,305	43,428	-14%	7,271	6,285	-14%

California water agencies that fail to comply with the mandated reduction are expected to be subjected to severe monetary penalties based on the most recent and best information available to the District. The District is unable to predict if any further actions may be taken by the Governor and the SWRCB, to modify or extend the reductions for periods after February 2016, or to impose penalties. Further actions could require the District to make a second-step rate adjustment as described later in this report, or to take other future actions to modify the rate structure as required by the cost of service standard.

Table 3-2 provides the baseline FY 2014-15 demands and forecasted FY 2015-16 demands for the untreated and recycled water systems. Unlike potable water sales, recycled and untreated water are not impacted by the mandated reductions and are forecasted to increase based on higher demands due to drier weather.

TABLE 3-2 FORECASTED RECYCLED AND UNTREATED WATER DEMANDS

Tier	RECYCLED WATER (AF)		UNTREATED (AF)	
	Baseline Sales	Forecasted FY 2015-16	Baseline Sales	Forecasted FY 2015-16
Low Volume	13,435	15,015		
Base Rate	14,076	15,731		
Inefficient	412	461		
Excessive	263	N/A		
Wasteful	1,180	1,613		
Untreated	13,435		2,151	2,612
Total	29,367	32,819	2,580	2,612

3.6 SEWER DEMANDS

For the sewer system, water use and a return to sewer factor is used as a proxy to estimate sewer flows. For FY 2015-16, Residential customers are billed based on their three-lowest water use months in the preceding calendar year. These three minimum months are used as a proxy for indoor domestic water use that will be returned to the sewer system. To account for minimal irrigation and consumptive use, a 90 percent return to sewer factor is assumed. Based on these results, it was assumed that any water usage in excess of 10 ccf was not being contributed to the sewer system.

The residential class is a relatively homogeneous group (needs are relatively uniform) and these assumptions are appropriate and reflect general industry practices. CII customers vary significantly and thus, as described previously, are subject to both a fixed and variable charge. The FY 2015-16 forecasted CII usage and associated sewer flow is 6,060,000 ccf.

3.7 RATE STABILIZATION AND RESERVES

Maintaining rates in accordance with cost of service standards requires an ongoing balancing of demands, expenditures, and appropriate water allocations. As year to year fluctuations are expected as weather is a significantly unpredictable factor, reserves can be utilized and are either added to or reduced based on actual versus forecasted results.

In response to the drought and to encourage further water use efficiency, the District has reduced its water allocations. Given the persistent dry conditions, customers in FY 2014-15 to date have not

responded as forecasted by the District. As such, the District has generated revenues in excess of its formalized budget. These revenues are put into reserves to mitigate potential future revenue shortfalls, increased targeted conservation efforts, and capital replacement.

The District's rate-structuring practice takes into account that, as weather and consumption cannot be predicted, the excess (over allocation) revenue must be considered cyclical for use over a three to five year timeframe. IRWD monitors, evaluates and prioritizes expenditures from the over allocation revenue to ensure its continuing ability to fund the costs of service allocated to the over allocation use in normal, wetter than normal and drier than normal years.

4 COST OF SERVICE REVIEW

4.1 STEP BY STEP APPROACH

Rate analyses are performed by District staff each fiscal year in order to establish the adequacy of the existing cost recovery levels to provide system revenues sufficient to fund utility operations, maintenance, and reserves for future replacement and enhancement capital needs.

To confirm these requirements, Carollo reviewed the District's cost of service rate setting process. The processes presented below are advocated by the American Water Works Association (AWWA) and the Water Environment Federation (WEF) for water and sewer respectively.

While the process is shown in a linear step by step approach, this is really an iterative process where the ultimate objective is to balance revenues with costs.



Revenue Requirement Analysis

- Compares existing revenues of the utility to its operating, capital reserves, and policy driven costs to establish the adequacy of the existing cost recovery levels

4.1.1 Revenue Requirements

The methodology that IRWD applies to establish annual rate revenue needs is consistent with industry standards established by the *Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1* (the "M1 Manual"), which is published by the American Water Works Association (AWWA), a national industry trade group that makes recommendations on generally accepted practices in the water and sewer industry. The revenue requirements analysis compares the forecasted revenues of the utility to its forecasted operating and capital reserve costs to determine the adequacy of the existing rates to recover the utility's costs. If any shortfalls exist, rates may need to increase.



Functional Cost Analysis

- Identifies and apportions annual revenue requirements to functional rate components based on its application of the utility system.



Water Demand Analysis

- Forecasts water sales based on historical billings, modifications to the rate structure, and any regulatory restrictions.



Rate Design Analysis

- Considers both the level and structure of the rate design to collect the distributed revenue requirements from each class of service

4.1.2 Functional Cost Analysis

After determining a utility's revenue requirements, the next step in the analysis is to outline the cost to deliver each unit of water or collect each unit of sewer discharge and to serve each customer. This process takes each item in the District's budget and organizes the items collectively based on what

function is served. For example, some cost items support the ability to deliver additional, expensive water, while other costs are incurred to provide customer service or to fund capital replacement. Organizing the budget in terms of end function allows direct correlation between the budget item and the rate, bridging the cost incurred by the District and the benefit delivered to the customer.

4.1.3 Water Demand Analysis

Forecasting water sales and purchases is a critical component in the rate setting process. As part of the budget process, the District forecasts the expected water usage based on historical demand, proposed changes to rates, regulatory impacts, and weather. These forecasted water demands are then compared against forecasted revenue requirements and rates are developed in order to recover costs. In other words, future demands are based on historic sales and factored for considerations like growth and weather. Rates are then generated so that estimated sales match associated costs.

4.1.4 Rate Design Analysis

The rate design involves developing a rate structure that proportionately recovers costs from customers. For example, in the potable water system, water supply costs are divided by units of water (demand), while service costs are allocated based on number of meter equivalents. This step allows the District to develop unit costs that can then be layered based on requirements to meet customer needs. This is a critical process for establishing tiered rates, as increasing usage incurs additional costs making excess water more expensive to provide.

4.1.5 Rate Calculation

The final part of the analysis is the rate calculation. This provides the nexus between the designed rates, the functional costs and the revenue requirements. This process connects planned expenditures to the designed rates by establishing rates to match the estimated revenue generation with expenditures.

As the following sections will demonstrate, this process creates a fair and equitable foundation for each charge and rate that the District levies.

4.2 REVENUE REQUIREMENT ANALYSIS

To recover the costs associated with providing service to its customers, the District derives revenue from a variety of sources, including fixed service charges, commodity charges, pumping surcharges for elevated communities within the District, and other miscellaneous revenues.

IRWD Budget Process

The IRWD Operating Budget provides the financial plan required to implement the District's planned operations for the year. After projecting the expected revenues and expenses for the upcoming fiscal year, staff prepares a draft budget for review and comment by the IRWD Board of Directors. Over a three-month period, IRWD considers forecasted growth factors, historical expenditures and revenues, and includes a robust internal vetting process. As part of this process, this budget is discussed and revised in a series of public meetings with the IRWD Board of Directors. These meetings are open to the public and participation is encouraged.

In addition, as previously mentioned, the District has a policy and long history of planning for the inevitable replacement or enhancement of capital infrastructure. The revenue requirements include a replacement and enhancement component intended to fund current and future capital costs that provide reliability and redundancy to the District's infrastructure. Setting replacement monies aside in advance helps to stabilize rates and avoids potential significant future rate swings.

As IRWD prepares rates annually, the revenue requirements analysis is performed as part of the budget process. While this study did not prepare a financial forecast, Carollo reviewed the District's expenditures and policies to determine if the identified FY 2015-16 funding needs appear appropriate and reasonable.

The District's expenditures drive the revenue requirement. Some of the most significant expenditures include the cost of providing water, repairs and maintenance of the systems, labor, and general and administrative expense.

4.2.1 Water System Revenue Requirement

Table 4-1 below outlines the forecasted expenditures for FY 2015-16, which serve as the basis for the revenue requirements for the water system.

TABLE 4-1 WATER FORECASTED REVENUE REQUIREMENT SUMMARY – FY 2015-16 (\$ IN THOUSANDS)

EXPENDITURES ¹	FY 2015-16 BUDGET
Dyer Road Well Field	\$13,079
Treated Groundwater	7,743
Purchased Water	14,586
Untreated Water	2,279
Water Banking	821
General Conservation	1,096
Targeted Conservation/NTS	4,098
Pumping	800
Total Cost of Water Production	\$44,502
Less use of reserve funds and revenue offsets ²	(2,046)
Total Cost of Production to be Recovered by Rates	\$42,456
Service Costs (Fixed)	24,494
Enhancement and Replacement Fund Contribution	5,624
Total Revenue Requirement from Rates	\$72,574

Notes:

(1) Detailed outline of costs provided in Appendix E: Water Revenue Requirement Detail.

(2) Reserve funds and offsets include contract service agreement revenue and non-rate generated revenue.

4.2.2 Recycled Water System Revenue Requirement

Table 4-2 below outlines the forecasted expenditures for FY 2015-16, which served as the basis of the revenue requirement for the recycled water system.

TABLE 4-2 RECYCLED WATER FORECASTED REVENUE REQUIREMENT SUMMARY — FY 2015-16 (\$ IN THOUSANDS)	
EXPENDITURES ¹	FY 2015-16 BUDGET
MWRP & LAWRP Treatment ²	\$8,962
Melded Supply (other treatment facilities and purchases)	9,303
Targeted Conservation	3,000
Total Cost of Water Production	\$21,265
Less use of reserve funds and revenue offsets ³	\$(486)
Total Cost of Production to be Recovered by Rates	\$20,779
Service (Fixed)	5,434
Total Revenue Requirement from Rates	\$26,213

Notes:

- (1) Detailed outline of costs provided in Appendix E: Water Revenue Requirement Detail
- (2) Includes the costs of tertiary treatment expenditures related to the production of recycled water system. These costs have been removed from the sewer revenue requirements.
- (3) Reserve funds and offsets include contract service agreement revenue and non-rate generated revenue.

4.2.3 Sewer System Revenue Requirement

The table below outlines the forecasted expenditures for FY 2015-16, which served as the basis of the revenue requirement for the sewer systems.

TABLE 4-3 SEWER FORECASTED REVENUE REQUIREMENT SUMMARY — FY 2015-16 (\$ IN THOUSANDS)	
EXPENDITURES ¹	SEWER
Total Cost of Production to be Recovered by Rates	\$11,583
Service Cost (Fixed)	17,058
Enhancement and Replacement Fund Contribution	17,506
Total Revenue Requirement ²	\$46,148
Offsetting Revenues ³	(\$10,091)
Total Revenue Requirement from Rates	\$36,057

Notes:

- (1) Detailed outline of costs provided in Appendix G: Sewer Revenue Requirement Detail
- (2) Excludes costs that have previously been allocated to recycled water
- (3) Contract service agreements with institutional customers.

4.3 FUNCTIONAL COST ANALYSIS

The purpose of a functional cost analysis is to provide a rational basis for distributing the full costs of IRWD's service to each customer class in proportion to the demands they place on the system. Carollo developed a detailed and independent cost allocation that serves as the basis for the rate structure analysis. The cost-of-service analysis yields an appropriate method for allocating costs, which could be sustained absent substantial changes in cost drivers or customer consumption patterns.

As the first step in the evaluation process, a functional allocation was developed for both sewer and water funds by analyzing the District's budget on a line-by-line basis, allocating each expenditure to the appropriate functional cost category.

4.3.1 Water System Functional Cost Categories

The potable system revenue requirements, shown above, were allocated to functional cost categories. This was done separately for the Irvine Ranch and Los Alisos rate areas. The following are the primary functional cost categories:

Lowest-Cost Water Source: The District draws water from a number of different sources, including groundwater, imported water, and stored, reservoir water. The District's lowest-cost source of water is from its Dyer Road wells. In order to incentivize conservation, and recognize the basic level of service needed to serve its customers, IRWD separately categorizes this source in order to establish its base demand operating costs. This demand covers meeting customers' minimum operating water needs and provides the basis for the Low Volume rate. The demand is roughly equivalent to half of the groundwater available from the Dyer Road Well Field and the cost includes the replenishment assessment from the Orange County Water District (OCWD), associated labor, energy, and chemicals necessary to make the water available.

Melded Water Costs: Groundwater provides a portion of the demands within the Base tier (representing base allocation demand, described below). To meet the remainder of the Base tier demand not met from the lowest cost source, the District taps into other sources necessary to meet the water demand within the customer basic use allocations. These sources require greater development and treatment, and thus result in higher production costs, or from imported water purchased at a higher cost. This cost provides the basis for the Base rate. The components included in the base rate include the remaining groundwater basin water (portion unused in Lowest Cost), both clear and treated wells, and then any additional demand is made up from imported supply. As above, all costs associated with making the water available for sale is loaded into the melded rate.

Purchased Water Costs: When usage exceeds the basic use allocations of customers, the District must purchase water to meet excess demand. Purchased imported water is the District's most expensive source of water. As a result, IRWD directly allocates this cost to its users that require this water in the over-allocation tiers.

General Conservation: IRWD maintains substantial conservation programs intended to promote general water use efficiency among all users, regardless of their usage patterns, customer class, or other account characteristics. As a result, these costs are applied to each and every unit of water that the District delivers.

Water Banking: The District's water banking program allows storage of low-cost water supplies during wet periods, and enables withdrawal of this water during dry periods. This source is a cost item that supports over-allocation usage, because without over-allocation usage, the available supplies would be sufficient to support within-allocation demand. Therefore, this cost is allocated to both the inefficient and wasteful tiers.

Targeted Conservation and NTS: In addition to the general conservation programs, the District also funds conservation programs that specifically target wasteful usage. In order to meet the mandatory 2015 water reductions imposed by the State, these enhanced conservation programs will be focused entirely on usage in the Wasteful tier, which represents the greatest potential savings. Additionally, inefficient irrigation practices resulting in over-allocation use in the Wasteful tier result in the creation of urban runoff and thus the cost of the District's Natural Treatment System for treating dry weather runoff is allocated to this tier.

Untreated Water: This reflects the District's costs associated with providing untreated water service including the purchase of untreated water and local untreated supplies.

Pumping: This reflects the additional costs of energy to pump water to higher elevations and provides the basis for the pumping surcharge.

Service: Service costs are fixed expenditures that relate to operational support activities including accounting, billing, customer service, and administrative and technical support. These expenditures are essentially common to all customers and are reasonably uniform across the different customer classes. Service costs also include meter and capacity related costs, such as meter maintenance and peaking charges, that are included based on the meter's hydraulic capacity (measured in gallons per minute).

This functional allocation process provides a reasonable and appropriate basis for distributing costs to system customers based on their usage patterns and is grounded in cost of service standards. IRWD functional allocation methodology adheres to the generally accepted framework of cost of service rate design, as set forth by the M1 Manual.

TABLE 4-4 WATER SYSTEM FUNCTIONAL ALLOCATION CALCULATION (\$ IN THOUSANDS)

CATEGORY	IRWD RATE AREA	LOS ALISOS RATE AREA	TOTAL
Lowest-Cost Water Source	\$6,828	\$2,862	\$9,690
Mixed Water Costs	17,337	3,320	20,657
General Conservation	946	150	1,096
Purchased Water	2,779	235	3,014
Water Banking	701	121	822
Targeted Conservation & NTS	3,466	632	4,098
Sub-Total Potable Water	\$32,058	\$7,320	\$39,377
Untreated Water	2,279		2,279
Pumping			800
Service			30,118
Total¹	\$34,337	\$7,320	\$72,574

Notes:

- (1) From Table 4-1
- (2) Detailed outline of costs provided in Appendix E: Water Revenue Requirement Detail

4.3.2 Recycled Water System Functional Cost Categories

The District's historical practice in setting recycled water rates recognized that the production of recycled water was derived from the processes of collecting and treating sewage. Therefore, the revenue and expenditures for the sewer and recycled water system were consolidated. The recycled water commodity rate was also indexed to the Irvine Ranch potable water rate. The indexing was tested by Carollo and found to closely track an independent cost of service analysis of the recycled water system. As the recycled water system is a self-sustaining entity and cost of service could diverge from the indexing method in the future, the proposed rates are no longer indexed to the potable system and instead are reflective of the separate functional allocation of system costs detailed below. Costs of recycled water production at the MWRP and LAWRP treatment facilities are similar, and the capital cost of constructing the facilities represents an equivalent contribution from both rate areas. Therefore the functional cost allocation for the recycled water system is not separated by rate area.

Service: Service costs are fixed expenditures that relate to operational support activities including accounting, billing, customer service, and administrative and technical support. These expenditures are essentially common to all customers and are reasonably uniform across the different customer classes. Service costs also include meter and capacity related costs, such as meter maintenance and peaking charges, that are included based on the meter's hydraulic capacity (measured in gallons per minute).

Lowest-Cost Water Source: The District's lowest-cost source is from its recycled water treatment plants (MWRP and LAWRP). The cost of treatment allocated to the recycled water system is the additional treatment cost necessary to produce recycled water meeting applicable regulatory requirements ("Title 22") for use, after sewage has been treated to the level necessary for disposal, the cost of

which is functionally allocated to the sewer system. Tertiary treatment costs were allocated to recycled water. In order to incentivize efficiency and recognize the basic level of service, IRWD separately categorizes this source in order to establish its base demand operating needs. This source provides the basis for recycled water's Low Volume rate.

Melded Water Costs: Any production capacity from MWRP and LAWRP remaining after the Low Volume tier allocation is used to meet a customer's full allocation. As there is insufficient recycled water production and storage capacity to meet all seasonally-fluctuating demand, the District is required to supplement recycled water with more expensive untreated water purchased from MWDOC, including the commodity cost and all surcharges added by Metropolitan Water District and MWDOC such as for system access. The melded water cost provides the basis for the recycled water Base tier rate.

Purchased Water Costs: When usage exceeds the basic use allocations of customers, the District must purchase water to meet excess demand. Purchased imported untreated water is the District's most expensive source of water, including the commodity cost and all surcharges added by Metropolitan Water District and MWDOC such as for system access. As a result, IRWD directly allocates this cost to its users that require this water in the higher tiers.

Targeted Conservation: Funds conservation programs that specifically target wasteful usage.

This functional allocation process provides a clear and reasonable basis for distributing costs to system customers based on their use of the system and is consistent with cost of service standards.

TABLE 4-5 RECYCLED WATER SYSTEM FUNCTIONAL ALLOCATION CALCULATION (\$ IN THOUSANDS)

CATEGORY	RECYCLED WATER
Lowest-Cost Water Source	\$7,018
Melded Water Costs	9,388
Purchased Water	1,373
Targeted Conservation	3,000
Service	5,434
Total	\$26,213

Notes:

- 1) From Table 4.2.
- 2) Refer to Appendix F for details of the Recycled Water Revenue Requirements.

As recycled water is a self-sustaining system, the costs can be borne wholly by recycled users and can be decoupled from the potable rate. Given the unprecedented drought, IRWD is forecasted to purchase roughly double the amount of expensive imported untreated water purchased in FY 2014-15. In order to minimize year to year rate fluctuations based on unpredictable demands and purchases, the recycled water rates are expected to utilize non-operating reserves to offset the short-term shortfall. This functional allocation process provides a reasonable and appropriate basis for distributing costs to

recycled water system customers based on their usage patterns and is grounded in cost of service standards.

4.3.3 Sewer System Functional Cost Categories

The IRWD sewer system collects sewage from homes and businesses within the service area. Sewage travels through the collection system and is conveyed to two treatment plants through nearly 1,000 miles of sewer distribution pipelines. Unlike the water system, there are no separate rate areas for sewer as the Los Alisos rate area has previously contributed its fair share to the sewer system. Costs of sewage treatment at the MWRP and LAWRP treatment facilities, as well as supplemental disposal to OCSD and SOCWA, are similar and the capital cost of constructing the facilities represents an equivalent contribution from both rate areas. Therefore the functional cost allocation for the sewer system is not separated by rate area. The sewer system costs are allocated into the following cost categories:

Sewer – Service: This cost category generally covers the costs associated with the basic level of sewer service as well as replacement and enhancement funding.

Sewer – Commodity: Given the semi-variable nature of incurred sewer expenditures, this cost category is aimed at recovering the remaining cost of operations, including the costs of stages of treatment not functionally allocated to the recycled water system.

Carollo's cost allocation modeling confirms IRWD's functional cost allocation process and is provided in greater detail in Appendix G: Sewer Revenue Requirement Detail. The developed model provides a clear, reasonable, and easily replicable functional cost allocation framework for the cost of service analysis.

TABLE 4-6 SEWER SYSTEM FUNCTIONAL ALLOCATION CALCULATION (\$ IN THOUSANDS)

FUNCTIONAL CATEGORY	SEWER
Commodity - Non-residential	\$12,814
Commodity - Residential	2,599
Service (Fixed)	20,644
Total	\$36,057

Notes:

- (1) Reference Table 4.3
- (2) Refer to Appendix G for the Sewer Revenue Requirement.
- (3) Table 4.3 identifies revenue requirements(expenses) and 4-6 identifies sources.

4.4 WATER DEMAND ANALYSIS

4.4.1 Demands Within the Allocation-Based Conservation Rate Structure

While forecasted demands were previously outlined in Water Demands, they are a direct result of the District's allocation based rate structure. Forecasted consumption in each tier is a function of the customer's historical usage, forecasted conservation, and overall water allocations.

Allocation Based Conservation Rate Structure

The District's allocation-based conservation rate structure is designed to recover commodity related costs. A base allocation of water is provided to promote conservation and minimize wasteful use. Customers are provided individualized water allocations specific to their defined reasonable indoor and/or outdoor needs. The base allocation method and rate design formulas for each account type are shown in Table 4-7, and are based on typical characteristics.

TABLE 4-7 BASE ALLOCATION METHOD¹

CUSTOMER CLASS	# OF RESIDENTS	LANDSCAPE AREA (LA)	BASE ALLOCATION INDOOR	BASE ALLOCATION OUTDOOR	TOTAL ALLOCATION
Residential Detached	4	1 300 sq. ft. (0.03 acres)	# Residents x 50 GPD ²	$ET^3 \times 0.6^4 \times LA^5$	(Indoor x # days in bill service period) + Outdoor
Residential Attached	3	435 sq. ft. (0.01 acres)	# Residents x 50 GPD	$ET \times 0.6 \times LA$	(Indoor x # days in bill service period) + Outdoor
Apartments ⁶	2	N/A	# Residents x 50 GPD		Indoor x # days in bill service period
Irrigation	N/A	Site specific based on irrigated acreage	N/A	$ET \times 0.6 \times LA$	Outdoor based on bill service period
Commercial, Industrial, Institutional	N/A	Site specific, based on productivity, employees, water use efficiency practices etc.		Site specific, based on irrigation needs	Site specific, adjusted for # days in bill service period

Notes:

- (1) Full detailed description of the allocation methodology is provided in Appendix C: Basis for Tiers FY 2015-16
- (2) GPD = gallons per day
- (3) ET (evapotranspiration) – from IRWD weather stations located in coastal, central or foothill zones
- (4) 0.6 represents drip or otherwise high efficiency irrigation and a crop coefficient (Kc) for drought tolerant plants
- (5) LA = landscape acreage.
- (6) For master-metered apartments and condominiums, the base allocation is multiplied by the number of dwelling units.

Allocations are based on property characteristics and include factors such as number of occupants, size of irrigated area, and local climate data.

- **Residential – Base Allocation Indoor:** IRWD allocates 50 gallons per person per day for indoor usage. This is based on research into efficient indoor water use from the California Residential End Use Study (2009) and IRWD usage data analysis. The daily indoor allocation is adjusted to the number of days in the bill cycle, and a default assumption of number of residents.
- **CII – Base Allocation Indoor:** Indoor allocations for commercial and industrial customers (monthly base index allocations) are based on specific business needs, including, but not limited to number of employees and commercial and industrial process water needs.
- **Base Allocation Outdoor:** Outdoor or landscape allocations are calculated in the same manner for all customer types and water systems, in that they are adjusted for the site specific irrigated area associated with the property. Factors included in the calculation are the type of landscape (drought-tolerant plants or warm-season turf), an adjustment for the efficiency of the irrigation system, a calculation for plant water loss through evaporation and transpiration (ET), and the irrigable area associated with the meter. Daily ET data corresponding to the bill cycle is used to develop the site specific outdoor allocation for customers in each of IRWD's three climate zones (Coastal, Central, and Foothill).
- **Variances:** Adjustments to the default indoor and outdoor allocations can be applied to accommodate special circumstances, such as additional residents, medical needs, and daycare facilities.

In setting rates and allocations, the District has various alternatives available to it to encourage conservation and water use efficiency. Due to the drought conditions over the past several years and the mandated reduction in potable water usage established by the SWRCB, IRWD has elected to adjust its outdoor allocation to redefine outdoor usage based on drought tolerant plants. The crop co-efficient and irrigation efficiencies were adjusted from .65 and .71 respectively, to .50 and .80 respectively in setting proposed rates for 2015-16 for potable irrigation. Recycled water customers continue to be based on warm-season turf and an irrigation efficiency of 0.71. This equates to a revised outdoor allocation factor from .9 in FY 2014-15 to .6 in FY 2015-16 as shown in the table above.

Carollo has reviewed the District's water allocation methodology and finds that this approach is supported both by cost of service principles and by the need for conservation in the midst of this historic drought in California. From a cost of service standpoint, the allocation-based approach creates a clear nexus between the demand from various customers groups and the increasing marginal costs incurred by the District. As a result, it is sound and prudent that the District has created these allocations for its customers, providing each business and household with a baseline amount of water reasonable to meet its demand within the base commodity rates.

Furthermore, the District's methodology for calculating customer basic water allocations has been calibrated through detailed audits, primarily of CII customers, and a variance system to accurately

reflect the needs of each customer. By using basic allocations coupled with higher usage tiers aligned with higher service costs, IRWD has created a structure and process that incentivizes conservation, while also recognizing the varying needs of its typical customer.

From a conservation standpoint, the allocation-based approach is a necessary step taken by IRWD to encourage water efficiency among its customers. IRWD's base allocations recognize this by establishing allocations for the higher priority water needs and charging a rate proportionately aligned with the basic cost of service, and increasing the rate for usage above that amount to recover the incremental increases in the cost of service.

Tiers, Break Points, and Allocations

FY 2015-16 proposes using two to four tiers depending upon the customer class. For each customer class, the District provides an allocation (based on projected usage) for each source of supply. For compliance with the cost of service principles, each tier is closely defined and represents the costs incurred specific to that level of service (demand). The various costs of service incurred by the District are allocated to each tier based on the forecasted demands within each tier using functional and unit cost methodologies.

The low volume tier is based on minimum (health and safety) levels of use, and therefore usage in this tier is allocated water from the lowest cost source of supply. The low volume tier does not apply to CII customers as their allocations are customized, based solely upon the reasonable use amounts required for all of the businesses' needs, and therefore do not factor in a separate health and human safety level of minimum use.

The base tier represents the reasonable use associated with the property and therefore usage in this tier is allocated any remaining lowest cost source of supply. As there are not sufficient supplies at the lowest cost source of water to meet all of the base tier demands, a portion of the base demands are met with the next available source of supply, imported water, resulting in a melded rate.

The melded rate, based on the overall ratio of lowest cost source and imported water cost, is allocated to the base tier. The inefficient tier represents a level of use that is based on an efficient irrigation system but a type of planting with higher irrigation needs than the type of planting used to establish the basic allocation for reasonable use for the property.

The cost of water for the inefficient tier is all imported water, plus a share of the cost of the water banking program since that water is used to meet above allocation demands. The wasteful tier represents a level of use that far exceeds the reasonable use for the property. The cost of service for the wasteful tier includes the imported water cost, a share of the cost of the water banking program, as well as the cost for targeted conservation efforts. These are conservation efforts that are specifically directed at the wasteful tier, and go beyond general conservation outreach and programs that apply to all customers. NTS costs are also allocated to the wasteful tier since a major component of water use is over-irrigation; NTS costs are not allocated to the inefficient tier since the inefficient tier use is established based on efficient irrigation. This approach is applied to each customer class, tier and source of water to appropriately allocate costs to tiers.

The breakpoints for each of the tiers are based upon the percentage of additional water required for the use in the tier based on an average customer and in an average month. For example, for residential customers the low volume tier is based on basic indoor needs of 30 gallons per person per day. The remainder of the base allocation includes an additional 20 gallons per person per day (for a total indoor allocation of 50 gallons per person per day), plus an allocation for outdoor use based upon drought tolerant plants and efficient irrigation. The total water allocation for a typical residential customer is then calculated. In this example, the low volume indoor is equal to 30 gallons x 4 residents x 30 days and is divided by 748 to convert from gallons to ccf, resulting in a low volume allocation of 4.8 ccf (for billing purposes the low volume allocation is rounded up in the customer's favor to 5 ccf).

The remaining indoor allocation of 20 gallons per person per day is calculated the same way, equal to 20 gallons x 4 residents x 30 days, divided by 748 to convert to ccf, resulting in 3.2 ccf. To obtain the base allocation this is added to the outdoor allocation which is based on a default landscape area of 0.03 acres. Average annual ET for IRWD's service area is 48 inches per year, or 4 inches per month, and the ETAF for FY 2015-16 is 0.6. The conversion factor from acre-inches to ccf is 36.3. The outdoor formula is Landscape Area x ET x ETAF. So on average, the outdoor allocation is 0.03 x 4 inches x 0.6 x 36.3, which equals 2.6 ccf. This is added to the indoor allocation for a total of 5.8 ccf in the base tier, or 6 ccf when rounded up.

The customer total allocation based on reasonable use for the property is then 11 ccf (low volume tier of 5 ccf plus base tier of 6 ccf). The low volume allocation of 4.8 ccf is 43 percent of the total allocation of 11 ccf, and so the breakpoint is established at the closest rounded percentage of 40 percent. The remainder of the total allocation is then 60 percent so that the next tier breakpoint is set at 100 percent of allocation.

The inefficient tier is then established by calculating the allocation assuming the outdoor use was based on warm season turf with overhead spray. That requires an additional 30 percent water compared with drought tolerant plants and an efficient irrigation system, and so the breakpoint for the inefficient tier is set at 130 percent of allocation. The wasteful tier is then set at 131 percent and above since it represents wasteful use that is greater than irrigating warm season turf with an efficient irrigation system.

This same process is applied to each customer class with the basis for the percent of allocation for each tiers detailed in Appendix C: Basis for the Tiers FY 2015-16.

TABLE 4-8 ALLOCATION DISTRIBUTION ACROSS TIER STRUCTURE

TIER	RESIDENTIAL DETACHED/ATTACHED	APARTMENT	COMMERCIAL / INDUSTRIAL / INSTITUTIONAL	LANDSCAPE POTABLE IRRIGATION	LANDSCAPE RECYCLED IRRIGATION
Low Volume	0-40%	0-60%	-	0-60%	0-40%
Base	41-100	61-100	0-100%	61-100	41-100
Inefficient	101-130	101-120	NA	101-160	101-130
Wasteful	131+	121+	101+	161+	131+

The tiers and rates for all classes of customers are structured to proportionately allocate the costs of service, including incremental costs attributed to the increased levels of demand and consumption within each tier, and by structuring in that manner, send a strong over-allocation use signal. For example, the tiers reflect greater variation in residential demands due to indoor and outdoor use being combined on one connection, and use of default assumptions, although variances can be applied.

IRWD's over-allocation break points are reasonable and necessary to allocate and effectively administer the agency's limited water and conservation resources.

Similarly, the tier break points for landscape customers are structured to proportionately allocate the costs of service. The resulting structure of ascending rates sends a strong over-allocation use signal designed to maximize conservation and minimize urban water runoff from excess irrigation. In the potable system, the Low Volume rate is based on needs of native plants, the Base rate is based on drought tolerant plants, and the Inefficient rate is based on cool season turf.

Four tiers are used in the residential and irrigation service classes, and two tiers are used in the commercial, industrial, and institutional (CII) service class. This reflects the District's practice of setting a customized allocation for each customer in the CII class, designed to accommodate all of the customer's business needs, compared to the District's practice of using typical use characteristics in the residential and irrigation classes. As CII users have their water allocation specifically defined according to their needs, they will generally use all of their allocation and a separation of low volume and base use tiers is not necessary. Similarly, because the base allocations in the CII class are customized to provide a sufficient amount for 100 percent of the customer's needs rather than the needs of a typical user, any usage above the base allocation is by definition excessive and considered wasteful, and as a result, only one over-allocation tier is used in this class.

4.5 RATE CALCULATION

The final step to calculate the rates is to spread each cost category across an appropriate component and customer. In order to calculate a rate, two components are necessary: (1) Costs and (2) Demands. As both of these items are defined above, the rate can be calculated using the functional cost category divided by applicable demand.

4.5.1 Water Fixed Service Charges

The fixed service charge recovers the cost of operating, maintaining and repairing the water system. Additionally, providing and reserving the capacity for each meter based on its potential demand is a fixed expenditure that the District incurs. IRWD must maintain production capacity equal to or greater than the potential demand.

The most common method for levying fixed charges is by meter size. Meter size is used to define the estimated requirement that each customer places on the water system. IRWD defines the base meter as

a 5/8-inch meter. To calculate a service charge for different size meters, the AWWA meter capacity ratio between the base meter's maximum flow rate and a larger meter's maximum flow rate is used.

The M1 manual details 13 types of meters that, despite a common size, could have significantly different maximum flow capacities. IRWD goes beyond standard service charge convention by separately calculating charges for different types of meters with the same size.

Realignment of Meter Ratios

As part of a continuous rate review process, prior to setting rates for FY 2014-15, the District conducted a review of the fixed monthly rates charged for domestic water service within the IRWD service area. This review, conducted by AKM Consulting Engineers (AKM), was to determine if the fixed monthly rates charged by IRWD were sufficient to cover the fixed costs of operating and maintaining the system, and that rates charged to customers were proportional to the system capacity available through each class of meter.

This fixed charge review recommended that the monthly fixed charge be adjusted to better account for the varying peaking demands placed on the system by individual customers' meters. According to the review, the previous fixed charge could be better aligned with peaking demand by using an updated industry standard meter size capacity ratio methodology. Meter size is a reasonable and industry standard metric for this approach; increasing meter size correlates directly with increasing peak demands that could be placed on the system. Larger meters are able to draw more water from the system than smaller meters.

IRWD's calculation of service charges utilized this approach, but industry standards, set by the American Water Works Association, added more nuance to that approach since it was first implemented by IRWD. Following a comparison of the original fixed service charge structure ratios with the latest industry standard ratios, AKM recommended realignments and updates were identified. The recommended adjustments to the meter ratios resulted in increases in the monthly service charges for larger residential meters and decreases in the service charges for large commercial meters. IRWD concurred with AKM's recommendation. Given the magnitude of some of the increases, IRWD implemented a two-year phase-in approach to mitigate this change for some customer classes. In FY 2014-15, 50 percent of the alignment related increase was applied. The remaining 50 percent of the alignment-related increase is included in the proposed FY 2015-16 fixed service charges. The District used non-operating rate stabilization funds to allow the phase-in and avoid disproportionately charging other customers during the phase-in period.

A partial table of the meter ratio realignments is provided in below and a full table is provided in Appendix B: Realignment of Meter Ratios.

TABLE 4-9 METER REALIGNMENT RATIOS

METER SIZE	ORIGINAL IRWD FLOW RATE (GPM)	AWWA CAPACITY (GPM)	IRWD % OF AWWA MAX
5/8" Disc	22	20	110%
3/4" Disc	22	30	73%
1" Disc	37	50	74%
1.5" Disc	75	100	75%
2" Disc	120	160	75%
2" Turbo	160	190	84%
3" Turbo	360	435	83%
4" Turbo	1,000	750	133%
6" Turbo	2,000	1,600	125%
8" Turbo	3,500	2,800	125%
10" Turbine	5,500	4,200	131%

After reviewing AKM's analysis and the District's application of the recommended meter size ratio methodology, Carollo supports the realignment to AWWA industry standard meter ratios and the continued implementation process for FY 2015-16. Carollo has reviewed IRWD's changes to its fixed charge structure and finds a clear nexus between the cost to serve each meter at each size and the charges that IRWD levies to provide that service.

Fixed Service Charge Calculation

Developing the monthly fixed service charge is a function of the total budget needed for these costs and the number of meter equivalents in the system. Meter equivalent units (MEUs) calculate a capacity ratio based on the potential demand of a given meter size based on its flow rate and are set relative to the baseline 5/8-inch meter as discussed above. The monthly service charge is calculated by dividing the revenue requirement by the total number of MEUs, and then dividing again by twelve months.

TABLE 4-10 FY 2015-16 MONTHLY FIXED SERVICE CHARGE CALCULATION

Total Revenue Requirement for Service ¹ (A)	\$30,118
Meter Equivalent Units (MEU) ² (B)	243,671
Fixed Charge (A) ÷ (B) ÷ 12	\$10.30 per MEU per month

Notes

- 1) From Table 4-4, in thousand dollars
- 2) Forecasted MEUs for FY 2015-16 as provided by IRWD.
- 3) See Appendix B.

As discussed previously, in order to scale the fixed charge to larger meter sizes, the base fixed charge is multiplied by the meter's capacity ratio. For example, a 5/8-inch meter has a flow rate of 20 gallons per minute, while a 3/4-inch meter has a flow rate of 30 gallons per minute and therefore has a meter equivalent ratio of 1.5 (or 150 percent of a 5/8-inch meter). These charges are provided in Appendix A: Fixed Service Charge By Meter Size

Service Charge for Low Volume Users

Based on feedback from ratepayers, a revision to the existing service charge was evaluated for low volume users. Low volume users have a larger percentage of their bill made up of the fixed charge. As with any fixed charge, it reduces the ratepayer's ability to control their own bill. Despite already having a low service charge compared with similar agencies in the region, the District wanted to review possible alternatives to address this. As implemented by other agencies, Carollo presented the concept of providing a "lease-back" conservation credit to those whose use remains in the Low Volume tier, via a fixed service charge reduction.

Most fixed service charges have two components: a customer component that covers costs that are identical for each account, such as reading meters and billing; and a capacity component that covers the reserved capacity in the system that each meter purchases, depending on its size. This second portion goes in large part to the repair and replacement of system infrastructure. The baseline rate is calculated on the meter's maximum flow capacity and thus demand on the system. With a "lease-back" approach, an agency can recognize that a low volume user is not fully using their potential capacity, and therefore, it is reasonable to provide a lease-back credit to users who are underutilizing that flow and effectively "leasing it back" to the system for other users. This prevents the District from having to upsize infrastructure as quickly as capacity is exhausted.

Carollo worked closely with IRWD to structure the proposed low volume lease-back credit, and analyzed the revenue and customer impacts of the various scenarios considered. Initially, the leasing was to be limited to residential customers who stay within their Low Volume tier allocation for the entire preceding twelve months, meaning that just one month into the Base tier would preclude a customer from the credit. After considering factors such as leaks, which would easily send a customer into the Base tier and can often take several months to resolve, it was determined that some allowance for exceeding a Low Volume would be appropriate. Three months was determined to be reasonable for the typical low volume household to address high use months, either due to a leak or aberrant consumption patterns.

Overall, this lease-back credit would have a limited impact on the District's revenue goals, but from a customer standpoint, this would provide a cost of service based incentive for residents to further conserve, especially if they are close to their Low Volume allocation each month. As this capacity is being utilized by those over their base allocation, their over-allocation revenues pay for leasing this capacity. Based on this recommendation, IRWD is proposing to implement this lease-back credit for its FY 2015-16 rates. Going forward IRWD will continue to monitor the lease-back credit methodology to confirm its ongoing nexus to cost of service.

4.5.2 Potable Water Rates

IRWD employs a unit cost of service based approach to rate setting. Under this methodology, for each rate area, each functional cost is divided by the number of billing units (in ccf) of projected water sales in the tier or tiers to which that functional cost is attributed.

To calculate the costs attributable to each tier, Table 4-11 and Table 4-12 below take the two rate areas commodity charge functional cost components detailed in Table 4-4 and divide them across the projected sales of units of water as shown in the ccf column. Each functional category benefits usage in a specific tier or tiers, and thus, the usage in that tier or tiers forms the denominator for allocating the cost in that category. The unit costs allocated to each tier can then be calculated, arriving at a single unit cost for each functional cost.

TABLE 4-11 FY 2015-16 UNIT COST CALCULATION – IRVINE RANCH RATE AREA

FUNCTIONAL CATEGORY	TIERS BENEFITING	ALLOCATION ¹	APPLICABLE AF ²	APPLICABLE CCF ³	UNIT COST (\$/CCF)
Lowest Cost Source	Low-Volume	\$6,828	14,618	6,367,421	\$1.06
Melded - IRWD	Base	18,735	27,360	11,917,958	\$1.57
General Conservation	All	946	43,427	18,917,237	\$0.05
Purchased Water Costs	Inefficient & Wasteful	1,743	1,450	631,620	\$2.76
Water Banking	Inefficient & Wasteful	701	1,450	631,620	\$1.11
Targeted Conservation and NTS	Wasteful	3,466	750	326,700	\$10.61
Total Rate Revenue		\$32,419			

Notes

- 1) From Table 4-4, in thousand dollars
- 2) From Table 3-1.
- 3) 1 AF = 435.6 ccf
- 4) Numbers may vary slightly due to rounding

Similar to the previous table, Table 4-12 shows the unit costs for the Los Alisos rate area, calculated by dividing the commodity charge functional cost components by projected units of water sold in the benefiting tier or tiers.

TABLE 4-12 FY 2015-16 UNIT COST CALCULATION – LOS ALISOS RATE AREA

FUNCTIONAL CATEGORY	TIERS BENEFITING	ALLOCATION ¹	APPLICABLE AF ²	APPLICABLE CCF ³	UNIT COST (\$/CCF)
Lowest Cost Source	Low-Volume	\$1,941	2,804	1,221,399	\$1.58
Melded – Los Alisos	Base	3,320	3,252	1,416,395	\$2.34
General Conservation	All	150	6,286	2,737,982	\$0.05
Purchased Water Costs	Inefficient & Wasteful	235	230	100,188	\$2.34
Water Banking	Inefficient & Wasteful	121	230	100,188	\$1.21
Targeted Conservation and NTS	Wasteful	632	125	54,450	\$11.60
Total		\$6,399			

Notes

- 1) From Table 4-4, in thousand dollars
- 2) From Table 3-1.
- 3) 1 AF = 435.6 ccf
- 4) Numbers may vary slightly due to rounding

With the unit costs for each system cost component calculated, the rate for each tier can be developed as a simple layering of costs. The calculation is essentially a sum of the individual cost components for each tier.

TABLE 4-13 FY 2015-16 UNIT COSTS BY TIER – IRVINE RANCH RATE AREA

COST BASIS	LOW-VOLUME	BASE	INEFFICIENT ²	WASTEFUL ³
Lowest Cost Water	\$1.06			
General Conservation	\$0.05	\$0.05	\$0.05	\$0.05
Melded Cost		\$1.57		
Purchased Water Cost			\$2.76	\$2.76
Water Banking			\$1.11	\$1.11
Targeted Conservation and NTS				\$10.61
Rate (\$ / ccf)¹	\$1.11	\$1.62	\$3.92	\$14.53

Notes

- 1) Rate is calculated as sum of above cost components
- 2) For Tier 3, there is a possible second step increase to \$9.30 if targeted SWRCB reductions are not met
- 3) For Tier 4, there is a possible second step increase to \$19.91 if targeted SWRCB reductions are not met

Table 4-14 shows the cost layering to define the Los Alisos rate area charges.

TIER	LOW-VOLUME	BASE	INEFFICIENT ³	WASTEFUL ⁴
Lowest Cost Water ²	\$1.58			
General Conservation	\$0.05	\$0.05	\$0.05	\$0.05
Melded Cost		\$2.34		
Imported Water			\$2.34	\$2.34
Water Banking			\$1.21	\$1.21
Targeted Conservation and NTS				\$11.60
Rate (\$ / ccf)¹	\$1.64	\$2.39	\$3.60	\$15.20

Notes:

- 1) Rate is calculated as sum of above cost components
- 2) Lowest cost of source water (MWDOC untreated \$2.34/ccf) offset by a sinking fund from future proceeds from sale of Los Alisos property. It is anticipated that the sale of the property surrounding the former Los Alisos Water District headquarters in Lake Forest will generate proceeds sufficient to provide necessary contribution to groundwater infrastructure or to fund an ongoing offset of the difference in source water cost, allowing the commodity rates within the Irvine Ranch rate area and Los Alisos rate area to be calculated on the same basis. When the property sale is completed, the Los Alisos rate area will be transitioned into the Irvine Ranch rate area. In anticipation of the sale, IRWD, as a matter of policy, has elected to advance a portion of the anticipated property sale proceeds from non-operating funds to offset the Los Alisos rate area's differential in source water cost in the Low Volume tier. The Los Alisos rate area has previously been transitioned to the Irvine Ranch rate area's sewer rate structure.
- 3) There is a possible second step increase to \$9.42 if targeted SWRCB reductions are not met
- 4) There is a possible second step increase to \$21.01 if targeted SWRCB reductions are not met

4.5.3 Second Step Increase

A second step increase is proposed for the Inefficient and Wasteful tiers, to be applied if customer demands for water in these tiers exceed the SWRCB required reductions, as these demands could require IRWD to pay penalties to the State or other additional costs for not achieving its targeted reduction. In this manner, the penalties are treated as a functional cost that is included in the highest cost of source water. The penalty cost is based on IRWD's most recent information indicating that the SWRCB would impose penalties upon agencies up to \$10,000 per day for failure to meet their mandated reductions. The penalty cost will be evaluated at the time of considering the proposed second step increase, including any updated information available from the SWRCB.

The second step rate component assumes 9 months of the potential penalties or \$2.7 million and approximately 75 percent of the remaining over allocation sales. The allocation between the Irvine Ranch and Los Alisos Rate Areas is based on total demand, approximately 85 percent and 15 percent respectively. The formula used to calculate the second step is: Estimated Penalty / Remaining Over

Allocation Sales = cost per ccf. If the revenue generated does not provide sufficient offset to any penalties received from the state, the conservation fund will provide for the shortfall.

4.5.4 Untreated Water Rates

IRWD applies a uniform rate for untreated water. The primary use of untreated water is agriculture, which is charged at a uniform rate. All other untreated water users are charged according to the tiered rate structure for recycled water. The proposed rate is based on the allocated costs specifically related to providing untreated water.

TABLE 4-15 FY 2015-16 UNTREATED UNIT COST CALCULATION

FUNCTIONAL CATEGORY	ALLOCATION ¹	AF ²	CCF ³	UNIT COST (\$/CCF)
Untreated	\$1,712	2,612	1,137,787	\$1.50

Notes

- 1) From Table 4-4, in thousand dollars
- 2) From Appendix E, Table 6-4
- 3) 1 AF = 435.6 ccf

4.5.5 Recycled Water Rates

IRWD has developed a significant recycled water program in order to promote conservation and alleviate some of the need to develop potable sources to supply water demands that could otherwise be met with recycled water. Like many agencies, IRWD incentivized the use of its recycled water program due to this system-wide benefit. The District accomplished this by setting recycled water rates at an indexed discounted rate relative to its potable water rates. The indexing was tested by Carollo and found to closely track an independent cost of service analysis of the recycled water system. Since the recycled water system is a self-sustaining entity and cost of service could diverge from the indexing method in the future, the proposed rates are no longer indexed to the potable system and instead are reflective of a separate functional allocation of system costs. While the proposed decoupled rates remain lower than potable water rates, they provide sufficient revenues to meet the costs of providing recycled water.

Applying the same unit cost approach as outlined in the potable water rates calculation yields the proposed rates for FY 2015-16, summarized in the tables below.

TABLE 4-16 FY 2015-16 UNIT COST CALCULATION – RECYCLED WATER

FUNCTIONAL CATEGORY	TIERS BENEFITING	ALLOCATION ¹	AF	CCF	UNIT COST (\$/CCF)
Lowest Cost Water	Low-volume	\$7,018	15,015	6,540,534	\$1.08
Melded Cost	Base	9,388	15,731	6,852,424	\$1.37
Imported Water	Inefficient & Wasteful	1,373	2,074	903,434	\$1.52
Targeted Conservation	Wasteful	3,000	1,613	702,623	\$4.27
Total		\$20,779			

Notes

1) From Table 4-5, in thousand dollars. Also see Table 4-5..

The table below details how these costs are layered to create the basis for each tier.

TABLE 4-17 FY 2015-16 UNIT COSTS BY TIER – RECYCLED WATER (LANDSCAPE)

TIERS	LOW-VOLUME	BASE RATE	INEFFICIENT	WASTEFUL
Lowest Cost Water	\$1.08			
Melded Cost		\$1.37		
Imported Water			\$1.52	\$1.52
Targeted Conservation				\$4.27
Rate (\$ / ccf)	\$1.08	\$1.37	\$1.52	\$5.79

In analyzing the differences between recycled water customer groups, it was evident that CII users peak dramatically less on the system. To reflect the differences in system use and added value of utilizing the recycled water system year round (not simply for peak irrigation), a storage credit is applied to CII recycled water customers. This credit is applied to reflect CII customers reduced benefit of additional storage in the recycled water system.

TABLE 4-18 FY 2015-16 UNIT COSTS BY TIER – RECYCLED WATER (CII)

TIERS	BASE RATE	WASTEFUL
Lowest Cost Water	\$1.08	
Storage Credit	(0.11)	
Imported Water		\$1.52
Water Banking		\$0.00
Targeted Conservation		\$4.27
Rate (\$ / ccf)	\$0.97	\$5.79

4.5.6 Sewer Service Charge

As previously discussed, IRWD's sewer charges include both a fixed and a variable component. The sewer service charge is identified as a volumetric-block rate structure monthly cost for residential customers with the rate tied to the cost of use. All other customer types pay a quantity charge per ccf. Given the homogeneous nature of residential sewer demands, the fixed service charge for residential customers is broken into three volumetric-blocks that are identified by the previous calendar year's average three lowest months of billed potable water demands:

- Homes using 10 or more ccf per month;
- Homes using 5-10 ccf per month; and
- Homes using 5 or less ccf per month.

The volumetric blocks are used to establish the assumed residential indoor average use as the amount of water consumption that returns to the sewer system. As discussed below, Carollo has recommended that the District use the minimum three months concept as a refinement to the previous residential sewer rate methodology of calculating charges based on total annual water usage. The District proposes to implement this change, designed to better align the service charge with the estimated sewer discharges. The proposed FY 2015-16 sewer charges reflect this recommendation.

For non-residential customers, the fixed monthly service charge includes the first 10 ccf of use. Thereafter, all use is charged volumetrically based on billed water use. Quantity charges are based on the assumption that 90 percent of non-residential water consumption returns to the sewer. Adjustments can be applied for landscape irrigation or consumptive usage. As in the water rate structure, this difference in the methodology among service classes reflects each customer classes characteristics for sewer discharge.

Similar to the water service charge, the fixed service charge is developed by determining the revenue requirement for an equivalent number of Block 1 accounts (0 – 5 ccf). Each incremental block represents a greater level of service and is allotted a higher equivalency. This approach is presented below.

TABLE 4-19 FY 2015-16 FIXED SEWER SERVICE CHARGE CALCULATION

Service Revenue Requirement ¹ (A)	\$20,644
Monthly accounts subject to charge (B)	92,739
Monthly Rate (A) ÷ (B x 12 months)¹	\$18.55

Notes

- 1) From **Table 4-6**, in thousand dollars
- 2) All accounts pay this base rate. Higher demand accounts are billed a higher rate based on **Table 4-20**.

TABLE 4-20 FY 2015-16 FIXED SEWER CHARGE CALCULATION

	BLOCK 2	BLOCK 3
Usage Level	5.01 – 10.0 ccf/month	10+ ccf/month
Revenue Requirement ¹ (A)	\$1,104	\$1,495
Monthly accounts subject to charge (B)	27,882	22,659
Peak Cost (\$/ccf) (A) ÷ (B x 12 months)	\$3.30	\$5.50
Monthly Rate (\$18.55 base rate + peak cost)	\$21.85	\$24.05

Notes

- 1) From Table 4-6, in thousand dollars

The variable rate is a simple function of the revenue requirement remaining divided by the projected volume above the 10 ccf threshold. This methodology is outlined in Table 4-21.

TABLE 4-21 FY 2015-16 VARIABLE SEWER SERVICE CHARGE CALCULATION

Variable Revenue Requirement ¹ (A)	\$15,414
Volume subject to charge (ccf) ² (B)	6,060,000
Unit cost (\$/ccf) (A) ÷ (B)	\$2.56

Notes

- 1) From **Table 4-6**, in thousand dollars
- 2) Only applies to ccf used in excess of 10 ccf per month for each non-residential account.

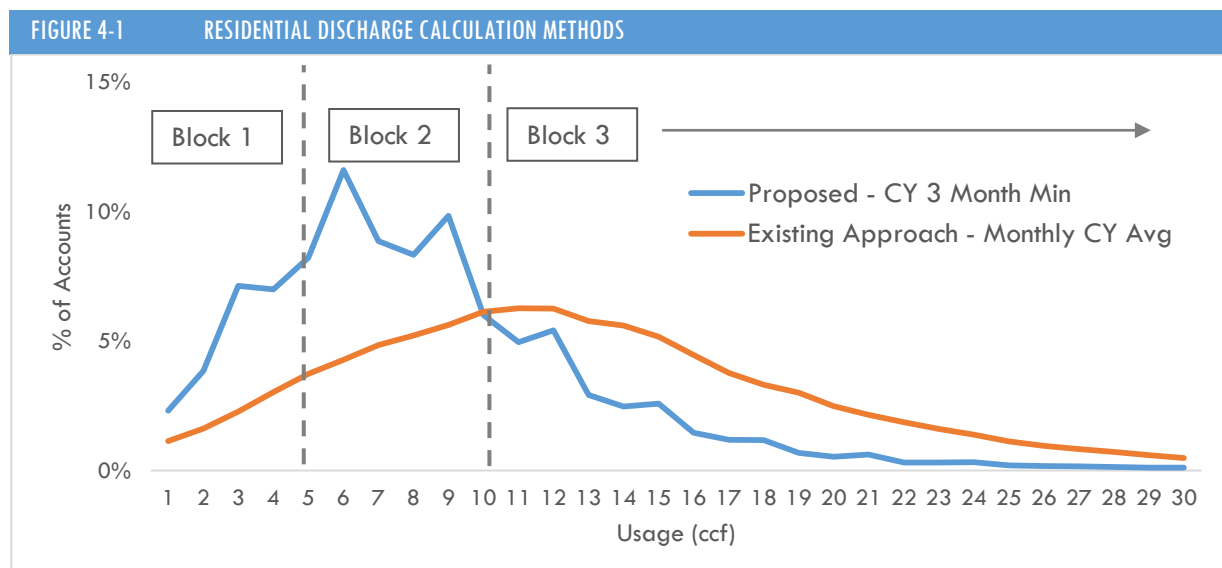
Revisions to Sewer Discharge Methodology

Unlike water, most sewer discharges to the collection system are not metered. As such, there are a variety of methodologies for estimating or forecasting assumed discharge. Because the District must treat this water, regardless of its use, there is a cost associated with each unit of flow received. The District must have a reasonable method to estimate how much water it is receiving and from where. This is a necessary step in order to collect sufficient revenues from everyone using the system.

Currently, for residential accounts, the monthly service charge is based upon actual water meter readings during the twelve month period ending December 31. Customers are then grouped into a low,

moderate, or high sewage demand group and charged with the according fixed charge for the year. This is a simplified methodology that uses metered water demands as a proxy for identifying the volume of sewer discharges. This methodology does not account for irrigation needs and other consumptive uses that do not return flow to the sewer system. To account for this, winter month demand—when outside irrigation is at its lowest—is commonly used as a proxy for indoor water usage or assumed discharge. While assumptions have to be made in the absence of sewer meter data, it is believed that this approach provides a more refined proxy for residential sewer rates.

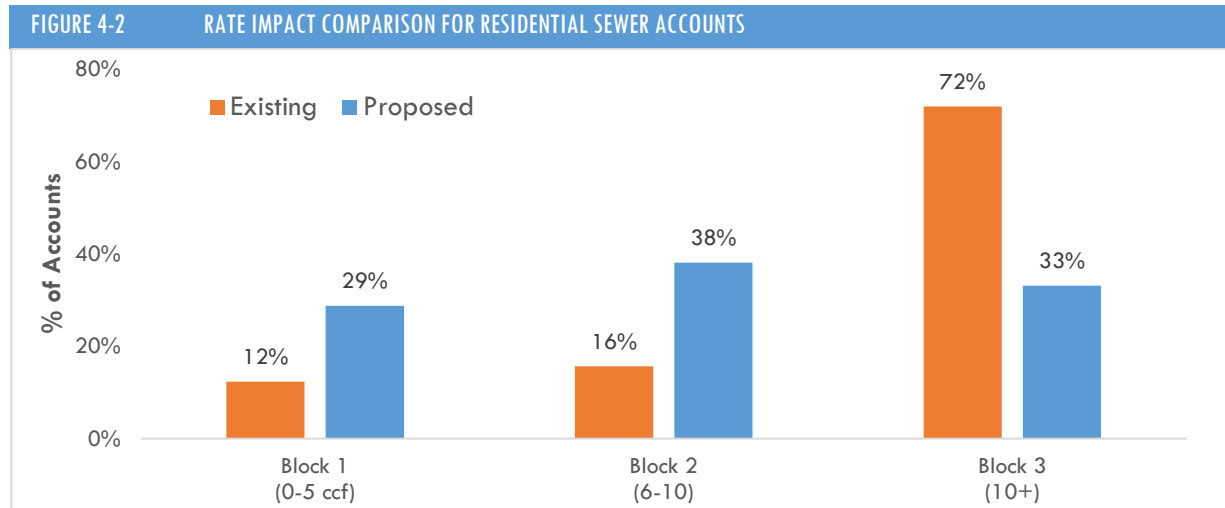
Carollo presented a slight variation of this approach to F&P for input and consideration. Given seasonal variation and to account for monthly anomalies in a ratepayers' water use, Carollo recommended basing assumed flows on the average of the three lowest meter readings during the twelve month period ending December 31. To get to the final assumed sewer return flow, Carollo recommends taking this average and applying a 90 percent return factor, assuming that roughly 1 out of every 10 units of water demand will be for consumptive uses that are not returned to the sewer system at the same connection. The shift in customer profiles is summarized in Figure 4-1



This approach shifts the distribution of customers so that more accounts are at the lower end of the assumed return flow distribution. This method naturally yields lower assumed discharges, because it only accounts for the three lowest demand months for each account, and because it reduces that return flow by 10 percent. As a result, more customers will qualify for the District's low volume tiers, bringing with it a revenue impact without any corresponding change to rates.

This approach has the benefit of smoothing the distribution of customers in each block for the District. Under the current structure, almost three-quarters of all residential accounts are in the high consumption tiers. Consequently, small shifts in demand can result in large impacts to the District's revenue. If a number of accounts adjust their usage and enter block 2 from block 3, this can have a substantial impact

on IRWD's revenue goals. By adjusting the methodology so that the accounts are more uniformly distributed, the District can make its revenue more stable and hedge these revenue shifts.



5 LEGAL REQUIREMENTS

5.1 INTRODUCTION

Carollo does not opine or provide an opinion on the legality of water rates. Carollo's analysis provides a clear record to illustrate how the District develops rates and evaluates these rates for conformance with cost of service principles. The District, under the guidance of its legal counsel, has provided direction based on the legality of the structure. The discussion below, based on the legal precedent, created the framework by which Carollo evaluated the District's rates.

The District's water, recycled water, sewer rates, and rate setting process must adhere to California constitutional and statutory requirements. Procedural requirements apply to the rate-setting process. The principal substantive requirements governing the rates are that revenues recovered through the rates do not exceed costs, and that costs be recovered proportionally from users. The cost of service principles used for this analysis include these substantive requirements.

The District's water rate structure employs allocation-based conservation pricing, including tiered rates. The use of tiered water rates has been determined to be consistent with constitutional requirements pertaining to proportional cost of service. On April 20, 2015, the California Court of Appeal, Fourth District, issued an opinion in *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano* ("San Juan") upholding tiered water rates under California Constitution Article XIII D (enacted by Proposition 218), provided that the tiers correspond to the actual cost of furnishing service at a given level of usage. The opinion was specific to the facts of the case, including a finding that the city did not attempt to calculate the actual costs of providing water at various tier levels. In reaching its conclusions, the *San Juan* Court treated all of the tiers as property-related services subject to Article XIII D, as interpreted by the California Supreme Court in its 2006 decision in *Bighorn-Desert View Water Agency v. Verjil*, 39 Cal. 4th 205 (2006) ("*Bighorn*"), that charges for domestic water delivery are charges for a property-related service. On the facts and arguments presented in *San Juan*, the Court found no basis for altering its application of Article XIII D in either Article XIII C ("Proposition 26") or Article X, Section 2 ("Article X").

Further judicial and legislative interpretation may provide additional guidance in the use of tiered water rates, including the application of Proposition 26's provisions concerning levies, charges and exactions other than property-related fees and the application of Article X. For the purposes of this cost of service analysis, it has been assumed that the District's tiered water and recycled water rate structures, as well as its sewer rate structure, are to be analyzed under the requirements of Article XIII D and implementing statutory provisions, described below.

5.2 ARTICLE XIII D

In November 1996, California voters approved Proposition 218, which amended the California Constitution by adding Article XIII C and Article XIII D. Article XIII D placed substantive limitations on the

use of the revenue collected from property-related fees and on the amount of the fee that may be imposed on each parcel. The substantive requirements, contained in Article XIII D, Section 6, include that the amount of the fee “shall not exceed the proportional cost of the service attributable to the parcel,” and that revenues from the rates “shall not exceed the funds required to provide the service” and “shall not be used for any purpose other than that for which the fee was imposed.” Additionally, Proposition 218 established procedural requirements for imposing new, or increasing existing, property-related fees.

Following the passage of Proposition 218, there have been a number of court rulings interpreting and applying its language, and implementing statutes have also been enacted. In *City of Palmdale v. Palmdale Water District*, the court recognized that California Constitution Article X, Section 2 may be harmonized with Article XIII D, section 6 to allow for budget based and tiered rates that promote water conservation, provided conservation is attained in a manner that “shall not exceed the proportional cost of the service attributable to the parcel”. As noted in *San Juan*, the 2011 *Palmdale* decision recognized that budget based water rates on their own do not violate Proposition 218. In *Palmdale*, the district failed to demonstrate a basis for the more restrictive tiered budgets and progression through the tiers in the irrigation customer class as compared to the other customer classes.

The *San Juan* decision rejected the argument that for purposes of the proportional cost allocation required by Article XIII D, the agency’s calculation is a matter within legislative or quasi-legislative discretion shielded from judicial review. It did recognize some degree of latitude in making such calculations. *San Juan* notes, for example, that it is not necessary to figure a rate for each parcel and it is permissible to allocate cost within tiers, as long as tiers are based on usage and not budgets. The opinion also explains that the time frame for the calculation of true water cost, particularly capital cost, may be long and calculation on a billing-cycle by billing-cycle basis is not required.

Cost and revenue projections are necessarily based on the best available information, and demand and consumption will be affected by weather and other factors that cannot be predicted. See *San Juan*, fn 11 (acknowledging projections of Metropolitan Water District rates as included in rate-setting process). Projections such as this will likely result in operating surplus and carryover, maintaining cost of service standards on a year over year basis through the inclusion of these amounts in subsequent years’ budget processes.

5.3 CALIFORNIA ASSEMBLY BILL 2882

Among the legislative enactments implementing Proposition 218 is California Assembly Bill (AB) 2882, which became law at the beginning of 2009. AB 2882 (Sections 370-374 of the California Water Code) defined the elements of allocation-based conservation pricing under Proposition 218, including the appropriate property characteristics (i.e., number of occupants, land use, irrigable area, and local climate data) to establish a reasonable basic use allocation. While rates for all water used within the basic allocation must be established following cost causation principles, AB 2882 provided authority for higher charges on increments of water used in excess of the basic use allocation.

This statute creates a framework under which water agencies may establish cost-of-service based rates while simultaneously allowing for the deterrence of wasteful water use. Under AB 2882, the elements of an allocation-based conservation water rate structure compliant with the mandates of both Article X and Proposition 218 are:

1. Water bills must be based on metered water use.
2. A water allocation of “basic use” must be established, providing a reasonable amount of water for each customer’s basic needs based on property characteristics. Allocation factors may include, but are not limited to, number of occupants, type of land use, size of irrigated area, and local climate data.
3. All water used within the basic use allocation must be a basic volumetric unit rate that is established following cost causation principles for the cost of water service.
4. A “conservation charge” can be imposed on all increments of water use in excess of the basic use allocation. The conservation charge must also be a volumetric charge and should be designed to encourage water conservation and efficiency.

The cost of service analysis of the District’s water and sewer rate structures is performed within the requirements of Article XIII D. The water rate structure is additionally analyzed within the framework of AB 2882. IRWD’s water, recycled water, and sewer service rates are designed to both recover costs proportionally from system users as well as encourage conservation. The District’s cost of service approach thereby conforms to the requirements of Article XIII D, and for water and recycled water, AB 2882.

5.4 ARTICLE XIII C

The application of Proposition 26 in the structuring of water rates is presently undetermined. The *San Juan* decision briefly touched upon one aspect of the Article XIII C provisions enacted by Proposition 26, finding that tiered water charges would not appropriately be characterized as penalties. Other aspects of the application of Proposition 26 to tiered rate structures may be addressed in future judicial decisions and legislative enactments.

The voters in the State approved Proposition 26 on November 2, 2010. Proposition 26 amended Article XIII C of the State Constitution to expand the definition of “tax” to include “any levy, charge, or exaction of any kind imposed by a local government” with listed exceptions. By means of these exceptions, Article XIII C classifies several types of charges, in addition to property-related charges, that are not taxes, such as charges for specific services or benefits, regulatory charges and penalties.

Article XIII C’s definition of “tax” lists the following exceptions: (1) a charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege; (2) a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the

reasonable costs to the local government of providing the service or product; (3) a charge imposed for the reasonable regulatory costs to a local government for issuing licenses and permits, performing investigations, inspections, and audits, enforcing agricultural marketing orders, and the administrative enforcement and adjudication thereof; (4) a charge imposed for entrance to or use of local government property, or the purchase, rental, or lease of local government property; (5) a fine, penalty, or other monetary charge imposed by the judicial branch of government or a local government, as a result of a violation of law; (6) a charge imposed as a condition of property development; and (7) assessments and property-related fees imposed in accordance with the provisions of Article XIII D.

Proposition 26 also provides that the local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity. Like the proportionality requirements of Article XIII D, assessment of rates under these requirements, if applicable, would be supported by the cost of service approach.

5.5 ARTICLE X

Article X, enacted as an amendment to the California Constitution in 1928 pursuant to an electoral initiative, provides that:

“It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.”

Article X conveys further that the right to water does not “extend to the waste or unreasonable use” of water. California Water Code Section 100 restates the policy that the waste of water shall be prevented. As indicated above, judicial interpretation in the *Palmdale* and *San Juan* decisions analyzed tiered water rates as property-related charges and, as such, found them to be compliant with Article XIII D provided that the tiers correspond to the actual cost of furnishing service at a given level of usage. Pricing signal was assumed to result from this manner of design. The use of tiered structures in compliance with Article XIII D restrictions was found to work in harmony with Article X. Further refinement through judicial and legislative interpretation may provide more specific guidance in this area, such as on the use of pricing signals.

6 APPENDIX

6.1 APPENDIX A: FIXED SERVICE CHARGE BY METER SIZE

TABLE 6-1 FY 2015-16 FIXED SERVICE CHARGES

METER SIZE	FLOW CAPACITY (GPM)	CAPACITY RATIO	MONTHLY CHARGE
5/8" Disc	20	1.0	\$10.30
3/4" Disc	30	1.5	15.45
1" Disc	50	2.5	25.75
1 1/2" Disc	100	5.0	51.50
2" Disc	160	8.0	82.40
2" Turbo	190	9.5	108.15
3" Turbo	435	21.75	247.20
4" Compound	500	25.0	309.00
6" Compound	1,000	50.0	515.00
4" Turbo	750	37.5	515.00
8" Compound	1,600	80.0	991.40
6" Turbo	1,600	80.0	1,030.00
8" Turbo	2,800	140.0	1,802.50
10" Turbo	4,200	210.0	2,163.00

6.2 APPENDIX B: REALIGNMENT OF METER RATIOS

TABLE 6-2 REALIGNMENT OF METER RATIOS

METER SIZE	METER COUNT	IRWD CAPACITY (GPM)	AWWA CAPACITY (GPM)	IRWD % OF AWWA MAX
5/8" Disc	79,117	22	20	110%
3/4" Disc	3,587	22	30	73%
1" Disc	13,516	37	50	74%
1.5" Disc	2,198	75	100	75%
2" Disc	1,587	120	160	75%
3" Compound	0	280	320	88%
4" Compound	0	450	500	90%
6" Compound	0	750	1,000	75%
8" Compound	0	1,450	1,600	91%
10" Compound	0	1,600	N/A	N/A
14" Compound	0	3,500	N/A	N/A
2" Turbo	163	160	190	84%
3" Turbo	68	360	435	83%
4" Turbo	32	1,000	750	133%
6" Turbo	5	2,000	1,600	125%
8" Turbo	0	3,500	2,800	125%
10" Turbine	0	5,500	4,200	131%
2" Mag*	5	280	311	90%
4" Mag*	0	1,000	1,243	80%
6" Mag*	0	2,000	2,797	72%
8" Mag*	0	3,500	4,974	70%
6" Prop	0	1,450	1,350	107%
8" Prop	0	1,600	1,800	89%
10" Prop	0	2,000	2,400	83%
12" Prop	0	3,500	3,375	104%
16" Prop	0	5,500	5,700	96%

6.3 APPENDIX C: BASIS FOR TIERS FY 2015-16

California is facing an unprecedented drought and a statewide mandate to reduce urban water use by 25 percent. IRWD's mandated potable water savings reduction is 16 percent from 2013 levels. In order to meet its target, IRWD will need to save approximately 8,000 acre-feet, and will focus on reducing discretionary water use. This requires that the District reduce wasteful use from leaks as well as outdoor water use.

Outdoor Allocation

Potable Water

Outdoor water use need is based on the amount of water plants lose from evaporation and transpiration or evapotranspiration (ET). IRWD maintains three weather stations that provide daily ET data in representative coastal, central and foothill climate zones. ET changes over the course of a year, generally increasing when it is hotter and dropping when it is cooler. Reference ET, is based on cool-season turf grass, usually the most water thirsty plant in a landscape. The water needs of other plant types can be adjusted by changing the relative crop-coefficient, as well as factoring in the efficiency of the application of water by the irrigation system (irrigation efficiency). Crop-coefficients are based on data from the California Department of Water Resources Guide to Estimating Irrigation water needs of Landscape Plantings in California, August 2000 and irrigation efficiencies are based on data from the Irrigation Association.

Given the mandated requirement to significantly reduce potable water use, IRWD's outdoor allocation is based on drought tolerant plants (crop co-efficient of 0.5) and a highly efficient irrigation system (irrigation efficiency of 0.8). Drought tolerant plants use up to 50 percent less water than cool-season turf. The resulting evapotranspiration adjustment factor (ETAF) is $0.5/0.8 = 0.6$. This is a measure of the relative amount of water that drought tolerant plants with an efficient irrigation system need compared with cool-season turf grass.

The actual formula used to calculate the potable water outdoor allocation is:

Landscape area (acres) x sum of ET for the days in the billing cycle x ETAF

or

Landscape area (acres) x sum of ET for the days in the billing cycle x 0.6

Recycled Water

Since the mandated reduction applies only to potable water, and since recycled water is a more "drought-proof" source of supply, the allocation for recycled water customers is based upon warm-season turf grass. Warm-season turf uses up to 30 percent less water than cool season turf, and has a crop-coefficient of approximately 0.65. Overhead irrigation is typically used for turf and is not as efficient so an irrigation efficiency of 0.71 is used consistent with the Model Water Efficient Landscape Ordinance, resulting in an ETAF of 0.91.

Sites with functional turf such as sports fields that are irrigated with potable water may request a variance. If at IRWD's discretion, the variance is granted, the associated irrigated area will receive the same allocation formula, based on warm season turf, as recycled water irrigation with an ETAF of 0.91.

Indoor Allocation

The indoor allocation of 50 gallons per person per day is based on a customer with efficient indoor use, no leaks and plumbing fixtures that meet current codes and standards. In 2009, the California legislature established a standard for efficient indoor use of 55 gallons per day. IRWD adopted its indoor standard of 50 gallons per person per day effective July 1, 2014 following the Governor's 2014 Executive Order requesting a voluntary statewide reduction of 20 Percent in potable water use. Health and safety levels are generally considered to range from 20 to 30 gallons per capita per day.

Residential Allocations and Tiers

Residential- Detached and Attached

Residential customers with landscape (single family, town homes and condos) are allocated based on the following water budget:

Base Allocation:

Indoor

- 50 gallons per person per day
- Default number of residents is 4 for single family and 3 for condos/townhomes

Outdoor (Potable) Irrigation

- Landscape area (acres) x sum of ET for the days in the billing cycle x 0.6

Residential Tiers

Tiers for residential customers are set using the following assumptions based on a typical customer in IRWD's service area, with the default number of single family residents, irrigated landscape area of 1300 square feet. Customers with additional residents, livestock, additional landscape area and medical needs, for example, may request a variance to provide additional allocation for the property-related water needs.

TIER	PERCENT OF ALLOCATION	BASIS	AVERAGE CCF PER MONTH*
Low volume	0-40%	Assumes health and safety level of use of 30 gallons per person per day	5
Base	41-100%	Provides additional 20 gallons per person per day, a measure of efficient indoor use plus the outdoor allocation based on drought tolerant plants and efficient irrigation	6
Inefficient	101-130%	Based on irrigating warm season turf with overhead spray. Requires approximately 40% more outdoor use than drought tolerant plants and efficient irrigation. Also incorporates leaks.	4
Wasteful	131%+	Represents wasteful use. More water than needed for irrigating cool season turf and typical leaks.	All use above 15 ccf

*Allocations are rounded to next whole ccf in the customer's favor.

Apartments

Residential customers with no landscape, apartments, are allocated based on the following water budget: Most apartments in IRWD's service area have separately metered outdoor use. If outdoor use is on the same meter, it will be allocated using the formula for drought tolerant plants and efficient irrigation if it is potable water, and for warm season turf if it is irrigated with recycled water. In those instances, the outdoor allocation will be added to the indoor allocation.

Base Allocation:

Indoor

- 50 gallons per person per day
- Default number of residents per unit is 2. A variance can be requested for additional residents.

TIER	PERCENT OF ALLOCATION	BASIS	AVERAGE CCF PER MONTH*
Low volume	0-60%	Assumes health and safety level of use of 30 gallons per person per day	3
Base	61-100%	Provides additional 20 gallons per person per day, a measure of efficient indoor use plus the outdoor allocation based on drought tolerant plants and efficient irrigation	2
Inefficient	101-120%	Based on studies indicating that leaks can account for up to 17% of use.	2
Wasteful	121%+	Represents wasteful use. More water than needed even beyond typical leak rates.	All use above 7 ccf

*Allocations are rounded to next whole ccf in the customer's favor.

Non Residential Allocations and Tiers

Potable Irrigation

Potable irrigation accounts are allocated on the same basis as residential customers, using drought tolerant plants and efficient irrigation with an ETAF of 0.6 in order to encourage reduced discretionary outdoor use, so that IRWD can meet its state mandated reduction target. Tiers for potable irrigation customers are based as follows:

TIER	PERCENT OF ALLOCATION	BASIS
Low volume	0-60%	Assumes native plants with a crop co-efficient of 0.3 and an irrigation efficiency of 0.85, giving an ETAF of approximately 0.4. Once established, native plants have minimal supplemental watering requirements.
Base	61-100%	Based on drought tolerant plants and efficient irrigation with an ETAF of 0.6
Inefficient	101-160%	Based on cool season turf and an irrigation efficiency of 0.8, resulting in an ETAF of 1.0, or 60% more water than drought tolerant.
Wasteful	161%+	Represents use that is greater than the requirement for cool-season turf, and an efficient irrigation system.

Recycled Water Irrigation

Since recycled water is a more “drought-proof” source of supply, the allocation for recycled water customers is based upon warm-season turf grass. Tiers for recycled water irrigation customers are based as follows:

TIER	PERCENT OF ALLOCATION	BASIS
Low volume	0-40%	Based on drought tolerant plants and efficient irrigation with an ETAF of 0.6 that is approximately 40% of the watering requirement of cool-season turf.
Base	61-100%	Based warm season turf with an ETAF of 0.91

Inefficient	101-130%	Based on cool season turf with an ETAF of 1.2, or approximately 30% more water than warm-season turf.
Wasteful	131%+	Represents use that is greater than the requirement for cool-season turf.

Commercial, Industrial and Institutional

IRWD establishes customized allocations (base indices) for all other non-residential customers based upon the property related needs, including specific business water process requirements, number of employees, customers, business type and seasonal uses. As such, each non-residential customer, commercial, industrial and institutional (CII) is allocated based on efficient use specific to their need. Non-residential customers may request allocation reviews at any time, which include an on-site visit by IRWD staff, in order to accommodate business growth and other needs. Therefore, any use above the allocation is considered wasteful.

TIER	PERCENT OF ALLOCATION	BASIS
Base	0-100%	Based on providing the water required for the specific business need. As a result there is no low-volume tier.
Wasteful	101%+	Use in excess of the business related need is wasteful.

6.4 APPENDIX D: ADDITIONAL CONSIDERATIONS

In addition to replicating the steps of the District's cost of service process in order to evaluate their validity, Carollo engaged the District in a challenging and thought provoking discussion process. The purpose of this process was to further test the validity of the existing rate design and internal cost of service process, identifying potential limitations or disadvantages in its structure. Based on this process, Carollo found that the existing rates provide a strong cost of service basis, with a clearly identifiable methodology for how costs are incurred and recovered and a demonstrated nexus between the rates and the cost of providing service within the systems, rate areas, service classes, and tiers.

While the existing structure is sound, the independent review did yield a variety of policy considerations and adjustments for consideration by the District. These refinements provide alternative methodologies and policy considerations to align expenditures with rates into the future.

The reviewed refinements were determined based on discussions with IRWD staff to address any ratepayer input as well as any cost of service matters presented by Carollo. Once identified, these refinements were evaluated against several policy-driven questions:

- Are there concerns with legal compliance?
- Is it easy to communicate and to understand?
- What is the cost of implementation?
- Does it achieve the stated objective?

Of the considerations Carollo discussed with staff, three were prioritized to bring to the District's Finance and Personnel Committee (F&P). Carollo presented eight policy considerations to F&P:

1. Service charge for low volume users
2. Decoupling of recycled water
3. Seasonal Rates for recycled water
4. Modification to recycled water service charge
5. Revision to sewer discharge methodology
6. Review of pumping charges
7. Multi-Year (Prop. 218 Notice) rate policy
8. Drought planning considerations

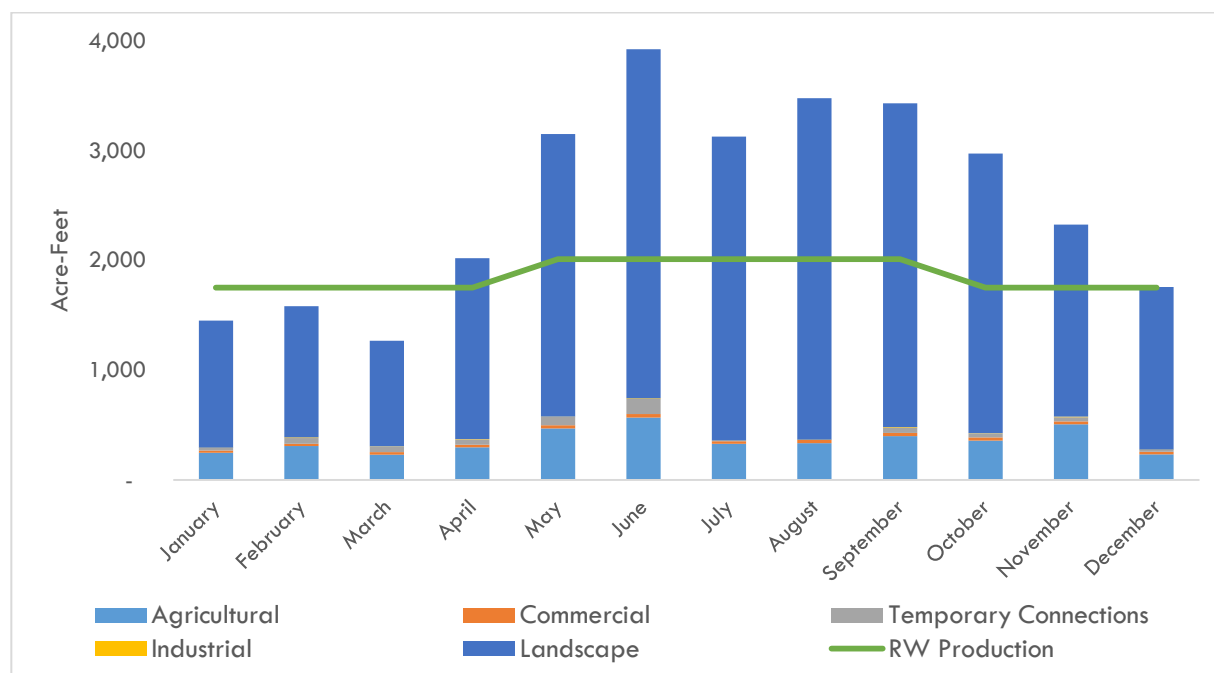
6.4.1 Focus Points for Review

Seasonal Rates for Recycled Water

Many alternatives were reviewed that explored the ability to further encourage recycled water use. Seasonal rates were examined as a possible solution. Seasonal pricing is aimed at aligning price to reflect the cost of peaking on the system. Recycled water demands are highest in the summer and lowest in the winter. At times, recycled water usage is so low that agencies cease production for part of the

year. IRWD has historically shut down production of recycled water at LAWRP as demand falls in the winter.

FIGURE 6-1 RECYCLED WATER DEMANDS & PRODUCTION - FY 2013-14



The premise behind season pricing for recycled water is to incentivize use during the winter months. Upon closer examination, the makeup of the District's recycled water users and existing rate structure would add unnecessary complexity and would likely produce undesirable results. Staff indicated that a lower recycled water rate in winter would likely produce waste and excess runoff, which would be in violation of their regulation. The existing structure better encourages efficient use of recycled water, rather than incentivizing greater use. Furthermore, IRWD uses excess recycled water production in the winter months to refill storage at its storage facilities, such as Syphon Reservoir for usage in summer months. With a lower commodity rate in the winter, recycled water could increase, causing a drop in the volume of water available for storage, and ultimately, for use in the hotter summer months when demand is more urgent. In the end, there are substantial trade-offs involved with this proposal, and the District should carefully scrutinize the costs and benefits against policy priorities prior to implementation.

Allocation of Recycled Water Benefits

In addition to evaluating existing costs, as recycled water is a product of water and sewer usage, its costs are often partially shared or allocated to either water or sewer. Carollo prepared an objective functional allocation of recycled water. Recycled water and Sewer share a common budget, thus expenditures have to be apportioned between the two unique services. Expenditures were allocated on a line-item (function) basis. In order to approximately distribute between the two primary functions,

allocation bases were created. The results of this analysis reveal that in aggregate, existing recycled water rates generate sufficient revenues to cover identified expenditures.

Understanding that there are many shared costs and benefits of recycled water, Carollo's analysis presented potential allocation methodologies to reduce the cost of recycled water. To identify the recycled water's benefit to the water system, Carollo analyzed and presented a cost of water alternative based on two illustrative systems. The first was the total cost of water with the recycled water system. This is how the system operates today. The second was an illustrative, "without" recycled water alternative.

As shown in below, if IRWD was not able to produce 21,000 AF from recycled water, it would necessitate the pumping of groundwater² and the purchase of over 15,000 AF of imported water.

TABLE 6-3 ILLUSTRATIVE BENEFIT OF RECYCLED WATER TO THE WATER SYSTEM

SOURCE OF SUPPLY (AF)	WITH RECYCLED WATER	WITHOUT RECYCLED WATER
Ground Water	54,157	54,157
Imported and other Local Sources	23,366	23,366
Recycled Water	21,038	
Additional Ground Water Supply		5,867
Additional Imported Supply		15,171
Total (AF)	98,561	98,561
Financial Impact	\$(in Thousands)	
Additional Ground Water Supply (RA & Energy)		\$2,001
Additional Imported Supply (MWDOC)		10,620
Total Additional Cost of Water		12,620
Total Additional Revenue		11,057
Variance		\$1,564

Following discussions with F&P, it was decided that this methodology, while understandable, should not be implemented. Based on the understanding that recycled water is now a self-sufficient program, it was F&P's position that recycled water should not be further incentivized as recycled water demand already outstrips production during peak summer periods.

As recycled water is a direct bi-product of the sewer treatment process, a direct relationship between sewer and recycled water exists. Multiple approaches are reasonable for allocating sewer treatment costs between sewer and recycled water customers. For the District's program, it is assumed that all treatment through secondary treatment is a cost to clean sewage in order to meet the District's permit requirements. Tertiary treatment provides a final level of treatment in order to meet Title 22 (recycled water usage) standards and is therefore primarily allocated to recycled water customers. Based on discussions with the District, 75 percent of tertiary treatment costs were allocated to recycled water. Additionally, Carollo worked with IRWD staff to identify possible avoided costs or savings related to the production of recycled water over discharging additional flows to OCSD. While these avenues were explored, no policy considerations were presented to F&P. There are trade-offs involved with this proposal, and the District should carefully scrutinize the costs and benefits against policy priorities prior to implementation.

Modifications to Recycled Water Service Charge

Rather than changing the recycled water commodity charges, modifications to the recycled water service charge were also considered. Primarily, the District wished to examine common costs charged through the monthly service charge that could be reduced if a customer has two meters. While some shared costs could be identified, the necessary data analysis and implementation issues were too difficult to overcome and the potential benefit to the end customer was not material.

Review of Pumping Charges

The District currently has 9 potable pumping charges and 3 recycled water pumping charges. Carollo and IRWD staff prepared a preliminary analysis to determine cost recovery and appropriateness of existing rates. In meeting with staff, it was communicated that the existing system (9 zones) was overly complicated and that rates should be revisited. The existing rates were determined to be reasonable and based on a detailed spreadsheet prepared annually by agency staff as part of the budgeting process for electrical purchases.

As the District is currently undergoing an Embedded Energy Plan to evaluate the District's energy usage throughout the service area, Staff and F&P recommended delaying any changes to pumping rates until the Embedded Energy Plan is completed. Therefore, Carollo has not prepared any recommendations at this time.

Multi-Year Rate Policy

Currently, the District analyzes rates annually as part of the budget process. Each time the rates are adjusted upward, it triggers the noticing requirements of Proposition 218. While this provides that rates are revisited each year, it is a costly and laborious effort. Many agencies have elected to calculate rates once every three to five years and some even have noticed rates for up to ten years. When rates are noticed for future years, it sets a ceiling (maximum) for that rate. The rates do not have to increase to that amount, but they cannot exceed the rates that had been noticed for that year.

A similar approach was discussed with staff and presented to F&P. The cost and labor effort benefits were discussed; however, that cost was offset by the flexibility the annual rate setting process affords.

As the District adjusted rates and budget allocations last year, foreseeable changes to customer behavior, and the perpetual threat of worsening drought, it was advised that any consideration of a multiple year rate notice be deferred until better forecasting is available.

Drought Plan Considerations

In response to an August, 2014 Executive Order from the Governor, the State Water Resources Control Board enacted Emergency Regulations due to the severe ongoing drought conditions throughout the state. These regulations prohibited certain outdoor water uses and required urban water providers to do one of the following:

Implement mandatory outdoor water use restrictions that restrict outdoor watering to two days a week or implement outdoor water restrictions as dictated by their water shortage contingency plans

OR -

In lieu of the first option, agencies like IRWD that have an allocation-based rate structure may submit an alternate plan that shows that the level of water conserved due to the rate structure and other conservation programs is superior to that achieved by restricting outside watering to two days a week.

Although the State Water Resource Control Board approved IRWD's alternate conservation plan for compliance with the State Board's Drought Emergency Water Conservation Regulation, worsening drought conditions caused the State to further modify its Drought Regulations in April 2015.

IRWD's allocation-based rate structures are currently the foundation of the District's Water Shortage Contingency Plan. The structure enables IRWD to effectively use price signals to encourage a quick conservation response from ratepayers. The District is currently updating its Plan in light of the latest events.

As part of the rate and cost of service review, Carollo offered a few additional mechanisms to further and equitably suppress demands in case of worsening or extreme drought conditions. These policies are presented below.

- **Adjustment of Landscape Area:** As a majority of residential accounts have the default outdoor allotments, evaluate impact using calculated landscape area based on aerial or GIS analysis, including non-residential accounts. Should IRWD need to further curtail outdoor allotments, this data could provide an enhanced calculation of reasonable use.
- **Adjustment Crop Coefficient (Kc) or Irrigation Efficiency (IE):** Grass is the highest water-using plant in a landscape. IRWD's FY 2014-15 allocation formula is based on the relative amount of water needed for warm-season turf (Kc, which averages 0.65). Trees and shrubs use far less water than grass – but IRWD's allocation assumes the entire landscape is covered with grass. This allocation provides more than enough water to meet the demands of a majority of landscapes. Additionally, the FY 2014-15 allocation formula is based on an IE of 71 percent to account for

inefficiencies in irrigation systems. Adjusting these could further incentivize use of drought tolerant plants and/or more efficient irrigation systems.

6.5 APPENDIX E: WATER REVENUE REQUIREMENT DETAIL

TABLE 6-4 FY 2015-16 DETAILED REVENUE REQUIREMENT FOR IRVINE RANCH RATE AREA

RATE COMPONENT	TIER	ACRE FEET	COST OF WATER ¹	LABOR	MATERIALS & SUPPLIES	GENERAL & ADMINISTRATIVE	TOTAL EXPENDITURES	RESERVES & OFFSETTING REVENUES ³	TOTAL RATE REVENUE REQUIREMENT
Lowest Cost Source									
Dyer Road Well Field	Low Volume	14,618	\$ 6,020	\$ 191	\$ 258	\$ 359	\$ 6,828		\$ 6,828
Melded Supply									
Dyer Road Well Field	Base	13,382	5,511	175	236	329	6,251		
Treated Groundwater ²	Base	11,790	5,650	397	950	746	7,743		
Purchased water	Base	2,187	4,427	-	-	-	4,427		
Total Melded Supply		27,360	15,588	572	1,186	1,075	18,421	314	18,735
Imported Supply									
Purchased water	Inefficient & Wasteful	1,450	2,935	-	16	-	2,951	(1,207)	1,743
Untreated									
Untreated	Untreated	2,612	1,859	77	205	139	2,279	(567)	1,712
Total Water Supply Costs			\$ 26,401	\$ 840	\$ 1,665	\$ 1,573	\$ 30,479	\$ (1,461)	\$ 29,018
Water Banking	Inefficient & Wasteful	1,450					701		701
General Conservation	All	43,427					946		946
Conservation/NTS/Marsh	Wasteful	750					3,466		3,466
Total Commodity Revenue Requirement							\$ 35,592	\$ (1,461)	\$ 34,131

Notes

- (1) Dollar figures in thousands.
(2) Includes Deep Aquifer Treatment System (8,000 AF), Irvine Desalter Project (2,890 AF), and other District groundwater sources (900 AF).
(3) Reserves are utilized to normalize forecasted fluctuations in expenditures not anticipated to be recovered through rate revenues.

TABLE 6-5 FY 2015-16 DETAILED REVENUE REQUIREMENT FOR LOS ALISOS RATE AREA

RATE COMPONENT	TIER	ACRE FEET	COST OF WATER ¹	LABOR	MATERIALS & SUPPLIES	GENERAL & ADMINISTRATIVE	TOTAL EXPENDITURES	RESERVES & OFFSETTING REVENUES ²	TOTAL RATE REVENUE REQUIREMENT
Lowest Cost Source									
Purchased water	Low Volume	2,804	\$ 2,831	\$ -	\$ 31	\$ -	\$ 2,862	\$ (921)	\$ 1,941
Melded Supply									
Purchased water	Base	3,252	3,283	-	36	-	3,319	1	3,320
Imported Supply									
Purchased water	Inefficient & Wasteful	230	232	-	3	-	235		235
Total Water Supply Costs		6,286	\$ 6,347	\$ -	\$ 69	\$ -	\$ 6,417	\$ (921)	\$ 5,496
Water Banking	Inefficient & Wasteful	230					121	1	121
General Conservation	All	6,286					150		150
Conservation/NTS/Marsh	Wasteful	125					632		632
Total Commodity Revenue Requirement							\$ 7,320	\$ (920)	\$ 6,399

Notes

(1) Dollar figures in thousands.

(2) Lowest cost of source water (MWDOC untreated \$2.34/cdf) offset by a sinking fund from future proceeds from sale of Los Alisos property. It is anticipated that the sale of the property surrounding the former Los Alisos Water District headquarters in Lake Forest will generate proceeds sufficient to provide necessary contribution or to fund an ongoing offset of the difference in source water cost, allowing the commodity rates within the Irvine Ranch rate area and Los Alisos rate area to be calculated on the same basis. When the property sale is completed, the Los Alisos rate area will be transitioned into the Irvine Ranch rate area. In anticipation of the sale, IRWD, as a matter of policy, has elected to advance a portion of the anticipated property sale proceeds from non-operating funds to offset the Los Alisos rate area's differential in source water cost in the Low Volume and Base tiers. The Los Alisos rate area has previously been transitioned to the Irvine Ranch rate area's sewer rate structure.

V

TABLE 6-6 FY 2015-16 DETAILED REVENUE REQUIREMENT FOR WATER SERVICE CHARGE

Appendix -- Detailed Water Service Revenue Requirement

BUDGET ITEM	FY 2015-16 PROJECTED
Labor	\$ 5,623
Materials & Supplies	9,684
General & Administrative	10,571
General Plant	592
System Replacement Funding	5,815
Less Included Variable Costs	(2,167)
Total	\$ 30,118

Notes

(1) Dollar figures in thousands.

6.6 APPENDIX F: RECYCLED REVENUE REQUIREMENT DETAIL

TABLE 6-7 FY 2015-16 DETAILED REVENUE REQUIREMENT FOR RECYCLED WATER

RATE COMPONENT	TIER	ACRE FEET	COST OF WATER ¹	LABOR	MATERIALS & SUPPLIES	GENERAL & ADMINISTRATIVE	CUSTOMER SERVICE, FLEET SERVICE, & GENERAL PLANT	TOTAL EXPENDITURES	RESERVES AND OFFSETTING REVENUES	TOTAL RATE REVENUE REQUIREMENT
Lowest Cost Source										
MWRP & LAWRP ²	Low Volume	15,015	\$ 1,905	\$ 626	\$ 1,266	\$ 1,148	\$ 1,783	\$ 6,728	\$ 289	7,018
Melded Supply										
MWRP & LAWRP	Base	4,985	633	208	420	381	592	2,234		
Purchased Water	Base	10,746	6,780	275	340	535	-	7,930		
Total Melded Supply		15,731	7,413	483	760	916	592	10,164	(776)	9,388
Imported Supply										
Purchased Water	Inefficient & Wasteful	2,074	1,373					1,373	-	1,373
Total Water Supply Costs		32,820	\$ 10,692	\$ 1,109	\$ 2,026	\$ 2,063	\$ 2,376	\$ 18,265	\$ (486)	\$ 17,779
Conservation/NTS/Marsh		1,613						3,000		3,000
Total Commodity Revenue Requirement								\$ 21,265		\$ 20,779

Notes

(1) Dollar figures in thousands

(2) Michelson and Los Alisos Water Reclamation Plants

6.7 APPENDIX G: SEWER REVENUE REQUIREMENT DETAIL

TABLE 6-8 FY 2015-16 DETAILED REVENUE REQUIREMENT FOR SEWER

BUDGET ITEM	COST OF WATER ¹	LABOR	MATERIALS & SUPPLIES	GENERAL & ADMINISTRATIVE	OTHER EXPENSES	TOTAL EXPENDITURES
VARIABLE REVENUE REQUIREMENT						
Primary Treatment Michelson	\$ 169	\$ 501	\$ 314	\$ 933		\$ 1,916
Secondary Treatment Michelson	926	598	387	1,098		3,010
Secondary Treatment Los Alisos	1	12	0	23		37
Collection OC Sanitation District	-	0	4,490	0		4,491
Treatment and Disposal OCSD	4	20	70	37		131
Secondary Treatment Los Alisos	812	381	93	714		1,999
Total Variable Cost	\$ 1,912	\$ 1,512	\$ 5,354	\$ 2,806		\$ 11,583
Reserves and offsetting revenues						6,530
Total Variable Rate Revenue Requirement						\$ 18,113
FIXED REVENUE REQUIREMENT						
Sewage Collection Michelson	\$ 134	\$ 1,315	\$ 1,638	\$ 2,471		\$ 5,558
Sewage Collection FOG Program	-	24	-	46		70
Sewage Treatment Michelson Generator Facility	8	54	42	101		205
Ocean Disposal Los Alisos	40	20	256	38		355
Biosolids Disposal Michelson	-	-	7	-		7
Biosolids Disposal OC Sanitation District	-	5	8,403	10		8,419
Biosolids Thickening Michelson	70	-	-	-		70
Customer Services					1,397	1,397
Fleet Services					518	518
General Plant					461	461
Total Fixed Cost	\$ 252	\$ 1,419	\$ 10,346	\$ 2,667	\$ 2,376	\$ 17,058
Reserves and offsetting revenues						3,585
Total Fixed Rate Revenue Requirement						\$ 20,644
Additional Replacement & Enhancement Funding						\$ 7,391
Other Offsetting Revenues						(10,091)
Total Sewer Revenue Requirement						\$ 36,057

Notes

(1) Dollar figures in thousands

EXHIBIT "B"

RESOLUTION NO. 2015- ____

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE IRVINE RANCH WATER DISTRICT RECEIVING
COST OF SERVICE STUDY

WHEREAS, Irvine Ranch Water District ("IRWD") has conducted a cost of service and rate design study through its consultant, Carollo Engineers, and the Board of Directors has been presented with the final study dated June 8, 2015 (the "Cost Study"); and

WHEREAS, the Cost Study was performed to provide an independent analysis and evaluation of IRWD's rate setting and methodology as to consistency with cost of service standards; and

WHEREAS, the Cost Study contains recommendations for the achievement of the objectives of encouraging conservation of water, maintaining equity across customer classes, maintaining affordability at low usage, maintaining financial stability by accounting for economic uncertainty, making reliable projections and maintaining sufficient revenue; and

WHEREAS, the proposed adjustments to property-related rates and charges and any proposed new property-related rates and charges, as set forth in the notices which have been given in accordance with the requirements of Article XIID and implementing statutes, have been evaluated in the Cost Study.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF IRVINE RANCH WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE AND ORDER THAT THE COST STUDY BE, AND THE SAME HEREBY IS, RECEIVED.

ADOPTED, SIGNED and APPROVED this 8th day of June, 2015.

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

June 8, 2015

Prepared by: L. Stuvick/A. McNulty

Submitted by: F. Sanchez/P. Weghorst *pm*

Approved by: Paul Cook *[Signature]*

ACTION CALENDAR

WATERSMART SOFTWARE VARIANCE NO. 2

SUMMARY:

The District's WaterSmart Program, developed and administered by WaterSmart Software Inc., provides enhanced water use information to over-allocation residential and commercial, industrial, and institutional (CII) customers separately from their water bills. The program is an effective tool that promotes water use efficiency and provides rate support outreach to customers. Staff recommends the Board authorize the General Manager to execute Variance No. 2 to IRWD's Professional Services Agreement with WaterSmart Software Inc. in the amount of \$215,693 to continue administering the WaterSmart Program through FY 2015-16.

BACKGROUND:

In 2012, the WaterSmart Program was first implemented in IRWD's service area on a pilot basis to 1,000 customers. Based on the water savings and positive customer response, the pilot program was expanded into a full-scale program targeting over-allocation, single-family customers beginning in FY 2013-14. The program provides targeted customers with monthly reports on IRWD's programs and incentives for water efficiency, as well as customized ways to save water based on each individual customer's usage. The reports compare each customer's water use with the assigned allocation, as well as with the usage of similar customers. These reports help increase customers' awareness of their water usage. The user-friendly report content is modified each billing cycle to encourage customers to participate in appropriate programs or events. A sample report is provided as Exhibit "A". Participants receive the WaterSmart Program reports for 12 consecutive monthly billing cycles.

Of the District's total recipient list of over 14,481 over-allocation customers, 11,523 single-family homes receive monthly electronic reports and an additional 2,958 receive hard copy reports through direct mail. Customers who receive hard copy reports through direct mail are encouraged to sign up for the monthly electronic water reports, as well as to schedule a home site survey with IRWD staff.

Consultant Variance:

IRWD's existing agreement with WaterSmart Software expires on June 30, 2015. Staff recommends the Board authorize the General Manager to execute Variance No. 2 with WaterSmart for FY 2015-16, which is provided as Exhibit "B". Variance No. 2 would continue and expand the program as part of the District's planned drought response plan to meet its 16 percent state-mandated potable use reduction target by February 2016. The expanded program would provide funding for up to 22,000 over-allocation accounts to receive home water reports. An open enrollment feature will be added to allow single-family residence (SFR) and condominium customers to opt in at any time. This will enable customers to sign up for the reports and for staff to enroll customers during home site surveys.

The proposed Variance No. 2 will also expand the program to include the development and implementation of custom water use portals for up to 6,000 CII customer accounts. This expansion will provide access to water usage data by CII building engineers, facility managers and sustainability managers who otherwise often experience a time delay waiting for the data from their accounts payable departments. The CII portal will provide a tool for this customer class to more closely monitor and manage water use at their facilities.

Variance No. 2 with the expanded Scope of Work will extend the WaterSmart Program through the end of FY 2015-16 at a cost of \$215,693. The FY 2015-16 program will target over-allocation SFR customers as well as CII customers through direct mail and electronic mail reports on a monthly basis for 12 months.

FISCAL IMPACTS:

Funding for the WaterSmart Program is included in the FY 2015-16 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

This program is exempt from CEQA.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on June 4, 2015.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 2 TO THE PROFESSIONAL SERVICES AGREEMENT BETWEEN IRWD AND WATERSMART SOFTWARE INC. IN THE AMOUNT OF \$215,693.

LIST OF EXHIBITS:

Exhibit "A" – Sample WaterSmart Report

Exhibit "B" – Variance No. 2 to IRWD's Professional Services Agreement with WaterSmart Software Inc.

EXHIBIT "A"

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 625 2nd Street, Suite 280
ACCOUNT NUMBER: 123-4567-89



SIGN UP TO GET THIS REPORT VIA EMAIL
irwd.waterinsight.com



WaterInsight Program
15600 Sand Canyon Ave
Irvine, CA 92618

949.453.5581 aws@irwd.com

A 0001 18334 V003 0000298 00000595 PDF-SEQ=29033

Peter Yolles
625 2nd Street, Suite 280
San Francisco, CA 94107-2014



Your WaterScore

JUN 18 TO JUL 18, 2014



You used **more water** than
most of your neighbors.

Gallons Per Day (GPD)
154 CCF = 3,715 GPD



Seasonal irrigation tune-up

Remember to look for:

- Appropriate sprinkler run times
- Shrubs or fences blocking your sprinkler heads
- Sprinklers that are broken or clogged, spraying sidewalks or not popping up
- Punctured hoses or leaky valves



Take action during the drought

Water conservation always has been important, but this year no Californian can afford to waste another drop.

As we near the end of summer, **reduce your outdoor water use** and check your irrigation system for broken or misdirected sprinklers.

Water-saving actions just for you

Selected assuming your home has 2 occupants and a more than 12,000 sq. ft. yard.

[Log on to correct us!](#)*

Potential annual savings if you:



Log On

Take the guesswork out of saving water. See:

- Where you're using the most
- All actions relevant to you
- Step-by-step tips and rebates

irwd.waterinsight.com

A **free** service offered by your water utility and powered by WaterSmart Software®

* UPDATES TO THE WATERINSIGHT WEBSITE WILL IMPROVE THIS REPORT, BUT WILL NOT AFFECT YOUR IRWD ALLOCATION.

EXHIBIT "B"

EXHIBIT "C"

IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Purpose. This procedure shall be used to identify, estimate, and report variances to the scope of work in professional services agreements between IRWD and a consulting engineer or other type of consultant. A variance may be initiated by either IRWD's Project Manager or by the Engineer/Consultant.

Variance. The Variance shall be used to identify all changes to the original scope of work, budget, and schedule for any study, design, or construction phases services.

Engineer/Consultant Initiates Variance. If a Variance is initiated by the Engineer/Consultant, the Engineer/Consultant shall prepare the Variance including the Description of Variance, the Engineering & Management Cost Impact, the Schedule Impact, and the Required Approval Determination sections. The Engineer/Consultant shall then sign the Variance and submit it to the IRWD Project Manager for action.

IRWD Initiates Variance. If a Variance is initiated by IRWD's Project Manager, the IRWD Project Manager shall complete the Description of Variance and fill-in the Total Original Contract amount and Previous Variances amount (if any). The Variance shall then be given to the Engineer/Consultant to complete the Cost Impact, the Schedule Impact, and the Required Approval Determination sections. The Engineer/Consultant shall then sign the Variance and submit it to the IRWD Project Manager for action.

Variance Processing. Once a Variance is signed and submitted by the Engineer/Consultant, the IRWD Project Manager shall:

1. Enter the Variance's details onto a Variance Register for the project,
2. Review, sign, and date the Variance, and
3. Obtain appropriate approvals.

Notice to Proceed. Work covered by a Variance may proceed upon signing by the department Director. A copy of the Variance, signed by the Director, shall be the Engineer's/Consultant's Notice to Proceed with the required work.

Contractual Authorization. Work covered by a Variance which has been signed by the Director may require final approval from the General Manager, Committee, or Board based upon the requirements of the Procurement Policy. These approvals may be obtained after the Engineer/Consultant has been given a copy of the Variance signed by the Director (the Engineer's/Consultant's Notice to Proceed). The IRWD Project Manager shall promptly thereafter prepare a memo to the General Manager, Committee and/or Board agenda items(s) for approvals as required. Once the Variance is properly approved, it modifies the existing Engineer's/Consultant's agreement.

Financial Authorization. An approved Variance may require any of the following:

1. A Capital Budget increase,
2. A new Expenditure Authorization,
3. An extension to an existing Purchase Order, and/or
4. A new Purchase Order.

It is the IRWD Project Manager's responsibility to process the necessary paperwork to grant the required financial authorization.

IRVINE RANCH WATER DISTRICT PROFESSIONAL SERVICES VARIANCE

Project Title: WaterSmart Home Water Use Report FY 15/16
 Project No.: _____ Date: _____
 Purchase Order No.: 516098 Variance No.: 2

Originator: ☒ IRWD ☐ ENGINEER/CONSULTANT ☐ Other (Explain) _____

Description of Variance (*attach any back-up material*):
This variance is to expand the scope of the current program to increase the number of reports to 22,000 with up to 11,000 as print reports, offer an "opt-in" enrollment feature for all other IRWD residential customers, add all IRWD commercial, industrial and institutional customers, and extend the contract through fiscal year 2015/16. The contract amount will increase by \$215,693 for continued administration of the expanded program.

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
As per the above Scope of Work				\$215,693		\$215,693
Total \$ =						\$215,693

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
1	Program Administration	July 2012 - June 2015	1 year renewal	July 2015-June 2016

Required Approval Determination:

Total Original Contract	<u>\$90,000</u>	☐ Director: Cumulative total of Variances less than or equal to \$50,000. ☐ Executive Director: Cumulative total of Variances less than or equal to \$75,000. ☐ General Manager: Cumulative total of Variances less than or equal to \$100,000. ☒ Board: Cumulative total of Variances greater than \$100,000.
Previous Variances \$	<u>98,550</u>	
This Variance	<u>\$215,693</u>	
Total Sum of Variances	<u>\$314,243</u>	
New Contract Amount	<u>\$404,243</u>	
Percentage of Total Variances to Original Contract	<u>349</u> %	

ENGINEER/CONSULTANT: WaterSmart Software Inc. IRVINE RANCH WATER DISTRICT
 Company Name

Project Engineer/Manager	Date	Department Director	Date
Engineer's/Consultant's Management	Date	General Manager/Board	Date

IRVINE RANCH WATER DISTRICT

PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: Water Smart Home Water Use Reports

Project No.: _____ Project Manager: Amy McNulty

Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Contract extension and addition of postcard mailing	5/29/14		\$98,550
2	Contract extension, expansion of print reports and inclusion of CII customers.	5/28/15		\$215,693

June 8, 2015

Prepared by: L. Stuvick/A. McNulty

Submitted by: F. Sanchez/P. Weghorst

Approved by: Paul Cook

ACTION CALENDAR

WATER CONSERVATION PARTICIPATION AGREEMENT

SUMMARY:

IRWD's water use efficiency program includes a "Tactical Incentives" element to encourage customers to install water conservation devices. Incentive payments are based on the water and sewage collection and treatment system avoided costs for each device and are cost-effective for IRWD. Staff has reviewed necessary funding levels and expected water savings and recommends that the Board authorize the General Manager to execute an agreement with the Municipal Water District of Orange County (MWDOC) to provide incentives at the levels specified per device, for a total funding amount of \$1,060,000 in FY 2015-16.

BACKGROUND:

Tactical Incentives are one of the key elements of IRWD's Water Use Efficiency Program. The Tactical Incentives are cost-effective financial incentives provided by IRWD to supplement existing regional rebate programs administered by either Metropolitan Water District of Southern California and/or MWDOC. The incentives are based on IRWD's calculated avoided costs resulting from the installation of the various conservation devices. A new umbrella agreement with MWDOC has been prepared to provide incentives for specified devices and programs for FY 2015-16. This agreement is attached as Exhibit "A".

Staff has reviewed the water savings and necessary funding levels for the various devices and recommends the incentive levels shown in Table 1. Based on customer participation, staff is proposing a total of \$1,060,000 in total incentive funding of which \$610,000 would be allocated to residential programs and \$450,000 to commercial programs.

Table 1: Proposed Device Funding Levels FY 2015-2016

Program	Maximum Funding	Devices	IRWD Rebate Funding Level Per Device
SoCal WaterSmart Residential Program	\$610,000	High Efficiency Clothes Washer (HECW)	\$165
		High Efficiency Toilet (HET)	\$50
		Residential Smart Timer	\$75

Action Calendar: Water Conservation Participation Agreement

June 8, 2015

Page 2

Program	Maximum Funding	Devices	IRWD Rebate Funding Level Per Device
<u>SoCal WaterSmart</u> Commercial Program	\$450,000	Commercial High Efficiency Toilet	\$50
		Multi-Family High Efficiency Toilet	\$50
		Zero Water/Ultra Low Water Urinals	\$100
		Connectionless Food Steamer	\$485 Per Compartment
		Commercial Ice Making Machine (Tier III)	\$250
		Hotel Connectionless Food Steamer	\$485 Per Compartment
		Hotel Commercial Ice Making Machine (Tier III)	\$250
		Water Savings Incentive Program	\$3 Per 1,000 gallons/ 1 year
Total Funding for All Programs	\$1,060,000		

FISCAL IMPACTS:

Funding from over-allocation revenues for tactical incentives in the amount of \$1,060,000 is included in the adopted FY 2015-16 Operating Budget.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Policy and Communications Committee on June 4, 2015.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE WATER CONSERVATION PARTICIPATION AGREEMENT BETWEEN THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY AND IRVINE RANCH WATER DISTRICT, SUBJECT TO NON-SUBSTANTIVE CHANGES, FOR SPECIFIED REBATE PROGRAMS WITH \$1,060,000 IN FUNDING FOR FY 2015-16.

LIST OF EXHIBITS:

Exhibit "A" –Water Conservation Participation Agreement between the Municipal Water District
of Orange County and Irvine Ranch Water District

EXHIBIT "A"

Water Conservation Participation Agreement between the Municipal Water District of Orange County and _____

This Water Conservation Participation Agreement ("Agreement") is made between the Municipal Water District of Orange County ("MWDOC") and _____ ("Participant"). MWDOC and Participant may be collectively referred to as "Parties" and individually as "Party."

Recitals

- A. The Metropolitan Water District of Southern California ("Metropolitan") provides incentive funding to residential, commercial, and industrial water users in its service area for a variety of water conservation activities, including, but not limited to, rebates for the purchase and installation of water-saving devices ("Metropolitan Base Incentives").
- B. MWDOC is a member agency of Metropolitan and has agreements with Metropolitan that enable residential, commercial, and industrial water users in MWDOC's service area, and for the benefit of MWDOC's member agencies, to participate in and take advantage of Metropolitan's Base Incentives.
- C. Participant, as a MWDOC member agency or a direct Metropolitan member agency, may elect to participate in Metropolitan's program to replace non-conserving items within its service area.
- D. The Metropolitan Base Incentives amounts for each eligible device or program available to MWDOC and Metropolitan member agencies are listed in the attached Addendums 1A and 1B. It is expected that Metropolitan will establish funding for additional water conservation items and to change some or all of the existing funding rates throughout the term of this Agreement. Any such changes will be incorporated herein by amendment to Addendums 1A and 1B.
- E. Metropolitan and MWDOC each have fiscal responsibility to manage their individual budgets, and hence may have a need to limit availability of funds.
- F. MWDOC and Metropolitan member agencies may also choose to provide additional supplemental funding of their own to augment the Metropolitan Base Incentives, as set forth on Addendums 2A, 2B, and 2C. Based on the terms and conditions of this Agreement, MWDOC will facilitate supplemental funding for MWDOC member agencies through the Metropolitan rebate contractor ("Rebate Contractor") or MWDOC directly. Metropolitan member agencies will coordinate any supplemental funding directly with Metropolitan.
- G. In addition to the Metropolitan Base Incentives, MWDOC has developed and arranged additional local, state, and federal grant funding ("Grant Funding") for eligible devices in a number of water conservation programs ("MWDOC Administered Programs") that MWDOC offers to its member agencies and Metropolitan member agencies. This grant

funding may be used to enhance the Metropolitan Base Incentives. Granting agencies include, but are not limited to, the Department of Water Resources and the United States Bureau of Reclamation.

- H. MWDOC member agencies may also operate customized, local water conservation incentive programs in their respective service areas ("Participant Agency Administered Programs) and may have access to the Metropolitan Base Incentives and Grant Funding for such, subject to MWDOC and Metropolitan approval and the terms and conditions of this Agreement and any MWDOC and/or Metropolitan agreements.
- I. The purpose of this Agreement is to create a master water conservation participation agreement between MWDOC and Participant that combines all of the conservation programs and incentives into one agreement. Addendums to this Agreement will be issued for changes involving Metropolitan approved items, MWDOC Board approved items, Grant Funding, adding and subtracting MWDOC Administered Programs and Participant Agency Administered Programs as identified in Section 2, and changes to incentive programs, including funding and incentive levels.

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

Section 1: Agreement Term and Administration

- 1.1 This Agreement will be effective on July 1, 2015 or upon execution of this Agreement by all Parties, whichever is later, and shall terminate on June 30, 2025 ("Term"). Continuance of this Agreement will be subject to annual budget approval by MWDOC's Board of Directors.
- 1.2 This Agreement may be amended at any time by written mutual agreement of the Parties, or by Addendums issued by MWDOC as set forth in Recital I.
- 1.3 This Agreement may be terminated by either Party for any reason upon thirty (30) days written notice to the other Party.
- 1.4 All Addendums are enforced for the duration of this Agreement unless the Addendums are amended or terminated by either Party.
- 1.5 In the event the Agreement is terminated early, Participant is responsible for payment of any funding contributions required by this Agreement that were initiated prior to the effective date of the termination. For purposes of this Section 1.5, an application is deemed initiated when an application has been received by Metropolitan's rebate vendor, EGIA, by MWDOC, or a reservation has been made within any of MWDOC's online application portals that is pursuant to any of the programs described within this Agreement and the attached Addendums.

- 1.6 Notwithstanding any other provision in this Agreement, funds for all of the programs described within this Agreement and the attached Addendums are conditioned upon the availability of funds and MWDOC is under no obligation to provide funding for any of the programs if MWDOC determines, in its own discretion, that such funding is exhausted, reduced, eliminated, or unavailable from any funding source, for any reason.

Section 2: Program Funding

2.1 Supplemental Funding

2.1.1 In addition to the Metropolitan Base Incentives, Participant may provide additional funding to augment the Metropolitan Base Incentives amounts for those programs and devices that Participant identifies, and in the amounts indicated, in the appropriate locations in Addendums 2A, 2B, and 2C (“Supplemental Funding”). The Supplemental Funding listed in Addendums 2A through 2C shall specify the amount of Supplemental Funding Participant will provide per device or program, as well as the total maximum Supplemental Funding amount committed to each category of device or program. If the Participant does not complete, sign, and return Addendums 2A through 2C to MWDOC within the expected timeframe, notwithstanding any other provision of this Agreement, the Participant will not be bound by this Section or the provisions in Addendums 2A through 2C.

2.1.2 If Participant elects to provide Supplemental Funding or enhanced incentives under this Agreement for any device or program, Participant is responsible for tracking the use and remaining availability of those funds. MWDOC will assist, in every way possible, but the ultimate responsibility for tracking all Participant funding is the responsibility of Participant.

2.1.3 Any requests for changes or revisions to Participant’s Supplemental Funding must be submitted by Participant to MWDOC in the form of revised Addendum 2s listing the new funding amounts/limits.

2.1.4 The Participant may elect to participate in the Supplemental Funding Program and be bound by the provisions of this Section 2.1, Sections 3, 4, 5, 6, and 7 of this Agreement, and Addendum 2A through 2C by having its authorized representative complete and sign Addendum 2a through 2c in the spaces provided.

2.2 MWDOC Administered Programs

2.2.1 With regard to the Smart Timer Rebate Program, Participant is eligible for additional Grant Funding from MWDOC (“MWDOC Smart Timer Funding”), when funding is available, only if Participant provides supplemental funding for the Smart Timer Program pursuant to this Section 2.2 and Addendum 3A.

2.2.2 Participant may elect to take advantage of the MWDOC Administered Programs by having its authorized representative complete and sign Addendums 3A through 3C in

the spaces provided. If Participant completes and signs Addendums 3A through 3C, Participant agrees to be bound by the provisions of this Section 2.2, Sections 3, 4, 5, 6, and 7 of this Agreement, and Addendums 3A through 3C. If the Participant does not complete, sign, and return Addendums 3A through 3C within the expected timeframe, notwithstanding any other provision of this Agreement, the Participant will not be bound by this Section or the provisions in Addendums 3A through 3C.

2.3 Participant Agency Administered Programs

2.3.1 From time to time, funding may be made available for Participant to operate a customized member agency administered local water conservation incentive program or programs (“Participant Agency Administered” “PA” or “MAA Program”) in its service area and access the Metropolitan Base Incentives for such, subject to MWDOC approval of the program and the terms and conditions of this Agreement and Addendum 4. The Participant Agency Administered Program(s) and requirements in connection with it are described in more detail in Addendum 4.

2.3.2 Upon receipt of approval of a Participant Agency Administered Program by MWDOC, Participant is bound by the provisions of Sections 3, 4, 5, 6, and 7 of this Agreement and Addendum 4.

- 2.4 Notwithstanding any other provision in this Agreement, MWDOC may terminate this Agreement as it relates to this Section 2 at any time without prior notice in the event that MWDOC determines that funding for any device or program on Addendums 2 through 4 or MWDOC Grant Funding is exhausted, reduced, eliminated, or unavailable from any funding source, for any reason.

Section 3: Responsibility and Ownership

- 3.1 Participant, at its sole discretion, may independently contract with its own agents under separate agreements for program administration and management for any Participant Agency Administered Program provided that doing so does not compromise program performance, create or present a conflict of interest, or violate the terms of this Agreement.
- 3.2 Participant and/or its agent shall provide all necessary services and materials for such Participant Agency Administered Programs including, but not limited to the following: program administration, promotion, marketing materials, data collection, and analysis, installation verification, and reporting.
- 3.3 All materials and supplies necessary to implement a Participant Agency Administered Program shall be the exclusive property of Participant. MWDOC shall have no ownership, right, title, security interest, or other interest in any Participant Agency Administered Program materials or supplies, nor any rights duties, or responsibilities, therefor.

- 3.4 Participant is responsible for assuring that any Participant Agency Administered Program complies with all federal, state, and local requirements.
- 3.5 Participant agrees to cooperate with MWDOC's data management activities related to assessing device saturation and program success.
- 3.6 As part of any Participant Agency Administered Program, Participant shall use, maintain, and submit to MWDOC within the designated timeframe an electronic database, to be approved by MWDOC prior to use, for any conservation items installed, distributed, or rebated by Participant or its agents to avoid duplicate distributions and to determine the saturation rate of items by the appropriate geographic delineation.
- 3.7 Participant is solely responsible for the performance of its staff or representatives in complying with the terms of this Agreement and for the proper allocation of funds provided by Metropolitan and/or MWDOC for the purpose of achieving water conservation savings under this Agreement.

Section 4 Marketing.

- 4.1 Participant agrees to assist in the marketing of programs it participates in under this Agreement. With regard to Participant Agency Administered Programs, Participant will be solely responsible for marketing its Participant Agency Administered Program to customers in its service area.

Section 5: Installation Verification

- 5.1 Participant shall be responsible for conducting installation verifications of items installed, distributed, and/or rebated by Participant under Participant Agency Administered Programs, and/or for paying all costs associated with this verification. Installation verification measures for program devices must be designed to ensure that materials, installation verifications of eligible program devices, and services meet requirements established by Metropolitan, which requirements will be provided to Participant by MWDOC.
- 5.2 Participant may be responsible for conducting installation verifications of items installed, distributed, and/or rebated by Participant or MWDOC under MWDOC Administered Programs, and/or for paying all costs associated with this verification. Installation verification measures for program devices must be designed to ensure that materials, installation verifications of eligible program devices, and services meet requirements established by Metropolitan, which requirements will be provided to Participant by MWDOC.
- 5.3 MWDOC reserves the right to conduct installation verification of items within MWDOC's service area.

- 5.4 Participant acknowledges that any device receiving funding from Metropolitan may be subject to an installation verification to be performed by Metropolitan, or its agent(s), at Metropolitan's discretion.
- 5.5 Participant shall promptly refund to MWDOC any amounts paid under any Participant Agency Administered Program or MWDOC Administered Program for installed or distributed devices in the event MWDOC or Metropolitan establishes via installation verification that the program devices were not installed.

Section 6: Reporting and Invoicing

- 6.1 For any and all Supplemental Funding provided by Participant and/or Participant provided funding or inspection costs under the MWDOC Administered Programs pursuant to Section 2 of this Agreement, and as more particularly described in Addendums 2 and 3, MWDOC will invoice Participant on a monthly basis for the cost of such funding, and Participant must pay the full amount of such invoice within thirty (30) days of receipt of any such invoice.
- 6.2 For any and all Participant Agency Administered Program(s), Participant will invoice MWDOC on a monthly basis, by the 10th of each month, for any approved funding and costs associated with the Participant Agency Administered Program(s) as indicated in and subject to the provisions of Addendum 4. MWDOC is under no responsibility to reimburse Participant for any costs incurred by Participant that are not approved by MWDOC consistent with the terms and conditions of this Agreement and Addendum 4. The invoice package shall include a fully completed, to the satisfaction of MWDOC, Excel customer/applicant spreadsheet showing program activity, and an Invoice, signed by the General Manager or designee of Participant, certifying the information provided as accurate. Participant shall use the Excel customer/applicant spreadsheet and Invoice forms approved by MWDOC.
- 6.3 Participant shall maintain all Participant Agency Administered Program information, including participant applications, water bills, and purchase receipts, for a period of seven years from the end date of this Agreement.
- 6.4 Payment of Participant invoices shall be in the form of either a credit on MWDOC's water bill to Participant or a check made payable to Participant. Method of payment shall be at MWDOC's discretion.

Section 7: Confidentiality

- 7.1 MWDOC agrees to maintain the confidentiality of Participant's customer names, addresses, and other information gathered in connection with this Agreement. MWDOC will not cause or permit the disclosure of such information except as necessary to carry out any of the MWDOC Administered or Participant Agency Administered programs ("Programs"), or as required by law. To the extent that MWDOC contracts with third

party contractors to carry out all or any portion of any of the Programs, MWDOC will require such contractors to maintain the confidentiality of such customer information.

- 7.2 Notwithstanding anything to the contrary in this Agreement, Participant acknowledges and agrees that MWDOC may request and use historical water consumption data for purposes of satisfying any grant water use and water quality evaluation requirements of any of the Programs. Participant also acknowledges and agrees that MWDOC may also request to use Program applicant information, such as name, mailing address, site photos, and email address to market other water use efficiency programs to past applicants. A similar provision will be required of every individual applicant.

Section 8. Indemnification.

- 8.1 The parties agree that each Party shall be responsible for its own actions, and the actions of its officers, employees, and agents, in performing services under this Agreement. Except as provided in this Agreement and its Addendums, each Party agrees to indemnify and hold the other Party and its officers and agents harmless and agrees to defend the other Party against any claim or asserted liability arising out of its actions, either willful or negligent, or the actions of its officers, employees, and agents, in performing services pursuant to this Agreement. Such indemnity will include any losses relating to any claim made, whether or not a court action is filed, and will include attorney fees and administrative and overhead costs related to or arising out of such claim or asserted liability.
- 8.2 Participant shall include the following language in its agreement with any consultant or contractor retained by Participant to work on any of the Program” “(Consultant) agrees at its sole cost and expense to protect, indemnify, defend, and hold harmless Metropolitan, MWDOC, and their associated Boards of Directors, officers, representatives, agents and employees from and against any and all claims and liability of any kind (including, but not limited to, any claims or liability for injury or death to any person, damage to property, natural resources or to the environment, or water quality problems) that arise out of or related to Participant’s approval, construction, operation, repair, or ownership of any Program. Such indemnity shall include all damages and losses related to any claim made, whether or not a court action is filed, and shall include attorneys’ fees, administrative and overhead costs, engineering and consulting fees, and all other costs related to or arising out of such claim or asserted liability.”

Section 9. Certification re Lobbying (43 CFR 18)

- 9.1 The undersigned hereby certifies on behalf of Participant that no Federal appropriated funds have been paid or will be paid, by or on behalf of the Participant, to any person for influencing or attempting to influence an officer or employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of

any Federal contract, grant, loan, or cooperative agreement. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying" in accordance with its instructions. To the extent federal funds are involved, the Participant shall require that the language of this certification be included in the awards documents for any sub-awards by the Participant at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans and cooperative agreements) and that sub-recipients, if any, shall certify accordingly.

Section 10. Other Terms

- 10.1 Any alteration or variation of the terms of this Agreement will not be valid unless made in writing and signed by both Parties.
- 10.2 This Agreement will inure to the benefit of and be binding upon the Parties and their respective successors.
- 10.3 The partial or total invalidity of one or more parts of this Agreement will not affect the intent or validity of this Agreement.
- 10.4 This agreement shall be deemed a contract made under the laws of the State of California, and for all purposes will be interpreted in accordance with such laws. The Parties hereby agree and consent to the exclusive jurisdiction of the courts of the State of California, and that the venue of any action brought hereunder will be in Orange County, California.
- 10.5 This Agreement constitutes the entire agreement between the Parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

MUNICIPAL WATER DISTRICT
OF ORANGE COUNTY

PARTICIPANT WATER AGENCY

By: _____
Robert J. Hunter
General Manager

By: _____

Addendum 1A FY 15-16

Metropolitan Base Incentive List - Residential (Pg. 1 of 1)

	Regional Residential Program	Metropolitan Incentive*
1	High Efficiency Clothes Washer (HECW)	\$85
2	High-Efficiency Toilet (HET) (Melded Rate)(single-family)	\$100
3	Rotating Nozzles ¹ (For Pop-Up Spray Head Retrofits - <i>Minimum 15 per home</i>)	\$4
	Weather Based Irrigation Controller (WBIC)	
4	- WBIC <i>Less than one irrigated acre</i>	\$80
5	- WBIC <i>One irrigated acre or larger</i>	\$35 per station
	Soil Moisture Sensor System (SMSS)	
6	- SMSS <i>Less than one irrigated acre</i>	\$80
7	- SMSS <i>One irrigated acre or larger</i>	\$35 per station
8	Rain Barrel	\$75 per barrel
9	Turf Removal	\$2 per sq ft (eff. 5/14/14)
	Other Incentives Eligible in MWD-Funded/Member Agency Administered Incentive Program	Metropolitan Incentive*
	Residential Surveys	
10	- <i>Single-Family Indoor Survey - Member agency provides on-site visit, written survey for the customer listing recommendations on improvements, and review of findings report with customer. Survey can be combined with either irrigation evaluation (w/o timer) or irrigation evaluation (with timer), but not both.</i>	\$12.50
11	- <i>Irrigation Evaluation (w/o timer) - Member agency provides the customer the findings of the evaluation, makes recommendations on improvements to the irrigation system and provides a watering schedule.</i>	\$8
12	- <i>Irrigation Evaluation (with timer) - Member agency provides the customer the findings of the evaluation and provides recommended irrigation schedule.</i>	\$18
13	Customized Residential Projects <i>Projects that result in water savings through customized site improvements. Metropolitan funding is limited to \$195 per acre-foot of estimated water savings based on project life and up to one-half of the eligible project costs.</i>	\$195 per acre-foot
14	Rotating Nozzles for Pop-up Spray Heads Retrofits <i>Minimum 15 per application. Payment will be up to the cost of the device plus appropriate administrative costs, including third party costs billed to the agency.</i>	\$4 per nozzle
	Other Incentives Grant-Funded/MWD-Matched	Metropolitan Incentives*
15	Rotating Nozzles ¹ (For Pop-Up Spray Head Retrofits)	\$4 per nozzle
	¹ Incentive incorporates \$1 per nozzle in funds from United States Department of the Interior Grant Agreement No. R12AP35351, Sprinkler Nozzle Incentive Program.	
* Incentives are subject to the following:		
- Effective July 1, 2015 (unless otherwise noted) - Paid on a first come, first served basis - Subject to available funding - Limited to the cost of the device when applicable - Must be a Metropolitan-approved device		

Addendum 1B FY 15-16

Metropolitan Base Incentive List - CII (Pg. 1 of 3)

	Regional CII Program	Metropolitan Incentive*
1	Plumbing Flow Control Valve (Minimum 10 required)	\$5 per valve ³
2	Laminar Flow Restrictors (Minimum 10 required)	\$10 per restrictor
3	Commercial High Efficiency Toilet (HET) – Tank Type <i>Rebates are for matching bowls & tanks.</i>	\$100
4	Commercial High Efficiency Toilet (HET) – Flushometer <i>Rebates are for matching bowls and complete flushometer valves (valve “kits” are ineligible)</i>	\$100
5	Multi-Family High Efficiency Toilet (HET)	\$100
6	Multi-Family High Efficiency Toilet (4-Liter)	\$145
7	Zero Water Urinals (ZWU) <i>ZWU units must replace existing urinals flushing at 1.5 gpf or greater.</i>	\$200
8	Ultra Low Water Urinal (ULWU) <i>Rebates are for matching bowls and flushometer valves (valve “kits” are ineligible) Must flush at < 0.125 gpf, and must replace existing urinals flushing at 1.5 gpf or greater.</i>	\$200
WBIC and CCIC: Upgrades to existing equipment that enable functionality as a WBIC/CCIC may qualify for incentives provided they meet program terms and conditions.		
9	Weather-Based Irrigation Controller (WBIC)	\$35 per station
10	Central Computer Irrigation Controller (CCIC)	\$35 per station
11	Soil Moisture Sensor System (SMSS)	\$35 per station
12	Large Rotary Nozzles <i>Minimum 8 sets (2 each) per site required.</i>	\$13 per set
13	Rotating Nozzles¹ for Pop-up Spray Heads Retrofits <i>Minimum 15 units per site.</i>	\$4 per nozzle
14	In-Stem Flow Regulator (Minimum 25 units per site)	\$1 per regulator
15	Turf Removal	\$2 per sq.ft. (eff. 5/14/14)
16	pH-Cooling Tower Controller (pH-CTC)	\$1,750
17	Cooling Tower Conductivity Controller (CTCC)	\$625
18	Dry Vacuum Pump <i>Maximum 2 Horsepower (HP) motor.</i>	\$125 per 0.5 HP
19	Connectionless Food Steamers	\$485 per compartment
20	Ice-Making Machines	\$1,000

Addendum 1B FY 15-16
CII Incentive List (Pg. 2 of 3)

	Other Incentives Eligible in MWD-Funded/Member Agency Administered Program	Metropolitan Incentives*
21	Large Landscape Surveys <i>Member Agency's landscape survey program shall contain the following elements for each survey site: 1) Irrigation system evaluation; 2) Development of a water budget and irrigation schedule; and 3) Survey report provided on-site to the recipient or customer. Incentives are limited to the full cost of the survey; no restriction on application for additional landscape device rebates. Project information data is required.</i>	\$200 per acre
22	Water Use Accountability Incentive <i>Applies to professional landscape irrigation training and management. This incentive is available for a maximum of five years and up to one-half of project cost. Large residential (lot sizes one acre or more) and CII landscapes must be metered to be eligible for Water Use Accountability (WUA) funding, and new construction sites are ineligible. If a weather- based irrigation controller (WBIC) is installed on a site, that site is not eligible for WUA funding. Member agencies must report all direct and indirect program costs, project acreage and acre-feet usage (to the nearest one-tenth of a unit) to Metropolitan on a monthly basis, and shall certify that Metropolitan Professional California Friendly landscape training or equivalent was provided.</i>	\$3.50 per acre/month
23	Customized Projects <i>Projects that save water through customized site improvements. Metropolitan's funding is limited to \$195 per acre-foot of estimated water savings based on project life, and up to one-half of eligible project costs.</i>	\$195 per acre-foot
24	Rotating Nozzles¹ for Pop-up Spray Heads Retrofits <i>Payment will be up to the cost of the device plus appropriate administrative costs, including third party costs billed to the agency</i>	\$4 per nozzle
	Other Incentives Grant-Funded/MWD-Matched	Metropolitan Incentives*
25	Rotating Nozzles¹ For Pop-Up Spray Head Retrofits	\$4 per nozzle
	1. Incentive incorporates \$1 per nozzle in funds from United States Department of the Interior Grant Agreement No. R12AP35351, Sprinkler Nozzle Incentive Program.	

Addendum 1B FY 15-16
CII Incentive List (Pg. 3 of 3)

	Additional Regional Programs	Metropolitan Incentives*
Public Agency Landscape Program <i>Up-front, enhanced incentives for public agencies to install water-efficient landscape devices. This program will run through June 30, 2016.</i>		
26	Weather-Based or Central Computer Irrigation Controller, Soil Moisture Sensor System	\$55 per station
27	Large Rotary Nozzles <i>Minimum 8 sets per application.</i>	\$13 per set
28	Rotating Nozzles for pop-up spray head retrofits <i>Minimum 15 nozzles per site.</i>	\$6 per nozzle
Targeted Fitness Center Incentive Program <i>HETs, ULWUs and ZWUs: Must be WaterSense labeled devices, where available. This program will run through June 30, 2016. Incentive limited to cost of device plus installation. Rebates are for matching bowls & tanks or matching bowls and flushometer valves.</i>		
29	Commercial High Efficiency Toilet (HET) – Tank Type or Flushometer	\$300 / HET
30	Zero Water Urinals (ZU) and Ultra Low Water Urinal (ULWU)	\$500 / Urinal
*Incentives are subject to the following: - Effective July 1, 2015 (unless otherwise noted) - Limited to the cost of the device when applicable - Paid on a first come, first served basis - Must be a Metropolitan-approved device - Subject to available funding		

Addendum 2A FY 15-16

Residential Program

Participant Agency Supplemental Funding Authorization (Pg. 1 of 1)

Regional Incentive Program	Metropolitan Incentive	Participant Agency Incentive	Total Incentive
High Efficiency Clothes Washer (HECW) no Grant	\$85	\$	\$
High-Efficiency Toilets (HET). Single-family	\$50	\$	\$
Rotating Nozzles	\$4	\$	\$
Rain Barrels	\$75	\$	\$

Select one: Check here ☐ if the supplemental incentives are **flat** regardless of actual device cost

Check here ☐ if the supplemental incentives are **limited to the actual device cost**
(Actual device cost is the retail price of the device excluding tax, shipping, labor or other charges)

☐ If Participant Agency has complex or more detailed requirements or wishes to stop their funding, please check this box, sign this form and attach a spreadsheet or other documentation showing funding details.

Participant Agency Name

Total Authorized Funding¹ \$ _____

Start Date: _____

End Date: _____

1. This authorization represents the Agency's total funding for the period indicated.

This funding authorization is effective only for the period designated by the Participant Agency above, or until a new authorization is approved and implemented by Metropolitan's vendor. Each form submitted shall include the total authorization of the Agency for the specified time period. No funds will be carried over from prior forms.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. **By signing, Participant Agency agrees to these terms.**

Authorizing Signature General Manager /Designee

Date

**MWDOC
Use Only:**

Date received: _____

Approved by: _____

Date sent to Metropolitan: _____

Comments:

Addendum 2B FY 15-16

CII Program

Participant Agency Supplemental Funding Authorization (Pg. 1 of 2)

Regional Incentive Program	Metropolitan Incentive	Participant Agency Incentive	Total Incentive
Plumbing Flow Control Valve	\$ 5 each	\$	\$
Laminar Flow Restrictors	\$ 10 per Restrictor	\$	\$
Commercial HET – Tank Type	\$ 100	\$	\$
Commercial HET – Flushometer	\$ 100	\$	\$
Multi-Family HET	\$ 100	\$	\$
Multi-Family HET (4-Liter)	\$ 145	\$	\$
Zero Water Urinals (Zwu)	\$ 200	\$	\$
Ultra Low Water Urinal (ULWU)	\$ 200	\$	\$
Large Rotary Nozzles	\$ 13 per Set	\$	\$
Rotating Nozzles for Pop-up Spray Heads Retrofits ¹	\$ 4 per Nozzle	\$	\$
In-Stem Flow Regulator	\$ 1 per Regulator	\$	\$
pH-Cooling Tower Controller (pH-CTC)	\$1,750	\$	\$
Cooling Tower Conductivity Controller (CTCC)	\$ 625	\$	\$
Dry Vacuum Pump	\$ 125 per 0.5 HP	\$	\$
Connectionless Food Steamers	\$ 485 per compartment	\$	\$
Ice-Making Machines	\$1,000	\$	\$
Public Agency Landscape WBIC, CCIC, and SMSS	\$ 55 per Station	\$	\$
Public Agency Landscape Large Rotary Nozzles	\$ 13 Per Set	\$	\$
Public Agency Landscape Rotating Nozzles	\$ 6 per Nozzle	\$	\$
Fitness Center HET Tank Type or Flushometer	\$ 300 per HET	\$	\$
Fitness Center Urinals ZWU and ULWU	\$ 500 per Urinal	\$	\$

Addendum 2B FY 15-16
CII Program
Participant Agency Supplemental Funding Authorization (Pg. 2 of 2)

Select one:	Check here ☐ if the supplemental incentives are flat regardless of actual device cost Check here ☐ if the supplemental incentives are limited to the actual device cost (Actual device cost is the retail price of the device excluding tax, shipping, labor or other charges)
☐	If Participant Agency has complex or more detailed requirements, or wishes to stop their funding, please check this box, sign this form and attach a spreadsheet or other documentation showing funding details

Participant Agency

Total Authorized Funding² \$ _____

Start Date: _____

End Date: _____

1. Includes grant funding, when grant funds are available.

2. This authorization represents the Participant Agency's total funding for the period indicated.

This funding authorization is effective only for the period designated by the Participant Agency above, or until a new authorization is approved and implemented by Metropolitan's vendor. Each form submitted shall include the total authorization of the Agency for the specified time period. No funds will be carried over from prior forms.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager
/Designee

Date

MWDOC
Use Only:

Date received: _____

Approved by _____

Date sent to Metropolitan, if applicable: _____

Comments:

Addendum 2C FY 15-16
Participant Agency Supplemental Funding Authorization
for Water Savings Incentive Program

		Participant Agency Incentive (per 1,000 gal/yr)
Supplement to Metropolitan's funding for Water Savings Incentive Program		\$
Participant Agency Total Authorized Funding* \$ Start Date: End Date:		
<i>*This authorization represents the Participant Agency's total funding for the period.</i>		
This funding authorization is effective for only the period designated by the Participant Agency above or until a new authorization is approved and implemented by Metropolitan. Each form submitted shall include the total authorization of the Agency for the specified time period. No funds will be carried over from prior forms. Incentives will not be applied retroactively. Water Savings Incentive Program projects are typically multi-year projects with incentives paid in subsequent years. Participant Agency is required to authorize the project prior to MWDOC and Metropolitan's approvals. Participant Agency is obligated to pay supplemental funding for any projects MWDOC and Metropolitan approve while this authorization is in effect. MWDOC will invoice for the supplemental funding portion of incentives when incentives are paid to the customer. Participating Agency shall reimburse MWDOC for any supplemental funding that the Participant Agency fails to provide as represented above and that MWDOC and/or Metropolitan provided or became obligated to provide on the Participant Agency's behalf. <i>The terms of this authorization may be modified only in writing by authorized representatives of Participant Agency and MWDOC. By signing, Participant Agency agrees to these terms.</i>		
Authorizing Signature General Manager /Designee		Date
MWDOC Use Only: Comments:	Date received: Approved by Date sent to Metropolitan, if applicable:	

Addendum 3A FY 15-16
Smart Timer Rebate Program
Participant Agency Funding Authorization

Participant Agency agrees to provide funding for the Smart Timer Rebate Program in the amount specified in Table 1 below per residential weather based irrigation controller or soil moisture sensor system (Res Smart Timer). Funding will be provided on a per device basis up to the "Not to Exceed" funding limit:

Table 1

Category	Participant Agency Funding Amount	Not to Exceed Funding Limit For Fiscal Year 2015-2016
Res Smart Timer	\$75 per Res Smart Timer	\$

If Participant Agency elects to provide additional funding for commercial weather based irrigation controllers, central computer irrigation controller, or soil moisture sensor system (CII Smart Timer), Table 2 below shall list the Participant Agency's funding amount per CII Smart Timer station. CII Smart Timer rebates are calculated on the CII Smart Timer's station capacity, and Participant Agency's funding amounts shall be in addition to the per station amount provided by Metropolitan.

Table 2

Category	Participant Agency Funding Amount	Not to Exceed Funding Limit For Fiscal Year 2015-2016
CII Smart Timer	\$ per Station	\$

This funding authorization is effective only for the designated period or until a new authorization is received and approved by MWDOC. Each form submitted shall include the total authorization of the Agency for the specified time period.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager /Designee

Date

Date received: _____

Approved by _____

Date sent to Metropolitan, if applicable: _____

Addendum 3B FY 15-16
Turf Removal Rebate Program
Participant Agency Funding Authorization (Page 1 of 3)

Site Inspection; Election by Participant. Participant Agency must either (1) conduct pre- and post-turf removal site inspections for all Program Applications submitted to MWDOC from within the Participant's service area, or (2) provide funding to MWDOC, as set forth below, for the cost of MWDOC's site installation inspection consultant, Mission Resource Conservation District (MRCD), to conduct both pre- and post-turf removal inspections.

If Participant Agency elects to perform the pre- and post-turf removal inspections, Participant Agency shall be responsible for the activities described below:

For pre-turf removal inspections:

- Schedule and conduct the pre- turf removal inspection,
- Complete the pre-turf removal work order, as provided by MWDOC, with the required data and site photographs
- Establish that the applicant's proposed project and site are consistent with the intent of the Program.
- Notify MWDOC If any site is being irrigated with recycled water.
- Submit the completed work order and site photographs to MWDOC.
- Recommend to approve or deny the application. If MWDOC staff agrees with the recommendation, it shall approve the application, designate the site as an eligible Program turf removal project, and issue a Notice to Proceed to the applicant, or reject the application and issue a Participation Denial Notice to the applicant. The final decision on a Notice to Proceed lies with MWDOC.

For post-turf removal inspections:

- Schedule and conduct the post-turf removal inspection
- Complete the post-turf removal work order, as provided by MWDOC, with the required data, site photographs, and receipts
- Establish that the applicant's completed project and site are consistent with the intent and guidelines of the Program, including the following.
 - The site's precise turf removal area in square feet that was removed. This shall be the basis for calculating the amount of each site's rebate, not to exceed initial pre-turf removal inspection measurements, and the total turf removal project cost.
 - The site's turf removal area does not include any live turf or turf-looking grasses.
 - The project area must include some plants.
 - The converted area's irrigation system, if any, is a low flow system (drip, bubblers, or low-precipitation high-efficiency rotating nozzles). If part of a lawn is converted, the sprinkler system must be properly modified to provide adequate coverage to the remaining lawn without spraying the converted area.
 - All exposed soil in the converted area is covered with a 2-3" layer of mulch, except in areas planted with creeping or rooting groundcovers.

Addendum 3B FY 15-16
Turf Removal Rebate Program
Participant Agency Funding Authorization (Page 2 of 3)

- Converted area is permeable to air and water. Weed barriers must be permeable. Pavers must have sufficient spacing to allow water to permeate project area. Concrete, plastic sheeting or other impermeable surfaces do not qualify for incentives under the Program.
- No invasive plant species are used.

At the time of this Addendum, the residential turf removal inspection cost as charged to MWDOC by MRCD is \$105 per residential inspection. The total cost for both pre and post-turf removal residential inspections is thus \$210.00. The current commercial inspection cost as charged to MWDOC by MRCD is approximately \$165.36 per inspection, based on an average of four (4) hours for a small commercial site at \$37.84 per hour, plus \$28 per hour for inspection verification administration. Again, two commercial inspections are required, for a total estimated cost of \$330.72. Should the MRCD costs decrease or increase, MWDOC will pass these changes through to Participant Agency.

By its initials below, _____ hereby elects to either:

Name of Participant Agency

(1) Conduct its own inspections:

Initials Here

or

(2) Provide funding to MWDOC to conduct inspections:

Initials Here

Not to exceed funding amount to conduct Inspections

\$ _____

Participant has the option to provide supplemental funding to customers in its service area to further incentivize turf removal program participation. By completing Table 3 below, Participant Agency elects to provide supplemental funding for turf removal rebate incentives

Table 3 –Turf Removal Supplemental Funding

Program	Not To Exceed Funding for Fiscal Year 15-16	Participant Agency Funding Amount per Square Foot	Notes/Special Considerations
Residential Turf Removal	\$	\$	
CII Turf Removal		\$	

Addendum 3B FY 15-16
Turf Removal Rebate Program
Participant Agency Funding Authorization (Page 3 of 3)

This funding authorization is effective only for the designated period or until a new authorization is received and approved by MWDOC. Each form submitted shall include the total authorization of the Agency for the specified time period. Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager /Designee

Date

Date received: _____ Approved by _____

Date sent to Metropolitan, if applicable: _____

Addendum 3C FY 15-16
Spray to Drip Irrigation Rebate Program
Participant Agency Funding Authorization (Page 1 of 2)

Site Inspection; Election by Participant. Participant Agency must either (1) post-drip conversion site inspections for all Program Applications submitted to MWDOC from within the Participant's service area, or (2) provide funding to MWDOC, as set forth below, for the cost of MWDOC's site installation inspection consultant, Mission Resource Conservation District (MRCD), to conduct the post-drip conversion inspections.

If Participant Agency elects to perform the post-drip conversion inspections, Participant Agency shall be responsible for the activities described below:

For post-turf removal inspections:

- Schedule and conduct the post-drip conversion inspection
- Complete the post-drip conversion work order, as provided by MWDOC, with the required data, site photographs, and receipts
- Establish that the applicant's completed project and site are consistent with the intent and guidelines of the Program, including the following.
 - Property type (residential/commercial)
 - Verified number of pressure regulation/filtration components
 - Verified project area in square footage.

At the time of this Addendum, the residential post-drip conversion inspection cost as charged to MWDOC by MRCD is \$_____ per residential post-drip conversion inspection. The current commercial inspection cost as charged to MWDOC by MRCD is approximately \$165.36 per inspection, based on an average of four (4) hours for a small commercial site at \$37.84 per hour, plus \$28 per hour for inspection verification administration. Should the MRCD costs decrease or increase, MWDOC will pass these changes through to Participant Agency.

By its initials below, _____ hereby elects to either:

Name of Participant Agency

(1) Conduct its own inspections:

Initials Here

or

(2) Provide funding to MWDOC to conduct inspections:

Initials Here

Not to exceed funding amount to conduct Inspections

\$ _____

Addendum 3C FY 15-16
Spray to Drip Irrigation Rebate Program
Participant Agency Funding Authorization (Page 2 of 2)

Participant has the option to provide supplemental funding to customers in its service area to further incentivize spray to drip conversion program participation. By completing Table 4 below, Participant Agency elects to provide supplemental funding for spray to drip conversion rebate incentives

Table 4 – Spray to Drip Rebate Supplemental Funding

Program	Not To Exceed Funding for Fiscal Year 15-16	Participant Agency Funding Amount per Square Foot	Notes/Special Considerations
Residential Spray to Drip	\$	\$	
CII Spray to Drip	\$	\$	

This funding authorization is effective only for the designated period or until a new authorization is received and approved by MWDOC. Each form submitted shall include the total authorization of the Agency for the specified time period.

Supplemental funding forms received by MWDOC by the 15th of a month will be sent to Metropolitan by the 20th of a month. Funding forms received by Metropolitan by the 20th of a month shall become effective on the first day of the following month unless a later Start Date is specified. Incentives will not be applied retroactively.

Participant Agency is obligated to pay supplemental funding for any on-line commitments made while this authorization is in effect. ***By signing, Participant Agency agrees to these terms.***

Participant Agency _____

Authorizing Signature General Manager /Designee

Date

Date received: _____

Approved by _____

Date sent to Metropolitan, if applicable: _____

Addendum 4 FY 15-16
Participant Agency Administered Project Pre-Approval Request
MWD-Funded/Participant Agency Administered Incentive Program

Participant Agency must obtain Metropolitan's written pre-approval for all projects.

This form must be received by MWDOC by _____.

Program Type: ☐ Residential ☐ Commercial, Industrial, Institutional	
Project Type: ☐ Device-based ☐ Customized	
Member Agency MUNICIPAL WATER DISTRICT OF ORANGE COUNTY	Agreement Number (Completed by MWDOC)
Participant/Retail Agency	Participant/Retail Agency Contact Name
Participant/Retail Agency Project Title/Name	Participant/Retail Agency Contact E-Mail Address
Project Start Date	Participant/Retail Agency Contact Phone Number
Project End Date (must be complete by May 31, 2016)	Participant/Retail Agency Funding Request for Project

Detailed Project Description

Project description must include the following:

1. Detailed Project narrative
2. For Device-Based Projects, include type and quantity of device
3. Implementation method (direct install, distribution, etc.)
4. Inspection/verification methodology, including percentage of installs to be inspected
5. Vendor contact information (if used)
6. Project implementation timeline (start and end dates, milestones)
7. For Customized Projects, include supporting documentation for the water savings estimate
8. An Excel Spreadsheet showing the data collection fields (MWDOC may provide standardized data collection form).

Project Description:

Please attach additional sheets, if necessary.

*I certify that the information provided in this request is accurate and in accordance with guidelines provided above, and understand that both MWDOC and Metropolitan must approve this request prior to Participant/Retail Agency seeking reimbursement from MWDOC for this project. I understand that funding is not guaranteed and that a lesser amount than requested may be awarded. I further understand that signed invoices must be submitted electronically to MWDOC by the 5th of each month and that invoices must be submitted on the MWDOC-approved invoice template and include a completed data collection table/spreadsheet. **By signing, Participant/Retail Agency agrees to these terms.***

Authorizing Signature General Manager /Designee _____	Date _____

MWDOC	Date received: _____

Use Only	

Addendum 4 FY 15-16
Requirements for Incentive Reimbursement
For MWDOC Participant/Retail Agencies
MWD-Funded/Member Agency Administered Incentive Program

Projects Eligible for Metropolitan Funding

Metropolitan's funding under the MWD-Funded/Member Agency Administered Incentive Program will be provided for two types of Participant/Retail Agency administered projects.

1. Device-based and other incentive project: Eligible devices must be included in residential or commercial incentive List. Metropolitan incentives will be available for Participant/Retail Agency projects that retrofit, install or distribute devices independent of the regional rebate program. A typical example is direct installation or distribution of devices.
2. Customized project: For projects that result in water savings through customized site improvements, Metropolitan's funding is limited to \$195 per acre-foot of estimated water savings, based on project life and up to one-half of eligible project costs. Metropolitan's vendor cannot be used for customized projects. Restrictions may apply.

Restrictions

Eligible project costs include the following:

- Equipment
- Plants
- Mulch
- Pervious hardscape
- Up to one year of irrigation management fees

Ineligible project costs include the following:

- Supplemental funding for Metropolitan device incentives
- Participant/Retail Agency staffing costs

Project life is estimated at the following terms:

- Landscape irrigation system improvements: 10 years
- For other projects, life estimate determined by Metropolitan or Member agency peer reviews of supplied documentation, technical studies, etc.

Project Approval and Payment Process

The process for MWDOC\Metropolitan approval and reimbursement for MWD-Funded/Member Agency Administered projects is as follows:

1. Participant/Retail Agency submits a signed project proposal by Request deadline. The proposal shall include a project pre-approval request and any supporting documentation.
2. MWDOC/Metropolitan shall approve, reject, or convene a peer review panel to consider the request. The participants in the peer review panel shall be determined by MWDOC/Metropolitan.
3. If approved, Participant/Retail Agency may implement its project.
4. Participant/Retail Agency shall only invoice MWDOC for funding within its total allocated amount.
5. Participant/Retail Agencies must submit monthly invoices. Invoices may be submitted as a scanned invoice signed by the Participant/Retail Agency's General Manager or Designee prior to submittal, certifying the incentive amount, verification method, and work performed for the period.

6. When submitting an invoice, Participant/Retail Agencies must also submit an excel database containing supporting documentation.

Addendum 4 FY 15-16
Requirements for Incentive Reimbursement
For MWDOC Participant/Retail Agencies
MWD-Funded/Member Agency Administered Incentive Program

7. The excel database must include the data fields in the order shown below for the invoice to be processed. MWDOC/Metropolitan will provide an example excel spreadsheet for Participant/Retail Agencies upon request.

Required Database Fields for invoice payment: - (where applicable*)

1. Member agency
 2. Retail agency *
 3. Site, company, or organization name *
 4. Customer first name
 5. Customer last name
 6. Site or installation street address
 7. Apartment or Unit
 8. City
 9. Zip code
 10. Device
 11. Quantity
 12. Install date
 13. Number of WBIC stations *
 14. Number of Acres (large landscape) *
 15. Total square feet of turf removed *
 16. Eligible square feet of turf removed *
 17. Water factor *
 18. Site description (Business, HOA, etc) *
 19. Customer phone number
 20. Customer email address
 21. Contractor Name*
 22. Contractor phone number*
 23. Contractor email*
 24. Device make
 25. Device model
 26. Retail cost per device
 27. Program Type (residential/commercial)
8. Metropolitan shall provide payment to MWDOC by means of a credit on their monthly water bill from Metropolitan. MWDOC shall then either credit the Participant/Retail Agency's monthly water bill from MWDOC or issue Participant/Retail Agency a check. Method of payment to be determined by MWDOC at its discretion. Participant/Retail Agency shall be solely responsible for any incentive payments to customers or other applicable third parties.

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