AGENDA
REGULAR MEETING BOARD OF DIRECTORS
ORANGE COUNTY WATER DISTRICT
18700 Ward Street, Fountain Valley, CA (714) 378-3200
Wednesday, January 20, 2016 – 5:30 p.m.

PLEDGE OF ALLEGIANCE

ROLL CALL

- **EMPLOYEE OF THE QUARTER AWARD TO COMMUNICATIONS SPECIALIST CRYSTAL NETTLES**

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

RECOMMENDATION: Adopt resolution determining need to take immediate action on item(s) and that the need for action came to the attention of the District subsequent to the posting of the Agenda (requires two-thirds vote of the Board members present, or, if less than two-thirds of the members are present, a unanimous vote of those members present.)

VISITOR PARTICIPATION

Time has been reserved at this point in the agenda for persons wishing to comment for up to three minutes to the Board of Directors on any item that is not listed on the agenda, but within the subject matter jurisdiction of the District. By law, the Board of Directors is prohibited from taking action on such public comments. As appropriate, matters raised in these public comments will be referred to District staff or placed on the agenda of an upcoming Board meeting.

At this time, members of the public may also offer public comment for up to three minutes on any item on the Consent Calendar. While members of the public may not remove an item from the Consent Calendar for separate discussion, a Director may do so at the request of a member of the public.

CONSENT CALENDAR (ITEMS NOS. 1 – 18)

All matters on the Consent Calendar are to be approved by one motion, without separate discussion on these items, unless a Board member or District staff request that specific items be removed from the Consent Calendar for separate consideration.

1. APPROVAL OF CASH DISBURSEMENTS

   RECOMMENDATION: Ratify/authorize payment of bills

2. APPROVAL OF MINUTES OF BOARD OF DIRECTORS MEETING HELD DECEMBER 16, 2015

   RECOMMENDATION: Approve minutes as presented

CONSENT CALENDAR ITEMS RECOMMENDED FOR APPROVAL AT COMMUNICATION AND LEGISLATIVE LIAISON COMMITTEE MEETING HELD JANUARY 7 [ITEM NO. 3]

3. CHANGE POSITION TO CO-SPONSOR PROPOSED BILL TO BOTTLE ADVANCED PURIFIED WATER FOR EDUCATIONAL PURPOSES

RECOMMENDATION: Change OCWD's position on WateReuse Association's proposed legislation to bottle advanced purified water for educational purposes from "support" to "co-sponsor" with WateReuse (and OCSD)

CONSENT CALENDAR ITEMS RECOMMENDED FOR APPROVAL AT GWRS STEERING CTE MEETING HELD JANUARY 11 [ITEMS NO. 4 - 5]

4. OCWD AND OCSD JOINT RESOLUTION OF SUPPORT FOR THE METROPOLITAN WATER DISTRICT INDIRECT POTABLE REUSE PROJECT

RECOMMENDATION: Adopt resolution supporting the Metropolitan Water District efforts to implement an indirect potable reuse project with County Sanitation District No. 2 of Los Angeles County

5. JOINT SECURITY VULNERABILITY ASSESSMENT

RECOMMENDATION: Authorize issuance of Agreement to Pinkerton for an amount not to exceed $15,000 for a joint security vulnerability assessment of the joint OCWD and OCSD Fountain Valley campus as a cost shared item between both agencies

CONSENT CALENDAR ITEMS RECOMMENDED FOR APPROVAL AT WATER ISSUES COMMITTEE MEETING HELD JANUARY 13 (ITEMS NO. 6 - 11)

6. ANNUAL SANTA ANA RIVER STREAM GAUGING JOINT FUNDING WITH THE UNITED STATES GEOLOGICAL SURVEY (USGS)

RECOMMENDATION:
1) Approve and authorize execution of Joint Funding Agreement with USGS to conduct stream gauging of the Santa Ana River below Prado Dam and Santiago Creek at Santa Ana for the period of November 1, 2015 to October 31, 2016; and

2) Authorize payment of $36,000 to the USGS for OCWD's share of costs for stream gauging services

7. OCWD PARTICIPATION IN COUNTY OF ORANGE ADOPT A CHANNEL PROGRAM

RECOMMENDATION:
1) Authorize participation in the OC Public Works Adopt A Channel program;

2) Approve and authorize execution of an Encroachment Permit application and a Certificate of Liability Insurance with OC Public Works, and

3) Approve and authorize issuance of Agreement with the Orange County Conservation Corps to conduct graffiti and trash removal for three years for a total expenditure of up to $55,800

8. AGREEMENTS FOR ON-CALL ENVIRONMENTAL SERVICES

RECOMMENDATION: 1) Authorize renewal of existing Agreements for on-call environmental analysis services with Bonterra Psomas Consulting and Environmental Advisors for an additional term of three years, extending the termination date to August 31, 2019; and

2) Approve and authorize execution of Agreement with Environmental Science Associates for on-call environmental analysis services with a termination date of August 31, 2019

9. REQUEST FOR PROPOSALS FOR CONROCK-WARNER TRANSFER TUBE DESIGN SERVICES

RECOMMENDATION: Authorize issuance of Request for Proposals for the Conrock-Warner Transfer Tube Project Design

10. REQUEST FOR PROPOSALS FOR CENTER LEVEE CORRUGATED METAL PIPE (CMP) TRANSFER PIPES REPAIR PROJECT DESIGN SERVICES

RECOMMENDATION: Authorize issuance of Request for Proposals for Center Levee CMP Transfer Pipes Repair Project Design Services

11. NOTIFICATION TO DEPARTMENT OF WATER RESOURCES (DWR) TO EXPLORE BULLETIN 118 BASIN BOUNDARY MODIFICATIONS

RECOMMENDATION: Authorize staff to notify DWR and local agencies of its decision to explore scientific boundary modifications to Bulletin 118, Basin 8-1, Coastal Plain of Orange County Groundwater Basin

CONSENT CALENDAR ITEMS RECOMMENDED FOR APPROVAL AT ADMINISTRATION AND FINANCE ISSUES MEETING HELD JANUARY 14 [ITEMS NO. 12 - 18]

12. MONTHLY CASH CONTROL REPORT

RECOMMENDATION: Receive and file Summary Cash and Cash Equivalents Control Report dated December 31, 2015

13. RENEWAL OF LICENSE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR GWRS SOUTHEAST BARRIER PIPELINE AND GREEN ACRES PROJECT PIPELINE

RECOMMENDATION: 1) Authorize renewal of SCE License Contract No. 9.4068 formerly Contract No. L2110 required for the Green Acres Project pipeline for a five-year period commencing February 1, 2016 for a total fee of $99,218; and

2) Authorize renewal of SCE License Contract No. 9.4172 formerly Contract No. L3272 required for the Southeast Barrier Pipeline for a five-year period commencing October 1, 2016 for a total fee of $59,835

14. LIMITED-TERM EMPLOYMENT AGREEMENT FOR ASSISTANT HYDROGEOLOGIST

RECOMMENDATION: Approve and authorize execution of Limited-Term Employment Agreement for Assistant Hydrogeologist Brendan Neel for a one-year period commencing January 21, 2016

15. INVESTMENT PORTFOLIO HOLDINGS REPORTS

RECOMMENDATION: Receive and file the Investment Portfolio Holdings Reports dated December 31, 2015

16. REVISED DISTRICT RESERVE POLICY

RECOMMENDATION: Adopt revised District Reserve Policy

17. AGREEMENT TO AUTOSCRIBE INFORMATICS FOR LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS) IMPLEMENTATION

RECOMMENDATION:

1) Authorize increase 2015/2016 Capital Improvement Budget line item C15001 by $221,000 to $721,000; and

2) Approve and authorize issuance of Agreement to Autoscribe Informatics for an amount not to exceed $621,494 for the acquisition of the Autoscribe Matrix Gemini Laboratory Information Management System software and related implementation services

18. BASIN PRODUCTION PERCENTAGE AND REPLENISHMENT ASSESSMENT ESTIMATES FOR FISCAL YEAR 2016-17

RECOMMENDATION: Provide the Fiscal Year 2016-17 Replenishment Assessment and Basin Production Percentage estimates to the Groundwater Producers along with any additional Board comments

MATTERS FOR CONSIDERATION – [Water Issues Committee Meeting]

19. PRADO BASIN SEDIMENT MANAGEMENT DEMONSTRATION PROJECT: CERTIFICATION OF ENVIRONMENTAL IMPACT REPORT AND APPROVAL OF PROJECT

RECOMMENDATION: Adopt Resolution approving the Prado Basin Sediment Management Demonstration Project which includes the following items:

- Certifying the Final Environmental Impact Report for the Project;
- Adopting the Findings of Fact and Statement of Overriding Consideration and the Mitigation Monitoring Reporting Program;
- Approve the Project and establish the Project budget of $3,898,000;
- Authorizing staff to complete the permitting process with the Army Corps of Engineers and the resource agencies, execute the permits received for the Project from the Army Corps of Engineers and the resource agencies, and prepare and implement the Habitat Management Program for the Project;

- Authorizing issuance of Notice Inviting Bids for sediment removal;
- Authorizing filing of Notice of Determination

20. LAGUNA BEACH COUNTY WATER DISTRICT AGREEMENT

RECOMMENDATION:
1) Approve and authorize execution of Agreement with the Laguna Beach County Water District to allow the extraction of 2,025 acre-feet of water from the OCWD basin; and

2) Authorize staff to file a California Environmental Quality Act Notice of Exemption

21. **INFORMATIONAL ITEMS**

A. MID-YEAR GROUNDWATER BASIN CONDITIONS UPDATE

B. WATER RESOURCES SUMMARY

C. POSTDOCTORAL RESEARCH ASSOCIATE FOR RESEARCH & DEVELOPMENT DEPARTMENT

D. SANTA ANA WATERSHED PROJECT AUTHORITY ACTIVITIES

E. GROUNDWATER PRODUCER MEETING MINUTES – JANUARY 13, 2016

F. COMMITTEE/CONFERENCE/MEETING REPORTS

1) January 07 – Communication and Legislative Liaison Committee (Chair Anthony)
January 11 – GWRS (Director Yoh)
January 12 - Water Issues Committee (Vice Chair Anthony)
January 13 – Administration and Finance Issues Committee (Chair Dewane)

2) Reports on Conferences/Meetings Attended at District Expense (at which a quorum of the Board was present)

22. **VERBAL REPORTS**

- PRESIDENT'S REPORT
- GENERAL MANAGER'S REPORT
- DIRECTORS' REPORTS
- GENERAL COUNSEL REPORT

ADJOURNMENT TO CLOSED SESSION

- **CONFERENCE WITH LABOR NEGOTIATORS**
  [Government Code Section 54957.6]
  OCWD designated representative: Stephanie Dosier
  ⊙ Employee Organization: Orange County Employee Association

RECONVENE IN OPEN SESSION

ADJOURNMENT

Agenda Posting: In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted in the main lobby of the Orange County Water District, 18700 Ward Street, Fountain Valley, CA and on the OCWD website: www.ocwd.com not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the Assistant District Secretary. Backup material for the Agenda is available at the District offices for public review and can be viewed online at the District's website: www.ocwd.com.

Accommodations to the Disabled: Pursuant to the Americans with Disabilities Act, persons with a disability who require a disability-related modification or accommodation in order to participate in a meeting, including auxiliary aids or services, may request such modification or accommodation from the District Secretary at (714)378-3233, by email at jdurant@ocwd.com by fax at (714) 378-3373. Notification 24 hours prior to the meeting will enable District staff to make reasonable arrangements to assure accessibility to the meeting.

Availability of Agenda Material: As a general rule, agenda reports or other written documentation that has been prepared or organized with respect to each item of business listed on the agenda can be reviewed at www.ocwd.com. Copies of these materials and other disclosable public records distributed to all or a majority of the members of the Board of Directors in connection with an open session agenda item are also on file with and available for inspection at the Office of the District Secretary, 18700 Ward Street, Fountain Valley, California, during regular business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday. If such writings are distributed to members of the Board of Directors on the day of a Board meeting, the writings will be available at the entrance to the Board of Directors meeting room at the Orange County Water District office.

AGENDA ITEM SUBMITTAL

Meeting Date: January 20, 2016

To: Board of Directors

From: Mike Markus

Staff Contact: K. Greene

Budgeted: N/A
Budgeted Amount:
Cost Estimate $7,473,635.45
Funding Source: N/A
Program/Line Item No. N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: APPROVAL OF CASH DISBURSEMENTS

SUMMARY

For the period December 31, 2015 through January 13, 2016 including manual checks and wire transfers, staff is presenting cash disbursements totaling $7,473,635.45 disbursed for each period as follows.

Accounts Payable:	
12/31/2015 to 01/06/2016	$ 1,981,428.89
01/07/2016 to 01/13/2016	$ 4,479,193.68
Payroll:	$ 1,013,012.88
Total Disbursements	$ 7,473,635.45

RECOMMENDATION

Ratify/Authorize payment of bills

PRIOR RELEVANT BOARD ACTION(S)

Semi-monthly

Orange County Water District

Check Register

Begin Date: 12/31/2015 **End Date:** 01/06/2016

Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
800916	01/06/2016	EVOQUA WATER TECHNOLOGIES LLC	Inv# 902412893		$26,147.88		
800916	01/06/2016	EVOQUA WATER TECHNOLOGIES LLC	Inv# 902412893	MF MEMBRANE REPLACEMENT	$566,281.36		
	Total for Check:	800916				$592,429.24	$686,822.25
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 9132911	LABORATORY SUPPLIES	$167.05		
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 9069768	LABORATORY SUPPLIES	$167.05		
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 9069767	LAB SUPPLIES	$3,908.30		
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 8988070	FIELD CLEANING ACTIVITIES	$117.86		
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 8908800	VIALS	$1,673.14		
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 8908799	FREIGHT	$135.87		
800917	01/06/2016	FISHER SCIENTIFIC CO.	Inv# 8908799	LABORATORY SUPPLIES	$924.37		
	Total for Check:	800917				$7,093.64	$87,899.09
800918	01/06/2016	IRON MOUNTAIN	Inv# MBL3477	IS/BOARD ADMINISTRATION	$2,262.91		
800918	01/06/2016	IRON MOUNTAIN	Inv# 200819916	IS/BOARD ADMINISTRATION	$393.95		
	Total for Check:	800918				$2,656.86	$20,583.18
800919	01/06/2016	SIGMA-ALDRICH INC.	Inv# 537670121		$16.20		
800919	01/06/2016	SIGMA-ALDRICH INC.	Inv# 537670121	SUPPLIES	$1,409.40		
	Total for Check:	800919				$1,425.60	$14,144.66
800920	01/06/2016	SPEX CERTIPREP, LLC	Inv# 312570	LABORATORY CHEMICALS	$70.40		
	Total for Check:	800920				$70.40	$12,379.20
800921	01/06/2016	WESTAIR GASES & EQUIPMENT	Inv# 10229781	Lab-nitrogen 6pk,helium 300	$486.27		
	Total for Check:	800921				$486.27	$43,926.65

Run Date: ***1/6/2016*** **$604,162.01**

Orange County Water District

Check Register

Begin Date: 12/31/2015 **End Date:** 01/06/2016

Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72338	01/06/2016	ACWA/JPIA	Inv# 0384303 JAN2016	HealthInsurance Jan16	$355,892.25		
	Total for Check:	72338				$355,892.25	$2,436,092.64
72339	01/06/2016	ALTERNATIVE HOSE, INC.	Inv# 5563381	RECHARGE OPERATIONS/WETLANDS	$98.12		
	Total for Check:	72339				$98.12	$665.28
72340	01/06/2016	AMERICAN WATER CHEMICAL, INC	Inv# 05-15737/01	12/23 antiscalant 40380 lbs	$63,800.40		
72340	01/06/2016	AMERICAN WATER CHEMICAL, INC	Inv# 05-15737/01	Discount	($1,276.01)		
	Total for Check:	72340				$62,524.39	$1,003,363.20
72341	01/06/2016	ANAHEIM HILLS PATROL	Inv# OC73052	Security Service	$3,692.00		
	Total for Check:	72341				$3,692.00	$22,096.50
72342	01/06/2016	ARAMARK UNIFORM SERVICES	Inv# 531148632	UNIFORM SERVICES	$228.65		
72342	01/06/2016	ARAMARK UNIFORM SERVICES	Inv# 531148632	UNIFORM SERVICES	$36.93		
72342	01/06/2016	ARAMARK UNIFORM SERVICES	Inv# 531148632	UNIFORM SERVICES	$1.50		
72342	01/06/2016	ARAMARK UNIFORM SERVICES	Inv# 531148632	UNIFORM SERVICES	$0.90		
72342	01/06/2016	ARAMARK UNIFORM SERVICES	Inv# 531183616	UNIFORM SERVICES	$166.01		
	Total for Check:	72342				$433.99	$26,247.82
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$52.50		
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$6.60		
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$37.67		
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$130.00		
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$189.50		
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$260.00		
72343	01/06/2016	ASSOCIATED TELECOM INC	Inv# 12476	Extend New FHQ Cables	$14.75		
	Total for Check:	72343				$691.02	$691.02
72344	01/06/2016	AT & T	Inv# 714 632-9206 118 5DEC15	DEC 14, 2015 - JAN 13, 2016	$175.50		
	Total for Check:	72344				$175.50	$11,746.91
72345	01/06/2016	AT & T	Inv# 951 273-9586 726 7JAN16	DEC 20 - JAN 19	$262.30		
	Total for Check:	72345				$262.30	$11,746.91
72346	01/06/2016	BATTERY SYSTEMS	Inv# 33591475	ROJEDA	$100.14		
72346	01/06/2016	BATTERY SYSTEMS	Inv# 3359928	BATTERY REPLACMENT	$669.84		
72346	01/06/2016	BATTERY SYSTEMS	Inv# 3359928	BATTERY REPLACMENT	$669.84		
	Total for Check:	72346				$1,439.82	$8,470.34
72347	01/06/2016	BRENNTAG PACIFIC INC.	Inv# BPI588363	12/29 citric acid 21.78 ton	$20,464.49		

Orange County Water District

Check Register

Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72347	01/06/2016	BRENNTAG PACIFIC INC.	Inv# BPI588363	Discount	($568.46)		
72347	01/06/2016	BRENNTAG PACIFIC INC.	Inv# BPI588569	12/30 hydro.peroxide 44960 lbs	$12,094.24		
72347	01/06/2016	BRENNTAG PACIFIC INC.	Inv# BPI588569	Discount	($241.88)		
	Total for Check:	72347				$31,748.39	$408,326.96
72348	01/06/2016	BURLINGTON SAFETY LABORATORY, INC.	Inv# 42691	Salisbury 8 CAL/CM2 Coverall K	$547.32		
72348	01/06/2016	BURLINGTON SAFETY LABORATORY, INC.	Inv# 42691		($6.55)		
72348	01/06/2016	BURLINGTON SAFETY LABORATORY, INC.	Inv# 42691		$27.00		
72348	01/06/2016	BURLINGTON SAFETY LABORATORY, INC.	Inv# 42691	Salisbury 8 CAL/CM2 Coverall K	$80.96		
	Total for Check:	72348				$648.73	$648.73
72349	01/06/2016	CALGON CARBON CORPORATION	Inv# 90009154	CARBON TREATMENT	$1,254.53		
72349	01/06/2016	CALGON CARBON CORPORATION	Inv# 90009154		$347.16		
	Total for Check:	72349				$1,601.69	$5,651.68
72350	01/06/2016	CALIFORNIA MARKETING GROUP	Inv# 66762	RE-ORDER OF OCWD FLASH DRIVES	$3,769.20		
72350	01/06/2016	CALIFORNIA MARKETING GROUP	Inv# 66762		$57.28		
	Total for Check:	72350				$3,826.48	$3,826.48
72351	01/06/2016	CDW-G	Inv# BLK0800	iPAD AIR 2	$2,300.40		
72351	01/06/2016	CDW-G	Inv# BLK0800	iPAD AIR 2	$25.53		
72351	01/06/2016	CDW-G	Inv# BLK0800	iPAD AIR 2	$9.00		
72351	01/06/2016	CDW-G	Inv# BLK1706	REPLACEMENT PRINTERS	$451.76		
	Total for Check:	72351				$2,786.69	$5,529.23
72352	01/06/2016	CITY OF CORONA	Inv# 29051949JAN.16	Water Usage Fees at Prado Dam	$415.17		
	Total for Check:	72352				$415.17	$1,315.16
72353	01/06/2016	CONSTELLATION NEW ENERGY INC.	Inv# CA-1873 (60693-0142)	ACCT#1-DUX-498	$1,293.70		
72353	01/06/2016	CONSTELLATION NEW ENERGY INC.	Inv# 0029638699	ACCT#1-DV1-927	$694,342.72		
	Total for Check:	72353				$695,636.42	$3,933,441.84
72354	01/06/2016	CS-AMSCO	Inv# 10806	PIPELINE AIRVAC REPL	$3,402.00		
72354	01/06/2016	CS-AMSCO	Inv# 10806		$65.11		
	Total for Check:	72354				$3,467.11	$17,529.46

Orange County Water District

Check Register

Begin Date: 12/31/2015 **End Date:** 01/06/2016

Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72355	01/06/2016	CUMMINS PACIFIC LLC	Inv# 008-20706	JLK FOR AUTO SHOP	$220.81		
72355	01/06/2016	CUMMINS PACIFIC LLC	Inv# 008-20706		$11.54		
	Total for Check:	72355				$232.35	$1,926.56
72356	01/06/2016	CWEA	Inv# ID#0000040441	REN. PAT LEWIS	$260.00		
	Total for Check:	72356				$260.00	$1,945.00
72357	01/06/2016	DEZURIK WATER CONTROLS	Inv# RPI/61018396	INVENTORY RE-ORDER	$758.16		
72357	01/06/2016	DEZURIK WATER CONTROLS	Inv# RPI/61019024	INVENTORY RE-ORDER	$6,995.17		
	Total for Check:	72357				$7,753.33	$15,506.66
72358	01/06/2016	Dosier, Bruce	Inv# DEC15 DSL REIMBURSEMENT	Dec15 DSL reimbursement	$71.98		
	Total for Check:	72358				$71.98	$656.82
72359	01/06/2016	ENS RESOURCES, INC.	Inv# 1738	Nov15 legis.support/D.C.	$5,532.50		
	Total for Check:	72359				$5,532.50	$39,887.51
72360	01/06/2016	EVANTEC LAB SUPPLY	Inv# 152002	LABORATORY CHEMICALS	$49.84		
72360	01/06/2016	EVANTEC LAB SUPPLY	Inv# 152002		$15.00		
	Total for Check:	72360				$64.84	$719.67
72361	01/06/2016	GE MOBILE WATER, INC.	Inv# 98028465	SERVICE AGREEMENT	$598.85		
	Total for Check:	72361				$598.85	$4,258.97
72362	01/06/2016	GRAINGER INC.	Inv# 9911440510	PAULA BOUYOUNES	$10.31		
72362	01/06/2016	GRAINGER INC.	Inv# 9911440510	PAULA BOUYOUNES	$16.20		
72362	01/06/2016	GRAINGER INC.	Inv# 9911440510	PAULA BOUYOUNES	$27.86		
72362	01/06/2016	GRAINGER INC.	Inv# 9902785832	SOAP DISPENSER	$39.61		
	Total for Check:	72362				$93.98	$65,436.13
72363	01/06/2016	HACH COMPANY	Inv# 9700252	LABORATORY SUPPLIES	$172.80		
72363	01/06/2016	HACH COMPANY	Inv# 9700252		$17.79		
72363	01/06/2016	HACH COMPANY	Inv# 9707643	EQUIP. SERVICE	$1,959.99		
	Total for Check:	72363				$2,150.58	$34,448.22
72364	01/06/2016	HERON INSTRUMENTS INC	Inv# 16707	WATER LEVEL TAPES	$859.00		
72364	01/06/2016	HERON INSTRUMENTS INC	Inv# 16707	WATER LEVEL TAPES	$714.00		
72364	01/06/2016	HERON INSTRUMENTS INC	Inv# 16707	WATER LEVEL TAPES	$90.00		
72364	01/06/2016	HERON INSTRUMENTS INC	Inv# 16707	Freight	$40.00		
	Total for Check:	72364				$1,703.00	$1,703.00

Orange County Water District

Check Register

Begin Date: 12/31/2015 **End Date:** 01/06/2016

Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72365	01/06/2016	HEWLETT-PACKARD FINANCIAL SERVICES CO	Inv# 60475673	NN	$1,396.52		
	Total for Check:	72365				$1,396.52	$10,098.86
72366	01/06/2016	HILMAN, PAUL	Inv# JANUARY 2016	RetireeCashMedical Jan16	$465.75		
	Total for Check:	72366				$465.75	$3,260.25
72367	01/06/2016	HOME DEPOT, INC.	Inv# 3123977	Refund Inv3152415	($23.05)		
72367	01/06/2016	HOME DEPOT, INC.	Inv# 5016166	VARIOUS	$26.57		
72367	01/06/2016	HOME DEPOT, INC.	Inv# 3152415	VARIOUS	$44.44		
72367	01/06/2016	HOME DEPOT, INC.	Inv# 1561431	VARIOUS	$14.01		
72367	01/06/2016	HOME DEPOT, INC.	Inv# 4035111	VARIOUS	$47.50		
	Total for Check:	72367				$109.47	$6,087.42
72368	01/06/2016	INDUSTRIAL SHOE COMPANY	Inv# I100-1045576	SAFETY & RISK MANAGEMENT	$150.00		
	Total for Check:	72368				$150.00	$1,329.84
72369	01/06/2016	INTERLOC SOLUTIONS, INC.	Inv# 5093	BRUCE DOSIER	$49,710.00		
	Total for Check:	72369				$49,710.00	$248,550.00
72370	01/06/2016	IRVINE PIPE & SUPPLY	Inv# 807992	WATER PRODUCTION/WATER QUALITY	$274.92		
72370	01/06/2016	IRVINE PIPE & SUPPLY	Inv# 807992	Frt	$6.43		
72370	01/06/2016	IRVINE PIPE & SUPPLY	Inv# 807992		($5.63)		
	Total for Check:	72370				$275.72	$112,642.96
72371	01/06/2016	LHOIST NORTH AMERICA	Inv# 1150236612	12/8 lime 25.12 ton	$4,856.95		
72371	01/06/2016	LHOIST NORTH AMERICA	Inv# 1150236854	12/10 lime 24.42 ton	$4,721.60		
72371	01/06/2016	LHOIST NORTH AMERICA	Inv# 1150237046	12/12 lime 25.09 ton	$4,851.15		
	Total for Check:	72371				$14,429.70	$356,367.23
72372	01/06/2016	LUCCI'S DELI BAKERY	Inv# 12083 BOARD MTG	Frt	$20.00		
72372	01/06/2016	LUCCI'S DELI BAKERY	Inv# 12083 BOARD MTG	VARIOUS	$143.41		
	Total for Check:	72372				$163.41	$5,839.36
72373	01/06/2016	MAIL DISPATCH, LLC	Inv# 143781	MailPickup/Delivery Jan16	$330.12		
	Total for Check:	72373				$330.12	$2,310.84
72374	01/06/2016	MARVAC ELECTRONICS	Inv# 75475222	Frt	$9.00		
72374	01/06/2016	MARVAC ELECTRONICS	Inv# 75475222	3.7 mm Plug-In Connector Molde	$101.25		
	Total for Check:	72374				$110.25	$110.25
72375	01/06/2016	MCFADDEN-DALE HARDWARE CO.	Inv# 221990/5	VARIOUS	$72.25		
	Total for Check:	72375				$72.25	$3,708.56

Orange County Water District

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Begin Date: 12/31/2015 **End Date:** 01/06/2016

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Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72376	01/06/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46104330	VARIOUS	$144.67		
72376	01/06/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46104330	Freight	$6.55		
	Total for Check:	72376				$151.22	$34,400.22
72377	01/06/2016	MWH AMERICAS, INC.	Inv# 1698862	5/2-6/5 Demo Mid-Basin Injecti	$2,174.94		
	Total for Check:	72377				$2,174.94	$2,174.94
72378	01/06/2016	McKeever, Justin A.	Inv# 12/15-17/15 TRAVEL Expo	12/15-17 L.V., NV Grndwtr	$303.55		
	Total for Check:	72378				$303.55	$303.55
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244120	WATER PRODUCTION	$15.72		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244120	Discount	($0.31)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244122	WATER PRODUCTION	$12.06		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244122	Discount	($0.24)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243798	Discount	($1.02)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244159	Discount	($0.70)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243171	WATER PRODUCTION	$26.97		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244162	CreditInv#242483	($139.32)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244159	WATER PRODUCTION	$34.80		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243798	WATER PRODUCTION	$51.03		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243793	Discount	($3.70)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243175	WATER PRODUCTION	$139.32		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243051	WATER PRODUCTION	$55.73		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 242483	WATER PRODUCTION	$139.32		

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Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 239574	CreditInv# 239058,239237	($376.43)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 238084	WATER PRODUCTION	$46.66		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244347	Discount	($1.50)		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 243793	WATER PRODUCTION	$184.98		
72380	01/06/2016	NAPA/ORANGE COUNTY AUTO PARTS	Inv# 244347	WATER PRODUCTION	$74.84		
	Total for Check:	72380				$258.21	$8,019.62
72381	01/06/2016	NATIONAL NOTARY ASSOCIATION	Inv# M#153399625 L.WIRTZ	Notary Insurance 2016 LW	$33.00		
	Total for Check:	72381				$33.00	$92.00
72382	01/06/2016	NOSSAMAN, LLP	Inv# 446958	Nov15 Desal state lobbying	$4,673.46		
	Total for Check:	72382				$4,673.46	$6,883.46
72383	01/06/2016	Nguyen, Viethuong T.	Inv# INTERNET REIMB JAN16 VTN	InternetReimb. Jan16	$35.99		
	Total for Check:	72383				$35.99	$255.66
72384	01/06/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4949019.001	Allen Bradley Factory Talk Vie	$1,055.16		
72384	01/06/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4949019.001	Frt	$17.50		
72384	01/06/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4981795.001	Fluke Multimeter FM 87-5/E2 Ki	$595.18		
72384	01/06/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4981795.001	Freight	$9.18		
72384	01/06/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4981795.001	Discount	($5.51)		
	Total for Check:	72384				$1,671.51	$66,699.98
72385	01/06/2016	ORVAC ELECTRONICS	Inv# 184619	RECHARGE OPERATIONS	$93.36		
	Total for Check:	72385				$93.36	$221.93
72386	01/06/2016	OSTERBAUER COMPRESSOR SERVICE	Inv# 10015008	BELTS	$237.04		
72386	01/06/2016	OSTERBAUER COMPRESSOR SERVICE	Inv# 10015008	Frt	$19.43		
	Total for Check:	72386				$256.47	$7,711.79
72387	01/06/2016	PENDERGRAFT, REX	Inv# JANUARY 2016	RetireeCashMedical Jan16	$465.75		
	Total for Check:	72387				$465.75	$3,260.25
72388	01/06/2016	PENTAIR VALVES & CONTROLS US LP	Inv# 4939006-00	ACTUATOR MANUAL	$719.28		

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Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72388	01/06/2016	PENTAIR VALVES & CONTROLS US LP	Inv# 4939006-00	Freight	$15.50		
	Total for Check:	72388				$734.78	$4,044.22
72389	01/06/2016	PERKINELMER HEALTH SCIENCES, INC.	Inv# 5303552647	LABORATORY SUPPLIES	$111.24		
72389	01/06/2016	PERKINELMER HEALTH SCIENCES, INC.	Inv# 5303552647	Freight	$16.00		
	Total for Check:	72389				$127.24	$65,960.36
72390	01/06/2016	PIKE, JAMES EDWIN	Inv# 214	12/1-22 Prado vireo study	$2,085.00		
	Total for Check:	72390				$2,085.00	$25,777.50
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512065	Fabricate #3 RO Pilot System -	$267.84		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512065	Fabricate #3 RO Pilot System -	$233.28		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512065	Fabricate #3 RO Pilot System -	$233.28		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512065	Freight	$9.18		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512085	Fabricate #3 RO Pilot System -	$155.52		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512085	Freight	$7.62		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512086	Fabricate #3 RO Pilot System -	$407.17		
72391	01/06/2016	PRECISION INSTRUMENTATION CO.	Inv# 201512086	Freight	$12.41		
	Total for Check:	72391				$1,326.30	$1,653.93
72392	01/06/2016	PSOMAS	Inv# 113413	10/30-11/26 LaPalma archaeolo	$2,133.68		
	Total for Check:	72392				$2,133.68	$2,349.93
72393	01/06/2016	QUINN COMPANY	Inv# PC830326924	SAMPLING KIT	$810.00		
	Total for Check:	72393				$810.00	$41,410.19
72394	01/06/2016	RED WING SHOES	Inv# 4170000009077	RISK MANAGEMENT & SAFETY	$142.56		
	Total for Check:	72394				$142.56	$7,393.59
72395	01/06/2016	RESTEK CORPORATION	Inv# 1308735	LABORATORY CHEMICALS	$542.38		
72395	01/06/2016	RESTEK CORPORATION	Inv# 1308735		$4.32		
	Total for Check:	72395				$546.70	$11,244.85

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Check No.	Date	Vendor Name	Invoice #	Purpose		Invoice Amount	Check Amount	YTD
72396	01/06/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501700	LABOR 12/7-12/11/15		$1,872.00		
72396	01/06/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501700	DISCOUNT		($37.44)		
72396	01/06/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501747	LABOR 12/21-12/23/15		$1,152.00		
72396	01/06/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501747	DISCOUNT		($23.04)		
72396	01/06/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501750	LABOR 12/14-12/18/15		$1,920.00		
72396	01/06/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501750	DISCOUNT		($38.40)		
	Total for Check:	72396					$4,845.12	$41,195.28
72397	01/06/2016	SC FUELS	Inv# 0488961-IN	RECHARGE OPERATIONS/WETLANDS		$1,601.03		
72397	01/06/2016	SC FUELS	Inv# 0488961-IN			($13.68)		
	Total for Check:	72397					$1,587.35	$39,712.26
72398	01/06/2016	SCOTT A. SOMMER, ESQ.	Inv# TAKATA NOV15 (NBGPP NCP) NCP compliance		Nov15 NBGPP	$280.00		
	Total for Check:	72398					$280.00	$18,678.17
72399	01/06/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-026-3567-06DEC15	11/30-12/29/15 KWH 2602		$326.79		
72399	01/06/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-023-7877-22DEC15	11/30-12/29/15 KWH 402		$81.76		
72399	01/06/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-023-7877-42DEC15	11/30-12/29/15 KWH 162		$47.48		
	Total for Check:	72399					$456.03	$2,738,758.39
72400	01/06/2016	STAPLES	Inv# 3286836848	OFFICE SUPPLIES		$154.43		
72400	01/06/2016	STAPLES	Inv# 3286836852	OFFICE SUPPLIES		$183.59		
72400	01/06/2016	STAPLES	Inv# 3286836852	OFFICE SUPPLIES		$97.72		
72400	01/06/2016	STAPLES	Inv# 3286836852	OFFICE SUPPLIES		$59.18		
72400	01/06/2016	STAPLES	Inv# 3286836852	OFFICE SUPPLIES		$37.79		
72400	01/06/2016	STAPLES	Inv# 3286836852	OFFICE SUPPLIES		$5.24		
72400	01/06/2016	STAPLES	Inv# 3287133568	OFFICE SUPPLIES		$11.84		
	Total for Check:	72400					$549.79	$20,386.92
72401	01/06/2016	SUNSET INDUSTRIAL PARTS	Inv# 652772-5H	HOSE - EMERGENCY		$296.35		
72401	01/06/2016	SUNSET INDUSTRIAL PARTS	Inv# 652772-5H			($5.93)		
	Total for Check:	72401					$290.42	$1,395.39
72402	01/06/2016	Smith, Benjamin	Inv# 12/8/15 MBI TRAVEL	12/8 Santa Ana MBI Meeting		$3.00		

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72402	01/06/2016	Smith, Benjamin	Inv# 12/26/15 CELL PHONE EXP exp reimb	12/26/15 cell phone	$40.00		
	Total for Check:	72402				$43.00	$357.30
72403	01/06/2016	T.D. WILLIAMSON, INC.	Inv# JC209429		$12.68		
72403	01/06/2016	T.D. WILLIAMSON, INC.	Inv# JC209429	CLEANING TOOL	$832.69		
	Total for Check:	72403				$845.37	$845.37
72404	01/06/2016	TCI AMERICA	Inv# 100352927	LABORATORY CHEMICALS	$88.56		
72404	01/06/2016	TCI AMERICA	Inv# 100352927		$15.12		
	Total for Check:	72404				$103.68	$103.68
72405	01/06/2016	TIME WARNER COMMUNICATIONS	Inv# 8448 40 0080400190JAN16	CMF FOR IS	$1,625.00		
	Total for Check:	72405				$1,625.00	$12,033.49
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$85.05		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$15.12		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$22.68		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$22.68		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$70.87		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$106.30		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$188.89		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$198.72		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$507.71		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$507.71		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$1,015.42		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160	TRAFFIC CONTROL FOR SAMPLING	$115.56		
72407	01/06/2016	TRAFFIC MANAGEMENT INC	Inv# 267160		$27.00		
	Total for Check:	72407				$2,883.71	$2,883.71
72408	01/06/2016	TRI-TEK BURGLAR ALARM CO.	Inv# 112835	RISK MANAGEMENT/WETLAND	$606.00		
	Total for Check:	72408				$606.00	$1,554.00
72409	01/06/2016	TRUCPARCO	Inv# 361406	WP/RECH/PRADO/NATRES	$4.14		
72409	01/06/2016	TRUCPARCO	Inv# 361397		$1.08		
72409	01/06/2016	TRUCPARCO	Inv# 361397	WP/RECH/PRADO/NATRES	$5.63		
72409	01/06/2016	TRUCPARCO	Inv# 361351		$1.08		
72409	01/06/2016	TRUCPARCO	Inv# 361351	BRAKE CLEANER	$51.71		
72409	01/06/2016	TRUCPARCO	Inv# 361328	WP/RECH/PRADO/NATRES	$55.25		

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72409	01/06/2016	TRUCPARCO	Inv# 361328		$1.08		
	Total for Check:	72409				$119.97	$14,828.81
72410	01/06/2016	Tan, Lo	Inv# 12/1/15 PROP 84 TRAVEL Mgmt Me	12/1 Riverside Prop 84	$44.85		
72410	01/06/2016	Tan, Lo	Inv# 12/17/15 SAWPA TRAVEL Agmt 22	12/17 Riverside SAWPA	$36.23		
	Total for Check:	72410				$81.08	$573.91
72411	01/06/2016	U-LINE	Inv# 72889667	LABORATORY SUPPLIES	$81.01		
72411	01/06/2016	U-LINE	Inv# 72889667		$9.60		
	Total for Check:	72411				$90.61	$1,387.77
72412	01/06/2016	ULTRA SCIENTIFIC INC.	Inv# 364612	LABORATORY CHEMICALS	$90.60		
72412	01/06/2016	ULTRA SCIENTIFIC INC.	Inv# 364657	LABORATORY CHEMICALS	$655.60		
	Total for Check:	72412				$746.20	$11,343.93
72413	01/06/2016	UNITED PARCEL SERVICE	Inv# 0000X81601515		$60.94		
	Total for Check:	72413				$60.94	$2,077.13
72414	01/06/2016	UTILIQUEST LLC	Inv# 229023-Q 9908	11/29-12/5 screen/mark pipes	$66.44		
72414	01/06/2016	UTILIQUEST LLC	Inv# 229023-Q 9911	11/29-12/5 screen/mark pipes	$929.17		
72414	01/06/2016	UTILIQUEST LLC	Inv# 229023-Q 9922	11/29-12/5 screen/mark pipes	$542.02		
72414	01/06/2016	UTILIQUEST LLC	Inv# 229023-Q 9932	11/29-12/5 screen/mark pipes	$10.99		
	Total for Check:	72414				$1,548.62	$42,779.65
72415	01/06/2016	VERIZON CALIFORNIA	Inv# 714 965-1308 070823JAN16 012834117636406606	12/22-1/21	$155.18		
	Total for Check:	72415				$155.18	$7,689.35
72416	01/06/2016	VWR INTERNATIONAL, INC.	Inv# 8043483155		($0.32)		
72416	01/06/2016	VWR INTERNATIONAL, INC.	Inv# 8043483155	LABORATORY SUPPLIES	$31.64		
	Total for Check:	72416				$31.32	$111,298.08
72417	01/06/2016	WILMINGTON INSTRUMENTS	Inv# 0086504-IN	Martel Hand Pump Kit - I&E Cal	$750.61		
	Total for Check:	72417				$750.61	$2,005.72
72418	01/06/2016	XEROX CORPORATION	Inv# 082549501	ENGINEERING	$38.00		
	Total for Check:	72418				$38.00	$5,939.06
72419	01/06/2016	ZCATER	Inv# 46937	VARIOUS	$122.96		
72419	01/06/2016	ZCATER	Inv# 46937	VARIOUS	$19.49		
72419	01/06/2016	ZCATER	Inv# 46937		$10.00		

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Begin Date: 12/31/2015 **End Date:** 01/06/2016

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Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
	Total for Check:	72419				$152.45	$2,024.41
975809	12/30/2015	WELLS FARGO BANK	Inv# JANUARY 4, 2016 DPR#1 WFZBA	Jan.4,16 DPR#01	$12,666.42		
	Total for Check:	975809				$12,666.42	$10,315,863.48
975810	12/30/2015	PRUDENTIAL RETIREMENT SERVICE	Inv# JANUARY 4, 2016 DPR#1	Jan.4,16 DPR#01 401a	$4,452.69		
	Total for Check:	975810				$4,452.69	$2,746,028.44
975811	12/30/2015	PRUDENTIAL RETIRMENT	Inv# JANUARY 4, 2016 DPR#1	Jan.4,16 DPR#01 457b	$5,570.14		
	Total for Check:	975811				$5,570.14	$696,565.10
975812	01/05/2016	UNION BANK OF CALIFORNIA, N.A.	Inv# JANUARY 05,2016 COP2003A TRUST	OCWD 2003A	$1,244.31		
	Total for Check:	975812				$1,244.31	$5,108,203.65
975813	01/05/2016	CITIGROUP GLOBAL MARKETS	Inv# JANUARY 5,2016 SERIES 200 REMKT.FEE	COP 2003A	$24,540.37		
	Total for Check:	975813				$24,540.37	$82,609.53
975814	01/06/2016	CITIBANK NA NEW YORK, ABA	Inv# JANUARY 6,2016	OCWD2007B SWAP PYMT.	$64,553.36		
	Total for Check:	975814				$64,553.36	$1,304,203.21
975815	01/05/2016	WELLS FARGO BANK	Inv# JANUARY 6, 2016 PR#1	Jan.6,2016 PR#1 WFZBA	$736,035.16		
	Total for Check:	975815				$736,035.16	$10,315,863.48
975816	01/05/2016	PRUDENTIAL RETIREMENT SERVICE	Inv# JANUARY 6, 2016 PR#1	Jan.6,2016 PR#1 401a	$199,301.60		
	Total for Check:	975816				$199,301.60	$2,746,028.44
975817	01/05/2016	PRUDENTIAL RETIRMENT	Inv# JANUARY 6, 2016 PR#1	Jan.6,2105 PR#1 457b	$54,986.87		
	Total for Check:	975817				$54,986.8	
Run Date:	*1/6/2016*				**$2,390,279.76**		

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12,666.42-
4,452.69-
5,570.14-
736,035.16-
199,301.60-
54,986.87-
-005
1,981,428.89*

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Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
800922	01/13/2016	SIGMA-ALDRICH INC.	Inv# 537694648	LABORATORY CHEMICALS	$1,404.00		
800922	01/13/2016	SIGMA-ALDRICH INC.	Inv# 537694648		$37.32		
800922	01/13/2016	SIGMA-ALDRICH INC.	Inv# 537731798	LABORATORY CHEMICALS	$1,378.94		
800922	01/13/2016	SIGMA-ALDRICH INC.	Inv# 537731798		$25.00		
800922	01/13/2016	SIGMA-ALDRICH INC.	Inv# 537731798		$16.36		
800922	01/13/2016	SIGMA-ALDRICH, INC.	Inv# 537694647	LABORATORY CHEMICALS	$89.10		
800922	01/13/2016	SIGMA-ALDRICH, INC.	Inv# 537694647		$13.01		
800922	01/13/2016	SIGMA-ALDRICH INC.	Inv# 537066491		$12.66		
	Total for Check:	800922				$2,976.39	$17,121.05
800923	01/13/2016	FEDERAL EXPRESS CORPORATION	Inv# 5-245-03296	Package Delivery	$186.77		
	Total for Check:	800923				$186.77	$7,005.16
800924	01/13/2016	FISHER SCIENTIFIC CO.	Inv# 9193218	LABORATORY SUPPLIES	$204.90		
	Total for Check:	800924				$204.90	$88,103.99
800925	01/13/2016	FOODCRAFT COFFEE SERVICE	Inv# 515111762	GENERAL ADMINISTRATION	$742.31		
800925	01/13/2016	FOODCRAFT COFFEE SERVICE	Inv# 515121550	GENERAL ADMINISTRATION	$16.63		
800925	01/13/2016	FOODCRAFT COFFEE SERVICE	Inv# 515101903	GENERAL ADMINISTRATION	$177.48		
	Total for Check:	800925				$936.42	$6,325.58
800926	01/13/2016	SPEX CERTIPREP, LLC	Inv# 313174	LJ for MF	$396.80		
	Total for Check:	800926				$396.80	$12,776.00
800927	01/13/2016	THERMO ELECTRON NORTH AMERICA LLC	Inv# 9020574911	LABORATORY SUPPLIES	$1,253.88		
800927	01/13/2016	THERMO ELECTRON NORTH AMERICA LLC	Inv# 9020574911	LABORATORY SUPPLIES	$265.68		
800927	01/13/2016	THERMO ELECTRON NORTH AMERICA LLC	Inv# 9020574911	LABORATORY SUPPLIES	$123.12		
800927	01/13/2016	THERMO ELECTRON NORTH AMERICA LLC	Inv# 9020574911		$10.00		
	Total for Check:	800927				$1,652.68	$6,647.68
800928	01/13/2016	WESTAIR GASES & EQUIPMENT	Inv# 10233324	Lab-nitrogen 6pk, HE 6pk	$1,802.52		
	Total for Check:	800928				$1,802.52	$45,729.17

Run Date: ***1/13/2016*** **$8,156.48**

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Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72420	01/13/2016	AMERICAN GEOTECHNICAL, INC.	Inv# 75783	9/27-11/28 La Palma Recharge	$447.50		
	Total for Check:	72420				$447.50	$447.50
72421	01/13/2016	A-Z GOLF CART SPECIALISTS INC	Inv# 4372	E-07 NEW SEAT	$144.97		
	Total for Check:	72421				$144.97	$902.77
72422	01/13/2016	ACCUSTANDARD, INC.	Inv# 832886	LABORATORY CHEMICALS	$445.00		
72422	01/13/2016	ACCUSTANDARD, INC.	Inv# 832886	LABORATORY CHEMICALS	$120.00		
72422	01/13/2016	ACCUSTANDARD, INC.	Inv# 832886	LABORATORY CHEMICALS	$80.00		
72422	01/13/2016	ACCUSTANDARD, INC.	Inv# 832886		$65.70		
72422	01/13/2016	ACCUSTANDARD, INC.	Inv# 832886		$7.00		
	Total for Check:	72422				$717.70	$11,707.76
72423	01/13/2016	ACEC CA	Inv# 2016 CEQA GUIDELINE BOOK	DAN BOTT	$31.63		
	Total for Check:	72423				$31.63	$31.63
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$26.27		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801		$9.43		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$54.00		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$71.93		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$129.82		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$140.75		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$190.38		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$459.65		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$470.02		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$815.62		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110488876		$8.64		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110488876	SUPPLIES	$42.27		
72425	01/13/2016	AGILENT TECHNOLOGIES, INC.	Inv# 110542801	LABORATORY SUPPLIES	$169.26		
	Total for Check:	72425				$2,588.04	$221,482.64
72426	01/13/2016	AKM CONSULTING ENGINEERS, INC.	Inv# 0008475	11/2-27 constr.mgmt/Imp.Head	$3,422.44		
72426	01/13/2016	AKM CONSULTING ENGINEERS, INC.	Inv# 0008475	11/2-27 contr.mgmt/Imp.Headgat	$12,242.56		
	Total for Check:	72426				$15,665.00	$243,469.44
72427	01/13/2016	AMERICAN MEMBRANE TECHNOLOGY ASSOC.	Inv# 9604-195	2016 MEM.REN.M.PATEL	$725.00		

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ıeck No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
	Total for Check:	72427				$725.00	$725.00
72428	01/13/2016	APPLIED INDUSTRIAL TECHNOLOGY	Inv# 7006773851		$22.06		
72428	01/13/2016	APPLIED INDUSTRIAL TECHNOLOGY	Inv# 7006773851	INVENTORY RE-ORDER	$624.08		
	Total for Check:	72428				$646.14	$1,252.47
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183617	UNIFORM SERVICES	$0.75		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 1447611123	UNIFORM SERVICES	$28.51		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531200911	UNIFORM SERVICES	$218.80		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531200911	UNIFORM SERVICES	$0.90		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531200908	UNIFORM SERVICES	$167.90		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183619	UNIFORM SERVICES	$0.90		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183619	UNIFORM SERVICES	$218.80		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183617	UNIFORM SERVICES	$324.12		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183615	UNIFORM SERVICES	$0.90		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183615	UNIFORM SERVICES	$1.50		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183615	UNIFORM SERVICES	$36.93		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 1447623088	UNIFORM SERVICES	$28.51		
72430	01/13/2016	ARAMARK UNIFORM SERVICES	Inv# 531183615	UNIFORM SERVICES	$232.15		
	Total for Check:	72430				$1,260.67	$27,508.49
72431	01/13/2016	ASBURY ENVIRONMENTAL SERVICES	Inv# 130556678	BPO USED OIL/ANTIFREEZE P/U	$55.00		
	Total for Check:	72431				$55.00	$255.00
72432	01/13/2016	AT & T	Inv# 714 630 3232DEC15	050 899 3675 001 DEC15	$38.06		
	Total for Check:	72432				$38.06	$263.19
72433	01/13/2016	AT & T	Inv# 714 639-9855 405 3JAN16	DEC 26 - JAN 25	$88.47		
	Total for Check:	72433				$88.47	$11,835.38
72434	01/13/2016	BENRICH SERVICE COMPANY, INC.	Inv# MOC11685	PDOPLITO	$150.00		
	Total for Check:	72434				$150.00	$1,200.00
72435	01/13/2016	BLACK & VEATCH CORPORATION	Inv# 1215028	Thru 12.4 design/GWRSIE	$24,378.75		
	Total for Check:	72435				$24,378.75	$388,672.28
72436	01/13/2016	BONTERRA PSOMAS (USE IF EXISTING PROJ.)	Inv# 113447 (WO#5)	10/30-11/26 wo#5 Fletcher B.lm	$951.17		

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Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72436	01/13/2016	BONTERRA PSOMAS (USE IF EXISTING PROJ.)	Inv# 113447A (WO#5)	10/30-11/26 wo#5 Fletcher Basi	$1,011.33		
	Total for Check:	72436				$1,962.50	$71,818.09
72437	01/13/2016	BOOT BARN	Inv# IVC0073785	RISK MANAGEMENT & SAFETY	$126.35		
	Total for Check:	72437				$126.35	$2,514.91
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI589205	12/30 caustic soda 11.938 ton	$5,930.80		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI590894	Discount	($594.82)		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI590894	1/8 citric acid 22.79 ton	$21,413.49		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI589975	Discount	($611.78)		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI589205	Discount	($109.83)		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI588980	Discount	($555.41)		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI588980	12/31 citric acid 21.28 ton	$19,994.69		
72438	01/13/2016	BRENNTAG PACIFIC INC.	Inv# BPI589975	1/5 citric acid 23.44 ton	$22,024.22		
	Total for Check:	72438				$67,491.36	$475,818.32
72439	01/13/2016	BUTIER ENGINEERING, INC.	Inv# AGMT #0370 #70	Nov15 Fletcher Basin/constr.mg	$24,570.51		
72439	01/13/2016	BUTIER ENGINEERING, INC.	Inv# AGMT #0370 #70	Nov15 Fletcher Basin/constr.mg	$3,239.49		
72439	01/13/2016	BUTIER ENGINEERING, INC.	Inv# AGMT #0982 #15	Nov15 B.P.Stn Ph2-const.mgmt	$53,426.85		
	Total for Check:	72439				$81,236.85	$509,437.89
72440	01/13/2016	CAL BUILDING SERVICES, INC.	Inv# SC4142	ANNUAL FIRE ALARM TESTING	$3,449.00		
	Total for Check:	72440				$3,449.00	$48,878.00
72441	01/13/2016	CALIFORNIA CENTRIFUGAL PUMP INC.	Inv# 215-1053-1	BACKWASH WASTE PUMP B03 RPR	$11,601.70		
72441	01/13/2016	CALIFORNIA CENTRIFUGAL PUMP INC.	Inv# 215-1053-1		($116.02)		
	Total for Check:	72441				$11,485.68	$96,940.03
72442	01/13/2016	CALIFORNIA GEOLOGICAL SURVEY	Inv# 2010 FAULT ACTIVITY MAP FAULT ACT.	MAP OF CALIF.2010	$33.00		
	Total for Check:	72442				$33.00	$33.00
72443	01/13/2016	CALIFORNIA GROUNDWATER COALITION	Inv# 2016CAT.3 MEM.DUES	MEMBERSHIP DUES	$9,500.00		
	Total for Check:	72443				$9,500.00	$9,500.00
72444	01/13/2016	CALIFORNIA NATIVE PLANT SOCIETY	Inv# 2016 MEM.RENEWAL	R. ZEMBAL	$45.00		
	Total for Check:	72444				$45.00	$45.00

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Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72445	01/13/2016	CERIDIAN EMPLOYER SERVICES	Inv# 35889386	P26 VUZ-wage attachment	$867.47		
72445	01/13/2016	CERIDIAN EMPLOYER SERVICES	Inv# 35889908	P12 VVY-HR special request	$200.00		
72445	01/13/2016	CERIDIAN EMPLOYER SERVICES	Inv# 35890150	P26 year end solution	$1,087.32		
72445	01/13/2016	CERIDIAN EMPLOYER SERVICES	Inv# 700060857	12/17/15 WFM time & labor	$711.00		
	Total for Check:	72445				$2,865.79	$28,624.69
72446	01/13/2016	CITY OF HUNTINGTON BEACH	Inv# 1381819-7693282DEC15 H.BCH	18461 PATTERSON	$34.47		
	Total for Check:	72446				$34.47	$172.45
72447	01/13/2016	CITY OF ORANGE	Inv# 00030145-00DEC15	821 N. PROSPECT ST.	$98.78		
72447	01/13/2016	CITY OF ORANGE	Inv# 00038354-00DEC15	3837 E. BOND AVE LDS	$328.07		
	Total for Check:	72447				$426.85	$2,877.90
72448	01/13/2016	CLIMATEC LLC	Inv# LV 32512		$21.00		
72448	01/13/2016	CLIMATEC LLC	Inv# LV 32512	DEVICE CIRCUIT	$2,411.53		
	Total for Check:	72448				$2,432.53	$6,635.40
72449	01/13/2016	CONNOR, FLETCHER & HEDENKAMP LLC	Inv# 12932 (NORTH BASIN APPEAL Appeal/legal	Nov15 No.Basin	$90.00		
72449	01/13/2016	CONNOR, FLETCHER & HEDENKAMP LLC	Inv# 12946 (ARNOLD COST APPEAL Cost Appeal/legal	Nov15 Arnold	$510.00		
	Total for Check:	72449				$600.00	$471,320.78
72450	01/13/2016	CORNELL LAB OF ORNITHOLOGY	Inv# 2016 MEM.RENEWAL	R. ZEMBAL	$44.00		
	Total for Check:	72450				$44.00	$88.00
72451	01/13/2016	CORPORATE IMAGE MAINTENANCE	Inv# 35236	JANICE KOVACEVIC	$9,300.00		
72451	01/13/2016	CORPORATE IMAGE MAINTENANCE	Inv# 35252	MAINT FLOOR WAXING	$620.00		
	Total for Check:	72451				$9,920.00	$48,093.00
72452	01/13/2016	COSTCO	Inv# 605645	KITCHEN/JANITORIAL SUPPLIES	$144.13		
72452	01/13/2016	COSTCO	Inv# 605645	KITCHEN/JANITORIAL SUPPLIES	$20.47		
72452	01/13/2016	COSTCO	Inv# 605645	KITCHEN/JANITORIAL SUPPLIES	$65.39		
72452	01/13/2016	COSTCO	Inv# 593443	SUPPLIES	$273.81		
72452	01/13/2016	COSTCO	Inv# 605645	KITCHEN/JANITORIAL SUPPLIES	$602.10		
72452	01/13/2016	COSTCO	Inv# 605645	KITCHEN/JANITORIAL SUPPLIES	$256.82		
	Total for Check:	72452				$1,362.72	$12,384.04
72453	01/13/2016	CWEA	Inv# ID#0000143341	JOAQUIN M.FERREYRA	$164.00		

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ıeck No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
	Total for Check:	72453				$164.00	$2,273.00
72454	01/13/2016	CWEA	Inv# ID#0000300321	JAMES W. PENNELLA	$164.00		
	Total for Check:	72454				$164.00	$2,273.00
72455	01/13/2016	Castro, Manuel	Inv# 2015-2016-03	Education Reimb MHC	$237.66		
	Total for Check:	72455				$237.66	$511.50
72456	01/13/2016	DAVID WILSON'S VILLA FORD	Inv# 399873	RECHARGE OPERATIONS/WETLANDS	$296.23		
	Total for Check:	72456				$296.23	$2,232.32
72457	01/13/2016	DELL MARKETING L.P.	Inv# XJYW5KFT8	MONITOR	$4.00		
72457	01/13/2016	DELL MARKETING L.P.	Inv# XJYW5KFT8	MONITOR	$213.61		
	Total for Check:	72457				$217.61	$1,305.68
72458	01/13/2016	DONALD PHIPPS	Inv# 6	Nov15 consulting/R&D	$310.00		
	Total for Check:	72458				$310.00	$5,013.33
72459	01/13/2016	Dunkin, Alicia	Inv# 11/12/15 TRAVEL	11/12 SACTO Governor's Off.Vis	$106.00		
72459	01/13/2016	Dunkin, Alicia	Inv# 12/2-4/15 ACWA TRAVEL	12/2-4 Indian Wells ACWA Conf	$83.07		
72459	01/13/2016	Dunkin, Alicia	Inv# 7/10/15 TRAVEL2	7/10 Carlsbad Legis.Posei.Tour	$63.25		
72459	01/13/2016	Dunkin, Alicia	Inv# 8/14/15 ACWA REGION 10 TR	8/14 Carlsbad ACWA Region 10	$63.25		
72459	01/13/2016	Dunkin, Alicia	Inv# 8/20/15 TRAVEL2	8/20 Santa Ana OC PA legislati	$9.20		
72459	01/13/2016	Dunkin, Alicia	Inv# 8/28/15 TRAV'L MEAL DEDUC	8/28 SACTO ACWA-meal deduct	($17.36)		
72459	01/13/2016	Dunkin, Alicia	Inv# 10/29/15 TRAVEL	10/29 L.A. SO.CA Water Cte Mtg	$56.80		
	Total for Check:	72459				$364.21	$772.28
72460	01/13/2016	ELECTRONIC DATA SOLUTIONS	Inv# 18929	Lincoln Basin Percolation Test	$1,292.54		
72460	01/13/2016	ELECTRONIC DATA SOLUTIONS	Inv# 18929	Lincoln Basin Percolation Test	$48.60		
72460	01/13/2016	ELECTRONIC DATA SOLUTIONS	Inv# 18929	Lincoln Basin Percolation Test	$772.74		
	Total for Check:	72460				$2,113.88	$7,668.98
72461	01/13/2016	EMD MILLIPORE CORP	Inv# 3651877692	LABORATORY SUPPLIES	$57.65		
72461	01/13/2016	EMD MILLIPORE CORP	Inv# 3651877692		$12.83		
	Total for Check:	72461				$70.48	$3,375.14
72462	01/13/2016	ENVIRO SUPPLY & SERVICE, INC.	Inv# 1-531493	REPLACE METER AT PRADO	$424.44		
72462	01/13/2016	ENVIRO SUPPLY & SERVICE, INC.	Inv# 1-531493		$15.00		
	Total for Check:	72462				$439.44	$439.44

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72463	01/13/2016	ENVIRONMENTAL TRAINING AND	Inv# 35758	SAFETY & RISK MANAGEMENT	$1,100.00		
	Total for Check:	72463				$1,100.00	$1,730.00
72464	01/13/2016	FOUNTAIN VALLEY, CITY OF	Inv# 8157-238500-03DEC15 USEAGE 83.12	10/26-12/19/2015	$183.56		
72464	01/13/2016	FOUNTAIN VALLEY, CITY OF	Inv# 8166-100000-01DEC15 6,719.05	10/26-12/19/15USEAGE	$3,037.30		
72464	01/13/2016	FOUNTAIN VALLEY, CITY OF	Inv# 8157-238000-13DEC.15 180.10	10/26-12/19/15USAGE	$411.96		
72464	01/13/2016	FOUNTAIN VALLEY, CITY OF	Inv# 8166-300500-01DEC15 USEAGE12,897.8	10/26-12/19/15	$652.68		
	Total for Check:	72464				$4,285.50	$14,831.16
72465	01/13/2016	GRAINGER INC.	Inv# 9904726941	CABLES/CONNECTOR/PLUG	$270.12		
72465	01/13/2016	GRAINGER INC.	Inv# 9904726958	CABLES/CONNECTOR/PLUG	$52.05		
72465	01/13/2016	GRAINGER INC.	Inv# 9904726958	CABLES/CONNECTOR/PLUG	$15.55		
72465	01/13/2016	GRAINGER INC.	Inv# 9905035466	SPENT CARBON SHIPPING	$1,369.70		
	Total for Check:	72465				$1,707.42	$67,143.55
72466	01/13/2016	HACH COMPANY	Inv# 9720061	LABORATORY SUPPLIES	$190.08		
72466	01/13/2016	HACH COMPANY	Inv# 9720061	Freight	$17.79		
	Total for Check:	72466				$207.87	$34,656.09
72467	01/13/2016	HALDEMAN INC.	Inv# I063294	Exhaust Fan Repair	$21.60		
72467	01/13/2016	HALDEMAN INC.	Inv# I063294	Freight	$7.60		
72467	01/13/2016	HALDEMAN INC.	Inv# I063294	Exhaust Fan Repair	$23.76		
72467	01/13/2016	HALDEMAN INC.	Inv# I063294	Exhaust Fan Repair	$21.60		
	Total for Check:	72467				$74.56	$555.32
72468	01/13/2016	HARGIS + ASSOCIATES, INC.	Inv# 810401 (SBGPP NCP) conting.compl	Nov15 SBGPP NCP	$617.50		
	Total for Check:	72468				$617.50	$83,575.90
72469	01/13/2016	Herndon, Roy L.	Inv# 1/8/16 DWR PANEL TRAVEL Panel Meeting	1/8 SACTO DWR	$107.60		
	Total for Check:	72469				$107.60	$439.50
72470	01/13/2016	INDUSTRIAL SHOE COMPANY	Inv# I100-1046052	SAFETY & RISK MANAGEMENT	$150.00		
	Total for Check:	72470				$150.00	$1,479.84
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 807815	Lab Domestic Heater Ck Valve	$377.87		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 807815	Discount	($9.11)		

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72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 807815	Freight	$5.95		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 807815	Lab Domestic Heater Ck Valve	$45.79		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 799237-1	Discount	($74.09)		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 799237-1	Freight	$5.95		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 799237-1	Freight Incoming	$64.77		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 799237-1	GASKET/FITTING/PUMP	$3,633.90		
72471	01/13/2016	IRVINE PIPE & SUPPLY	Inv# 807815	Freight Incoming	$25.81		
	Total for Check:	72471				$4,076.84	$116,719.80
72472	01/13/2016	IRVINE WINDOW CLEANING	Inv# 2846	WINDOW CLEANING	$210.00		
	Total for Check:	72472				$210.00	$5,860.00
72473	01/13/2016	LHOIST NORTH AMERICA	Inv# 1150237310	12/15 lime 25.40 ton	$4,911.09		
72473	01/13/2016	LHOIST NORTH AMERICA	Inv# 1150237522	12/17 lime 24.38 ton	$4,713.87		
72473	01/13/2016	LHOIST NORTH AMERICA	Inv# 1150237784	12/19 lime 25.61 ton	$4,951.70		
	Total for Check:	72473				$14,576.66	$370,943.89
72474	01/13/2016	LONG BEACH WATER DEPARTMENT	Inv# 40469	Nov15 Alamitos 227.9 af @$928	$237,471.80		
	Total for Check:	72474				$237,471.80	$1,211,775.31
72475	01/13/2016	MCFADDEN-DALE HARDWARE CO.	Inv# 223765/5	DISCOUNT	($1.93)		
72475	01/13/2016	MCFADDEN-DALE HARDWARE CO.	Inv# 223765/5		$69.49		
72475	01/13/2016	MCFADDEN-DALE HARDWARE CO.	Inv# 223406/5	Discount	($1.81)		
72475	01/13/2016	MCFADDEN-DALE HARDWARE CO.	Inv# 223406/5	VARIOUS	$65.02		
	Total for Check:	72475				$130.77	$3,839.33
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46549171	VARIOUS	$12.48		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46651433	DISCOUNT	($0.27)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46651433	SHIPPING	$5.36		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46651433		$13.63		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46638940	DISCOUNT	($1.45)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46638940	SHIPPING	$5.36		

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ıeck No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46638940		$72.52		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46549171	Freight	$4.86		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46531128	DISCOUNT	($0.24)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46531128	SHIPPING	$4.86		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46531128		$12.11		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 45974477	DISCOUNT	($3.95)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 45974477	SHIPPING	$5.79		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 45974477		$197.68		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46700556		$14.77		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46549171	Discount	($0.25)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46700556		$543.61		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46700556	DISCOUNT	($11.17)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46818434	PWPS PIPELINE REINFORCNG	$465.82		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46818434	PWPS PIPELINE REINFORCNG	$362.23		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46818434	SHIPPING	$50.03		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46818434	DISCOUNT	($16.56)		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46867201		$17.55		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46867201	SHIPPING	$6.46		
72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46867201	DISCOUNT	($0.35)		

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72478	01/13/2016	MCMASTER-CARR SUPPLY COMPANY	Inv# 46700556	SHIPPING	$27.90		
	Total for Check:	72478				$1,788.78	$36,189.00
72479	01/13/2016	MELTWATER NEWS US INC	Inv# IN-S151-427964	RENEWAL OF SERVICE 2016	$14,700.00		
	Total for Check:	72479				$14,700.00	$14,700.00
72480	01/13/2016	MIKE THOMPSON'S RV SUPER STORES	Inv# FVCS517433	REPAIRS & INSTALL OF AWNINGS	$1,499.00		
	Total for Check:	72480				$1,499.00	$1,499.00
72481	01/13/2016	MUNICIPAL WATER DISTRICT OF OC	Inv# 8721	Nov15 Water Purchases	$3,308,646.57		
	Total for Check:	72481				$3,308,646.57	$8,712,532.26
72482	01/13/2016	Markus, Michael R.	Inv# 12/7/15 STATE BRD TRAVEL	12/7 SACTO State Board Meeting	$101.67		
	Total for Check:	72482				$101.67	$3,713.08
72483	01/13/2016	NEW LINE FIRE	Inv# 12082015-01	240 West FACP 2401 3-IDC Board	$340.00		
	Total for Check:	72483				$340.00	$480.40
72484	01/13/2016	NORTHWEST HABITAT INSTITUTE	Inv# 0911-23	Oct15 Prado Bsn FS habitat	$5,248.00		
	Total for Check:	72484				$5,248.00	$10,352.00
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2102005	12/16 sod.hypochlorite 4948 ga	$2,716.45		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2103507	12/20 sod.hypochlorite 4990 ga	$2,739.51		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2103506	12/20 sod.hypochlorite 4968 ga	$2,727.43		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2103353	12/19 sod.hypochlorite 4762 ga	$2,614.34		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2103352	12/19 sod.hypochlorite 5002 ga	$2,746.10		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2103133	12/18 sod.hypochlorite 4890 ga	$2,684.61		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2102577	12/17 sod.hypochlorite 5020 ga	$2,755.98		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2102004	12/16 sod.hypochlorite 4946 ga	$2,715.35		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2101411	12/15 sod.hypochlorite 4956 ga	$2,720.84		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2101410	12/15 sod.hypochlorite 4956 ga	$2,720.84		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2102578	12/17 sod.hypochlorite 4960 ga	$2,723.04		
72486	01/13/2016	OLIN CHLOR ALKALI PRODUCTS	Inv# 2103132	12/18 sod.hypochlorite 4884 ga	$2,681.32		
	Total for Check:	72486				$32,545.81	$774,827.97
72487	01/13/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4970986.001	OCAL Electrical Material Reloc	$12.24		
72487	01/13/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4971010.003	Freight	$13.53		
72487	01/13/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4970986.001	Freight	$9.18		

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72487	01/13/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4970986.001	OCAL Electrical Material Reloc	$58.62		
72487	01/13/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4970986.001	OCAL Electrical Material Reloc	$65.10		
72487	01/13/2016	ONESOURCE DISTRIBUTORS INC.	Inv# S4971010.003	FAN/LAMPS/SWITCH	$264.32		
	Total for Check:	72487				$422.99	$67,122.97
72488	01/13/2016	ORANGE COAST PETROLEUM EQUIPT.	Inv# 0211113-IN	PRESET METER FOR T-125	$2,125.44		
72488	01/13/2016	ORANGE COAST PETROLEUM EQUIPT.	Inv# 0211113-IN	Discount	($42.51)		
	Total for Check:	72488				$2,082.93	$4,629.52
72489	01/13/2016	PACIFIC HYDROTECH CORPORATION	Inv# 8 (SAR-2014-1)	Prog.Pmt#8 (SAR-2014-1)	$57,126.35		
72489	01/13/2016	PACIFIC HYDROTECH CORPORATION	Inv# 8 (SAR-2014-1)	Prog.Pmt#8 (SAR-2014-1)	$21,375.00		
	Total for Check:	72489				$78,501.35	$7,930,557.03
72490	01/13/2016	PACIFIC HYDROTECH CORPORATION	Inv# ESC#0030301887 RET#8 SAR-2014-	Ret#8 (Pac.Hydrotech	$3,006.65		
72490	01/13/2016	PACIFIC HYDROTECH CORPORATION	Inv# ESC#0030301887 RET#8 SAR-2014-	Ret#8 (Pac.Hydrotech	$1,125.00		
	Total for Check:	72490				$4,131.65	$403,943.39
72491	01/13/2016	PROTEC ARISAWA AMERICA	Inv# 40989	SEAL/END CAPS	$17,236.80		
72491	01/13/2016	PROTEC ARISAWA AMERICA	Inv# 40989	Discount	($258.55)		
	Total for Check:	72491				$16,978.25	$17,954.47
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$69.14		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327286	RECHARGE OPERATIONS/WETLANDS	$136.43		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$24.66		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$26.98		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$64.11		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$83.68		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$86.97		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$93.51		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$95.71		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$158.95		
72493	01/13/2016	QUINN COMPANY	Inv# PC830327351	RECHARGE OPERATIONS/WETLANDS	$696.15		

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ıeck No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72493	01/13/2016	QUINN COMPANY	Inv# PC830327352	CAT FILTERS	$61.56		
	Total for Check:	72493				$1,597.85	$43,008.04
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$128.17		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$129.21		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$48.11		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$95.75		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$9.20		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$273.72		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$280.80		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$327.40		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356		$335.90		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$772.20		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$86.73		
72495	01/13/2016	R.D.O. EQUIPMENT CO./POWERPLAN	Inv# P05356	PARTS-NEW JOHN DEERE W/O DIN	$243.02		
	Total for Check:	72495				$2,730.21	$3,502.86
72496	01/13/2016	RICHARD BRADY & ASSOCIATES (BRADY)	Inv# 1510157	CHRIS OLSEN	$800.00		
72496	01/13/2016	RICHARD BRADY & ASSOCIATES (BRADY)	Inv# 1512120	CHRIS OLSEN	$160.00		
	Total for Check:	72496				$960.00	$960.00
72497	01/13/2016	SAME LOS ANGELES POST	Inv# LA POST ANNUAL	BREAKFAST WITH THE CHIEF	$55.00		
	Total for Check:	72497				$55.00	$55.00
72498	01/13/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501748	DISCOUNT	($30.24)		
72498	01/13/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501812	LABORERS	$1,104.00		
72498	01/13/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501748	LABOR	$1,512.00		

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72498	01/13/2016	SANDWOOD ENTERPRISES INC.	Inv# OC 01501812	DISCOUNT	($22.08)		
	Total for Check:	72498				$2,563.68	$43,758.96
72499	01/13/2016	SANTA ANA WATERSHED ASSOC.	Inv# 2015-59	Darla Cirillo for R. Zembal	$2,356.00		
	Total for Check:	72499				$2,356.00	$39,689.69
72500	01/13/2016	SARBS-CWEA	Inv# WES HAYDOCK ONLINE	ONLINE CLASS	$75.00		
	Total for Check:	72500				$75.00	$75.00
72501	01/13/2016	SC FUELS	Inv# 2961748	RECHARGE OPERATIONS/WETLANDS	$11,109.94		
72501	01/13/2016	SC FUELS	Inv# 2961748		($102.44)		
	Total for Check:	72501				$11,007.50	$50,719.76
72503	01/13/2016	SC FUELS	Inv# 1871261	WATER PRODUCTION	$111.90		
72503	01/13/2016	SC FUELS	Inv# 1871261	WATER PRODUCTION	$38.43		
72503	01/13/2016	SC FUELS	Inv# 1871261	RECHARGE OPS	$718.24		
72503	01/13/2016	SC FUELS	Inv# 1871261	PLANNING & WATERSHED	$56.84		
72503	01/13/2016	SC FUELS	Inv# 1871261	PROP MANAGEMENT	$0.48		
72503	01/13/2016	SC FUELS	Inv# 1871261	HYDROGEO	$65.93		
72503	01/13/2016	SC FUELS	Inv# 1871261	ENGINEERING	$145.13		
72503	01/13/2016	SC FUELS	Inv# 1871261	WETLAND OPS	$156.01		
72503	01/13/2016	SC FUELS	Inv# 1871261	WATER PRODUCTION	$706.31		
72503	01/13/2016	SC FUELS	Inv# 1871261	WATER QUALITY	$729.03		
72503	01/13/2016	SC FUELS	Inv# 1871261	NAT RESOURCES	$311.61		
72503	01/13/2016	SC FUELS	Inv# 1871261	FINANCE	$128.54		
	Total for Check:	72503				$3,168.45	$36,136.45
72504	01/13/2016	SIERRA SPRINGS/DS WATERS	Inv# 507-6-OCWD 01/05/2016 OPERATIONS	WETLAND	$66.00		
	Total for Check:	72504				$66.00	$834.00
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-013-4094-34DEC15	12/7-1/6/16 KWH 11681	$1,287.44		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-033-3084-84DEC15	12/7-1/6/16 KWH 164	$50.05		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-033-1467-28DEC15	12/3-1/4/16 KWH 5170	$882.18		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-024-1041-07DEC15	12/7-1/6/16 KWH 12374730	$403,842.54		

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72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-024-0896-29DEC15 chg	12/1-1/1/16 add facilities	$10,521.78		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-018-4099-58DEC15	12/7-1/6/16 KWH 283	$64.86		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-015-7214-86DEC15 chg	12/1-1/1/16 add facilities	$3,900.00		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-012-1700-45DEC15	12/3-1/4/16 KWH 213	$56.96		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-003-7100-85NOV15	11/3-12/4/15 KWH 0	$2,063.54		
72505	01/13/2016	SOUTHERN CALIFORNIA EDISON CO.	Inv# 3-017-8551-74DEC15	11/21-12/22/15 KWH 18208	$9,278.48		
	Total for Check:	72505				$431,947.83	$3,170,706.22
72506	01/13/2016	SOUTHWEST MATERIAL HANDLING	Inv# 00497512	WATER PRODUCTION	$87.76		
72506	01/13/2016	SOUTHWEST MATERIAL HANDLING	Inv# 00497537	WATER PRODUCTION	$87.76		
72506	01/13/2016	SOUTHWEST MATERIAL HANDLING	Inv# 00497536	WATER PRODUCTION	$87.76		
72506	01/13/2016	SOUTHWEST MATERIAL HANDLING	Inv# 00497514	WATER PRODUCTION	$87.76		
72506	01/13/2016	SOUTHWEST MATERIAL HANDLING	Inv# 00497513	WATER PRODUCTION	$101.17		
	Total for Check:	72506				$452.21	$1,268.87
72507	01/13/2016	SPARKLETTS	Inv# 4076005 121515	WQ/R&D/WATER PRODUCTION	$220.25		
72507	01/13/2016	SPARKLETTS	Inv# 4076005 121515	WQ/R&D/WATER PRODUCTION	$103.33		
72507	01/13/2016	SPARKLETTS	Inv# 4076005 121515	WQ/R&D/WATER PRODUCTION	$24.76		
	Total for Check:	72507				$348.34	$2,541.34
72508	01/13/2016	SPRINT	Inv# 459104313-169	12/2-1/1/16 459104313	$219.80		
	Total for Check:	72508				$219.80	$1,900.12
72509	01/13/2016	STAPLES	Inv# 3287189437	Office Supplies	$7.56		
72509	01/13/2016	STAPLES	Inv# 3287189437	Office Supplies	$4.85		
72509	01/13/2016	STAPLES	Inv# 3287189437	Office Supplies	$19.30		
	Total for Check:	72509				$31.71	$20,418.63
72510	01/13/2016	STATE WATER RESOURCES CONTROL BOARD	Inv# CERT.RENEWAL T. KNOELL	TOM KNOELL	$80.00		
	Total for Check:	72510				$80.00	$730.00
72511	01/13/2016	STETSON ENGINEERS, INC.	Inv# 2593-01	Review Draft Prado Manag Plan	$1,242.50		
	Total for Check:	72511				$1,242.50	$1,242.50
72512	01/13/2016	SUNSTATE EQUIPMENT	Inv# 6377025-002	RENTAL AIR COMPRESSOR	$1,196.64		

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72512	01/13/2016	SUNSTATE EQUIPMENT	Inv# 6377025-003	RECHARGE OPERATIONS	$159.84		
	Total for Check:	72512				$1,356.48	$1,356.48
72513	01/13/2016	SUPERIOR SWEEPING LTD.	Inv# 377-1215	WATER PRODUCTION	$380.00		
	Total for Check:	72513				$380.00	$2,660.00
72514	01/13/2016	SWRCB ACCOUNTING OFFICE	Inv# RW-1002332	RECYCLED WATER 7/1-6/30/15	$10,679.40		
	Total for Check:	72514				$10,679.40	$16,285.40
72515	01/13/2016	THE GAS COMPANY	Inv# 113 758 3304 0DEC15	12/3-1/6/16 THERMS 6306	$4,104.88		
72515	01/13/2016	THE GAS COMPANY	Inv# 044 409 2900 0DEC15	12/3-1/6/16 THERMS 1376	$733.92		
	Total for Check:	72515				$4,838.80	$15,529.71
72516	01/13/2016	TRUCPARCO	Inv# 361687		$1.08		
72516	01/13/2016	TRUCPARCO	Inv# 361687	WP/RECH/PRADO/NATRES	$71.29		
	Total for Check:	72516				$72.37	$14,901.18
72517	01/13/2016	U.S. BANK	Inv# 4166626	LEGAL FEES OCWD SERIES B	$1,750.00		
	Total for Check:	72517				$1,750.00	$12,882.00
72518	01/13/2016	UC REGENTS	Inv# PUBLIC SERVICE FAIR	UC IRVINE COMMUNITY & PUBLIC	$30.00		
	Total for Check:	72518				$30.00	$30.00
72519	01/13/2016	ULTRA SCIENTIFIC INC.	Inv# 365286	LABORATORY CHEMICALS	$469.44		
72519	01/13/2016	ULTRA SCIENTIFIC INC.	Inv# 365286	LABORATORY CHEMICALS	$124.60		
	Total for Check:	72519				$594.04	$11,937.97
72520	01/13/2016	UNITED PARCEL SERVICE	Inv# 0000X81601016		$55.49		
	Total for Check:	72520				$55.49	$2,132.62
72521	01/13/2016	UTILIQUEST LLC	Inv# 229256-Q 9932	12/6-12 screen/mark pipes	$10.92		
72521	01/13/2016	UTILIQUEST LLC	Inv# 229256-Q 9908	12/6-12 screen/mark pipes	$66.01		
72521	01/13/2016	UTILIQUEST LLC	Inv# 229256-Q 9911	12/6-12 screen/mark pipes	$923.16		
72521	01/13/2016	UTILIQUEST LLC	Inv# 229256-Q 9922	12/6-12 screen/mark pipes	$538.51		
	Total for Check:	72521				$1,538.60	$44,318.25
72522	01/13/2016	VERIZON CALIFORNIA	Inv# 714 964-1492 090306JAN16 012834113156523206	12/28-1/27	$51.72		
	Total for Check:	72522				$51.72	$7,741.07
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553807	LABORATORY SUPPLIES	$132.51		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553808		($1.70)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553808		$7.99		

Orange County Water District

Check Register

Begin Date: 01/07/2016 **End Date:** 01/13/2016

Accounts Payable Check Register Presented for Board Ratification and/or Approval

Check No.	Date	Vendor Name	Invoice #	Purpose	Invoice Amount	Check Amount	YTD
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553808	LABORATORY CHEMICALS	$45.86		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553808	LABORATORY CHEMICALS	$46.23		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553808	LABORATORY CHEMICALS	$70.34		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043537969	LAB SUPPLIES	$356.16		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043553807		($1.33)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043559685		($3.65)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043559685	INVENTORY RE-ORDER	$365.32		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043519575		($1.22)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043537969		($12.82)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043519575	LABORATORY CHEMICALS	$121.67		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043540792		($14.16)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043524343	LABORATORY CHEMICALS	$62.02		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043524343		$19.83		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043524343		($0.82)		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043537969	LAB SUPPLIES	$780.95		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043537969	LAB SUPPLIES	$144.56		
72524	01/13/2016	VWR INTERNATIONAL, INC.	Inv# 8043540792	CAPS	$1,416.42		
	Total for Check:	72524				$3,534.16	$114,832.24
72525	01/13/2016	WALTERS WHOLESALE ELECTRIC COMPANY	Inv# 215938-01	RECHARGE OPERATIONS	$1,170.72		
72525	01/13/2016	WALTERS WHOLESALE ELECTRIC COMPANY	Inv# 215938-01		($23.41)		
	Total for Check:	72525				$1,147.31	$2,837.30
72526	01/13/2016	WASTE MANAGEMENT INLAND IMPIRE	Inv# 0369172-0161-2	MONTH OF JAN.2016	$156.95		
	Total for Check:	725[illegible]				$156.95	$1,098.65
72527	01/13/2016	WESTBAY INS		Replacement cable	$9,849.00		
	Total for Check:	725[illegible]				$9,849.00	$26,712.90
72528	01/13/2016	WESTERN BIR		ERSHIP REN.2016 R. ZEMBAL	$40.00		
	Total for Check:	725[illegible]				$40.00	$40.00
72529	01/13/2016	XEROX CORP(		KAREN WARREN	$26.74		
	Total for Check:	725[illegible]				$26.74	$5,965.80

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4,479,193.68*

un Date: *1/12/2016*

$4,471,037.20

MINUTES OF MEETING
BOARD OF DIRECTORS, ORANGE COUNTY WATER DISTRICT
December 16, 2015, 5:30 p.m.

President Dewane called to order the December 16, 2015 regular meeting of the Orange County Water District Board of Directors at 5:30 p.m. in the Boardroom at the District office. Following the Pledge of Allegiance to the Flag, the Secretary called the roll and reported a quorum as follows.

Directors		Staff
Philip Anthony		Michael Markus, General Manager
Denis Bilodeau		Joel Kuperberg, General Counsel
Jordan Brandman		Judy-Rae Karlsen, Assistant District Secretary
Shawn Dewane		Gina Ayala, Paula Bouyounes, Bruce Dosier,
Jan Flory		Stephanie Dosier, Bill Dunivin, Randy Fick,
Cathy Green		Mark Greening, Bonnie Howard, Bill Hunt,
Dina Nguyen	(not present)	John Kennedy, Nira Yamachika
Roman Reyna	(arrived 5:40 p.m.)	
Stephen Sheldon	(not present)	
Roger Yoh	(not present)	

Others:
Jim Atkinson, Paul Schoenberger, Ethan Temianka – Mesa Water District
Marc Marcantonio, Robert Kiley – Yorba Linda Water District
Jose Diaz – City of Orange
Michael Grazzo - City of Buena Park
Ken Vecchiarelli - Golden State Water Company
Brian Ragland - City of Huntington Beach
Richard Eglash - Brady
Dick Wilson - City of Anaheim
Kelly Rowe - Consultant
Rob Hunter, Keith Lyon – Municipal Water District of Orange County
Paul Rigali - Arent Fox
Nabil Sabu - City of Santa Ana
Steve Conklin - Irvine Ranch Water District
Debbie Cook - Resident
John Earl - Surf City Voice
Hannah Hess - Representing Mimi Walters Office
Alison Martin - Representing Ed Royce
Caleb Shaffer, Nicole Moutoux, Bethany Dreyfus, Rachelle Thompson– U.S. Environmental Protection Agency

PRESIDENT'S COMMENTS

Director Green reported that Jordan Brandman was appointed Division 9 Director by the City of Anaheim and has taken his oath of office and is seated at the dais this evening. She requested that Item Received Too Late To Be Agendized be advanced on tonight's agenda.

ITEM RECEIVED TOO LATE TO BE AGENDIZED

General Manager Mike Markus reiterated that the District was notified yesterday that the City of Anaheim appointed Jordan Brandman to replace Harry Sidhu on the OCWD Board. The following action was then taken adding this item to tonight's Agenda. Upon motion by Director Anthony, seconded by Director Dewane, the following resolution was adopted [6-0].

RESOLUTION NO. 15-12-171
DETERMINING NEED TO ADD ITEM RECEIVED TOO LATE TO BE AGENDIZED TO TONIGHT'S AGENDA: APPOINTMENT OF JORDAN BRANDMAN TO OCWD BOARD

WHEREAS, pursuant to Government Code Section 54954.2, the District posted the Agenda for its December 16, 2015 Board meeting at least 72 hours prior to the meeting, *to wit*, on December 11, 2015; and

WHEREAS, after posting of such Agenda, the Board was apprised of the appointment of Jordan Brandman to the OCWD to represent the City of Anaheim;

NOW, THEREFORE, the Board of Directors of the Orange County Water District does hereby determine the need to take immediate action to consider the within described matters during tonight's meeting.
Ayes: Anthony, Brandman, Bilodeau, Dewane, Flory, Green
Absent: Nguyen, Reyna Sheldon, Yoh

CEREMONIAL SWEARING IN OF JORDAN BRANDMAN

The Assistant District Secretary administered the ceremonial oath of office to newly appointed Director Jordan Brandman and the following action was taken.

MOTION NO. 15-170
DECLARING JORDAN BRANDMAN DULY APPOINTED

Upon motion duly made, seconded and carried [6-0], Jordan Brandman is declared a duly appointed member of the OCWD Board representing Division 9 (City of Anaheim) for the remainder of former Director Sidhu's four-year term expiring December 2, 2016.
Ayes: Anthony, Bilodeau, Brandman, Dewane, Flory, Green
Absent: Nguyen, Reyna, Sheldon, Yoh

Director Reyna arrived at 5:40 p.m.

1. Annual Reorganization of the Board of Directors

A) Election of Officers

The Board entertained nominations for Board officers. The following Directors were nominated by the Board:

Office of President:	Cathy Green
Office of First Vice President:	Denis Bilodeau
Office of Second Vice President:	Philip Anthony

The following actions were then taken.

MOTION NO. 15- 171
ELECTING CATHY GREEN PRESIDENT

Upon motion by Director Anthony, seconded by Director Flory and carried [7-0], Director Cathy Green is hereby nominated to the office of President of the Orange County Water District; and, the nominations are hereby closed and Director Green is elected President for the 2015-16 one-year term.

Ayes: Anthony, Bilodeau, Brandman, Dewane, Flory, Green, Reyna
Absent: Nguyen, Sheldon, Yoh

MOTION NO. 15-172
ELECTING DENIS BILODEAU FIRST VICE PRESIDENT

Upon motion by Director Anthony, seconded by Director Dewane and carried [7-0], Denis Bilodeau is hereby nominated to the office of First Vice President; and, the nominations are hereby closed and Director Bilodeau is elected First Vice President for the 2015-16 one-year term.

Ayes: Anthony, Bilodeau, Brandman, Dewane, Flory, Green, Reyna
Absent: Nguyen, Sheldon, Yoh

MOTION NO. 15-173
ELECTING PHILIP ANTHONY SECOND VICE PRESIDENT

Upon motion by Director Flory, seconded by Director Bilodeau and carried [7-0], Director Philip Anthony is hereby nominated to the office of Second Vice President; and, the nominations are hereby closed and Director Anthony is elected Second Vice President for the 2015-16 one-year term.

Ayes: Anthony, Bilodeau, Brandman, Dewane, Flory, Green, Reyna
Absent: Nguyen, Sheldon, Yoh

B) Interim Reappointment of Committee and Agency Representatives

President Green indicated that she would make her decisions regarding Committee and outside agency appointments at the next Board meeting and urged the Directors to contact her with their requests for assignments.

2. Presentation of Service Awards

The Board presented service awards to the Board and staff.

VISITOR PARTICIPATION

Surf City Voice representative John Earl expressed support for video streaming of the District's public meetings and welcomed Director Jordan Brandman.

CONSENT CALENDAR

Director Dewane removed Item No. 6, *Warner Basin Landscaping Project*, and Director Anthony removed Item No. 18, *Orange County Water Summit* from the Consent Calendar. The balance of the Consent Calendar was then approved upon motion by Director Anthony, seconded by Director Flory and carried [6-1] with Director Brandman abstaining on all items.
Ayes: Anthony, Bilodeau, Dewane, Green, Flory, Reyna
Abstain: Brandman
Absent: Nguyen, Sheldon, Yoh

3. Approval of Cash Disbursements

MOTION NO. 15-174
APPROVING CASH DISBURSEMENTS

Payment of bills for the period November 27, 2015 through December 9, 2015 in the total amount of $8,029,507.22 is ratified and approved.

4. Approval of Minutes of Board Meeting

MOTION NO. 15-175
APPROVING MINUTES OF BOARD MEETINGS

The minutes of the Board of Directors meeting held November 18, 2015 are approved as presented.

5. Limited-Term Employment Agreement with NWRI Executive Director

RESOLUTION NO. 15-12-172
APPROVING RENEWAL OF LIMITED-TERM EMPLOYMENT AGREEMENT WITH NWRI EXECUTIVE DIRECTOR JEFFREY MOSHER

WHEREAS, Jeffrey Mosher has served as the Executive Director of the National Water Research Institute under a limited term contract since August 25, 2005; and

WHEREAS, the District staff has recommended approval of a renewed limited-term agreement with Jeffrey Mosher for an additional one-year term commencing October 15, 2015;

NOW, THEREFORE, the Board of Directors of the Orange County Water District does hereby approve renewal of the limited-term employment agreement with Jeffrey Mosher as outlined herein, and, upon approval as to form by District General Counsel, its execution by the District's officers is authorized.

6. Warner Basin Landscaping Project

This item was removed from the Consent Calendar and considered later in tonight's meeting.

CONSENT CALENDAR ITEMS RECOMMENDED FOR APPROVAL AT WATER ISSUES COMMITTEE MEETING HELD DECEMBER 9

7. Purchase Order for Autosampler for High Performance Liquid Chromatography (HPLC) for the Advanced Water Quality Assurance Laboratory

RESOLUTION NO. 15-12-173
AUTHORIZING PURCHASE ORDER FOR AUTOSAMPLER FOR HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

RESOLVED, that issuance of a Purchase Order is authorized to Agilent Technologies for the amount of $7,851 for Agilent 1260 Infinity Standard Autosampler for the existing High-Performance Liquid Chromatography (HPLC) Agilent 1200 instrument.

8. Amendment to Agreement with James Pike for Prado Vireo Monitoring

RESOLUTION NO. 15-12-174
AUTHORIZING AMENDMENT TO AGREEMENT WITH JAMES PIKE FOR PRADO VIREO MONITORING

WHEREAS, pursuant to Resolution No. 12-12-146 adopted December 19, 2012, OCWD authorized issuance of Agreement No. 0637 to James Pike for vireo and wildlife monitoring and services in the Prado Basin for a three year period through 2015; and

WHEREAS, the Water Issues Committee of this Board has recommended issuance of Amendment No. 2 to such Agreement extending the termination date to December 31, 2017, and increasing the not to exceed reimbursement amount to $126,000 over the two-year period;

NOW, THEREFORE, the Board of Directors of the Orange County Water District does hereby authorize issuance of the aforementioned Amendment No. 2 to Agreement No. 0637 as outlined herein; and, upon approval as to form by District General Counsel, its execution by the District officers is authorized.

9. Amendment to Agreement with Scheevel Engineering for Technical Support for Prado Dam Water Conservation

RESOLUTION NO. 15-12-175
AUTHORIZING AMENDMENT TO AGREEMENT WITH SCHEEVEL ENGINEERING FOR TECHNICAL SUPPORT FOR PRADO DAM WATER CONSERVATION

WHEREAS, pursuant to Resolution No. 14-4-55 adopted April 16, 2014, OCWD authorized issuance of Agreement No. 1077 to Scheevel Engineering, LLC for engineering consulting services;

WHEREAS, the Water Issues Committee of this Board has recommended issuance of Amendment No. 1 to such Agreement for an amount not to exceed $99,795 for technical support for increased water conservation at Prado Dam;

NOW, THEREFORE, the Board of Directors of the Orange County Water District does hereby authorize issuance of Amendment No. 1 to such agreement with Scheevel Engineering as outlined herein; and, upon approval as to form by District General Counsel, its execution by the District's officers is authorized.

10. North Basin Remediation Early Action

RESOLUTION NO. 15-12-176
APPROVING AGREEMENT WITH AECOM FOR DESIGN MODIFICATION OF EXTRACTION WELL EW-1 IN CONNECTION WITH NORTH BASIN REMEDIATION EARLY ACTION, AND AUTHORIZING PREPARATION OF GEOLOGISTS REPORT AND NECESSARY CEQA DOCUMENTS

WHEREAS, OCWD North Basin extraction well EW-1 was installed in 2008 to capture elevated concentrations of Volatile Organic Compounds (VOCs) in the northeast North Basin VOC plume area that area are migrating into the Principal Aquifer; and

WHEREAS, staff is moving forward in developing a project proposal to operate North Basin extraction well EW-1 capturing and preventing the further migration of the VOC plume in the vicinity of EW-1 which is both necessary and urgent to protect the Principal Aquifer;

WHEREAS, such project would entail installation of well appurtenances and piping necessary to deliver the captured VOC-contaminated water to the sanitary sewer for recycling at GWRS for a temporary period and include construction of a treatment plant to deliver potable-quality water to Fullerton's distribution system; and

WHEREAS, prior to proceeding with such project, staff recommends authorization to retain AECOM to provide engineering design services to modify the existing well EW-1 design to include a connection to the sanitary sewer; and

WHEREAS, staff recommends AECOM to conduct these engineering design services because of its experience with this project, as AECOM prepared the original North Basin Groundwater Protection Plan pipeline and treatment plant and well equipping design plans and the same AECOM staff will work on the EW-1 sewer tie-in plans; and

WHEREAS, staff further recommends preparation of the Geologist's/Engineer's Report for such project and the necessary California Environmental Quality Act (CEQA) documents evaluating environmental issues associated with the proposed project;

NOW, THEREFORE, the Board of Directors of the Orange County Water District does hereby resolve as follows:

Section 1: An Agreement with AECOM in the amount not to exceed $42,796 for modification of the existing well EW-1 design to include a connection to the sanitary sewer is authorized; and, upon approval as to form by District General Counsel, its execution by the District officers is authorized.

Section 2: Preparation of the Geologist's report and the necessary CEQA documents for the aforementioned project is authorized.

CONSENT CALENDAR ITEMS RECOMMENDED FOR APPROVAL AT ADMINISTRATION AND FINANCE ISSUES MEETING HELD DECEMBER 10

11. Monthly Cash Control Report

MOTION NO. 15-176
RECEIVING AND FILING CASH CONTROL REPORT

The Summary Cash and Cash Equivalents Control Report dated November 30, 2015 are hereby received and filed.

12. Purchase Order to WESTESCO for Auto Shop Brake Lathe Machine

RESOLUTION NO. 15-12-177
RATIFYING PURCHASE ORDER TO WESTESCO FOR NEW BRAKE LATHE MACHINE IN THE AUTO SHOP

Issuance of a Purchase Order to WESTESCO for $5,562 for new brake lathe machine in the Auto Shop is hereby ratified.

13. Agreement to Allison Mechanical, Inc., for Annual Maintenance of HVAC Equipment

RESOLUTION NO. 15-12-178
APPROVING EXTENSION TO AGAREEMENT WITH ALLISON MECHANCIAL FOR HVAC MAINTENANCE

RESOLVED, that extension of the Agreement with Allison Mechanical, Inc., is approved for an amount not to exceed $62,304 per year for a period of two years commencing January 1, 2016 for maintaining the HVAC equipment.

14. Agreement Extension with Utiliquest for Underground Service Alert Services

RESOLUTION NO. 15-12-179
AUTHORIZING EXTENSION OF AGREEMENT TO UTILIQUEST FOR UNDERGROUND SERVICE ALERT MONITORING SERVICES

RESOLVED, that extension of the agreement with Utiliquest for an amount not to exceed $74,000 per year for a two-year period to provide underground service alert monitoring services is hereby authorized.

15. Contractor Safety Program

RESOLUTION NO. 15-12-180
ADOPTING CONTRACTOR SAFETY PROGRAM

WHEREAS, OCWD is committed to the safety of all employees, contractors, and subcontractors; and

WHEREAS, OCWD is required to adopt a Contractor Safety Program to comply with Cal OSHA's Multi-Employer Worksite Standards and the ACWA/JPIA Commitment to Excellence Program; and

WHEREAS, all future contractors hired by OCWD would be required to comply with the proposed Contractor Safety Program;

NOW, THEREFORE, the Board of Directors of the Orange County Water District does hereby adopt the Contractor Safety Program as presented and on file at the District office.

16. American Academy of Environmental Engineers and Scientist Patrons Program

MOTION NO, 15-177
AUTHORIZING ANNUAL PARTICIPATION IN THE AMERICAN ACADEMY OF ENVIRONMENTAL ENGINEERS AND SCIENTIST PATRONS PROGRAM

Annual participation in the American Academy of Environmental Engineers and Scientist Patrons Program for $6,000 is authorized.

17. Investment Portfolio Holdings Reports

MOTION NO. 15-178
RECEIVING AND FILING INVESTMENT PORTFOLIO HOLDINGS REPORT

The Investment Portfolio Holdings Reports dated November 30, 2015 is hereby received and filed.

18. 9Th Annual Orange County Water Summit

This item was removed from the Consent Calendar and considered later in tonight's meeting.

ITEMS REMOVED FROM CONSENT CALENDAR FOR CONSIDERATION

6. Warner Basin Landscaping Project

Director Dewane requested that staff provide additional information about the landscape installation project at Warner Basin. Executive Director John Kennedy briefly described the project for installing drought tolerant landscaping at Warner Basin and advised that staff applied for and was awarded $347,606 from Anaheim's SoCal Water Smart Program for the replacement of turf along the frontage of the property at 4060 E. La Palma in Anaheim. He noted the project has already been designed; however, the contractor has not yet been determined, so staff is recommending the Board authorize the General Manager to execute an agreement as soon as the contractor has been selected. Director Bilodeau expressed his support for the project, noting the area surrounding Warner Basin is in dire need of landscaping. Following a brief discussion the Board then took the following action.

Upon motion by Director Bilodeau, seconded by Director Anthony, the following resolution was unanimously adopted [7-0].
Ayes: Anthony, Brandman, Bilodeau, Dewane, Flory, Green, Reyna
Absent: Nguyen, Sheldon, Yoh

RESOLUTION NO. 15-12-181
AUTHORIZING EXECUTION BY THE GENERAL MANAGER OF AGREEMENT FOR WARNER BASIN LANDSCAPING PROJECT

RESOLVED, that the General Manager is authorized to execute an Agreement with a landscape contractor for an amount not to exceed $600,000 for the Warner Basin landscaping project.

18. 9Th Annual Orange County Water Summit

Mr. Markus reported the Orange County Water Summit ad hoc Committee encountered several obstacles in planning the 9th annual event. He advised that the Municipal Water District of Orange County (MWDOC) was lead agency this year and that event details are still in the early planning stages. MWDOC General Manager Rob Hunter stated there has been a significant amount of miscommunication about the planning for the annual event and that some of the obstacles would be sorted out as options are discussed and decided. Mr. Hunter stated the main theme for the upcoming Water Summit will focus on statewide water reliability and resilience - not just regional issues. There was a consensus of the Board to move forward with participating in the annual event and it was recommended that General Manager Markus meet with the Water Summit ad hoc Committee to assist with resolving issues. Discussion ensued and the Board took the following action

MOTION 15-179
DETERMINING TO MOVE FORWARD WITH EVENT PLANNING FOR THE 9TH ANNUAL ORANGE COUNTY WATER SUMMIT

Upon motion duly made and seconded and carried [7-0], staff is directed to move forward with planning the Orange County Water Summit and the General Manager and OCWD ad hoc Water Summit Committee are directed to resolve event planning issues with Municipal Water District of Orange County.
Ayes: Anthony, Brandman, Bilodeau, Dewane, Flory, Green, Reyna
Absent: Nguyen, Sheldon, Yoh

19. INFORMATIONAL ITEMS

A. US Environmental Protection Agency Update Regarding North Basin Groundwater Remediation Program

Mr. Markus reported that 400 stakeholders were invited to attend and participate in tonight's presentation by the United States Environmental Protection Agency (EPA) team on the North Basin Groundwater Remediation program. Director of Special Projects William Hunt introduced the EPA team: Caleb Shaffer, Rachelle Thompson, Bethany Dreyfus, and Nicole Moutoux. Each team member gave a brief presentation and addressed various aspects of the EPA remediation programs that included the following: An explanation of the process utilized in conducting preliminary investigations, the administrative process for settlement negotiations, the EPA coordination with state agencies, stakeholder participation, site inspections, setting goals to establish funding strategies, the process used for superfund designations, and a review of the national priorities listing process. Mr. Hunt advised the next steps would include meeting with other interested parties and scheduling community stakeholder events.

B. Water Resources Summary

There was no discussion of this item.

C. Santa Ana Watershed Project Authority Activities

Director Anthony updated the Board on recent SAWPA activities.

D. Groundwater Producer Meeting Minutes – December 9, 2015

There was no discussion of this item.

E. Committee/Conference/Meeting Reports

The Board reported on the following Committee meetings and noted the Action Agendas were included in tonight's Board packet.

December 09 – Water Issues Committee
December 10 – Administration and Finance Issues Committee

20. VERBAL REPORTS

President Green welcomed Director Brandman and reported that she attended the Association of California Water Agencies (ACWA) Fall Conference in Indian Wells, CA and the Carlsbad Desalination Plant Dedication ceremony. Director Flory reported the City of Fullerton declared a Phase 3 water conservation action. Director Dewane reported that Mesa Water District has shut off all outdoor irrigation on government property and multi-tenant units. Director Bilodeau reported on his Radio France interview on water recycling. Mr. Markus reported on meetings with the U.S. Army Corps of Engineers on the planned deviation at Prado Dam.

ADJOURNMENT

There being no further business to come before the Board, the meeting was adjourned at 7:05 p.m.

_____
Judy-Rae Karlsen, Assistant District Secretary

_____
Cathy Green, President

Communications and Legislative Liaison Committee held January 7, 2016

CHANGE POSITION TO CO-SPONSOR PROPOSED BILL TO BOTTLE ADVANCED PURIFIED WATER FOR EDUCATIONAL PURPOSES

Staff Notes:

The Orange County Sanitation District will be invited to co-sponsor the proposed bill at the GWRS Steering Committee on January 11, 2016.

AGENDA ITEM SUBMITTAL

Meeting Date: January 7, 2016

To: Communications/Leg.Liaison Cte.
Board of Directors

From: Mike Markus

Staff Contact: E.Torres/A.Dunkin

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

POLICY ISSUE: CHANGE POSITION TO CO-SPONSOR PROPOSED BILL TO BOTTLE ADVANCED PURIFIED WATER FOR EDUCATIONAL PURPOSES

SUMMARY

On October 21, 2015, the Orange County Water District (OCWD) Board of Directors voted to take a position to support the WateReuse Association with potential new legislation efforts to bottle advanced purified water (formerly wastewater) for educational purposes to demonstrate that the water is safe, reliable and can be a source of water during an emergency such as an earthquake. On January 4, 2016, WateReuse requested that OCWD co-sponsor the proposed legislation because OCWD already has demonstrated that tasting the water is safe and has a reputation of being the state's leading example of water recycling. The last day to submit bill requests to the Office of Legislative Counsel is January 22, which is why consideration to change OCWD's position on the new bill cannot be postponed until February's Communications and Legislative Liaison Committee.

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Change OCWD's position on WateReuse Association's proposed legislation to bottle advanced purified water for educational purposes from "support" to "co-sponsor" with WateReuse (and OCSD).

DISCUSSION/ANALYSIS

On November 4, 2015 at WateReuse CA's legislative committee meeting, OCWD staff requested that WateReuse sponsor new legislation in 2016 that will allow the bottling of advanced purified water for educational purposes.

The bottling of advanced purified water will provide an opportunity for OCWD, WateReuse and other water agencies to further educate legislators, policy makers and the general public regarding the benefits of using advanced purified water, its quality and safety.

Using advanced water purification technology, billions of gallons of water that would otherwise be wasted to the ocean can be reused and serve as a safe and reliable source of new water to help fulfill California's ever-growing demand. As such, new legislation to allow the bottling of advanced purified water is an excellent means of allowing Californian's who don't have the opportunity to visit OCWD's advanced purification facility in Fountain Valley

to experience how cutting edge technology is being used to purify wastewater to a near-distilled quality to protect and replenish the Orange County Groundwater Basin.

This bill provides an opportunity to educate Californians about OCWD's Groundwater Replenishment System (GWRS) and its role in helping provide solutions to California's persistent drought and water supply shortage issues. Bottling the water also allows Board members and staff the ability to transport GWRS water to conferences and presentations, making the experiences more impactful.

BACKGROUND

AB 1100, in the 2010 legislative session, dealt with the bottling of advanced purified water. The bill passed the Assembly unanimously in 2010, in the Senate it was referred to Health Committee and passed (10-1), and when the bill was up in the Environmental Quality Committee it failed (the bill did not pass by a narrow margin). OCWD staff and consultants think that this bill could be successfully chaptered in 2016 because (1) there is broader acceptance for potable reuse, (2) this bill is only for educational purposes, (3) the bottled water is not for re-sale, and (4) the GWRS has been successfully operating since January 2008.

AGENDA ITEM SUBMITTAL

Meeting Date: January 11, 2016

To: GWRS Steering Committee

From: Mike Markus/Jim Herberg

Staff Contact: J. Kennedy/M.Patel

Budgeted: N/A
Budget Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: **OCWD AND OCSD JOINT RESOLUTION OF SUPPORT FOR THE METROPOLITAN WATER DISTRICT INDIRECT POTABLE REUSE PROJECT**

SUMMARY

The Metropolitan Water District of Southern California (MWD) is considering an indirect potable reuse project to reclaim treated wastewater from the Sanitation Districts of Los Angeles County. The project would be similar to the Groundwater Replenishment System (GWRS). The attached resolution pledges both the Orange County Water District (District) and Orange County Sanitation District's (OCSD) support to advance this project.

Attachment(s): Resolution of Support

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for the January 20 **OCWD** and January 27 **OCSD** Board meeting: Adopt resolution supporting the Metropolitan Water District efforts to implement an indirect potable reuse project with County Sanitation District No. 2 of Los Angeles County.

DISCUSSION/ANALYSIS

The Los Angeles County Joint Water Pollution Control Plant in the City of Carson currently treats approximately 280 million gallons of day of wastewater to secondary standards before it is discharged through a network of outfalls to the Pacific Ocean. MWD is working with the Sanitation Districts of Los Angeles County to potentially construct a GWRS type project at the Carson plant to purify and produce up to 150 million gallons per day of new water supplies to be used to replenish local groundwater basins in Southern California.

Both the District's and OCSD's expertise in permitting, designing, constructing and operating the GWRS can be beneficial to MWD in developing this new project. In addition, Orange County Water District can receive a portion of the water created by the new project to assist in recharging the Orange County Groundwater Basin. Engagement by both OCWD and OCSD can provide positive media or community impressions in support of GWRS and other water reuse projects.

PRIOR RELEVANT BOARD ACTION(S) N/A

RESOLUTION OF THE BOARD OF DIRECTORS OF THE ORANGE COUNTY WATER DISTRICT AND THE ORANGE COUNTY SANITATION DISTRICT SUPPORTING THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA'S EFFORTS TO DEVELOP A GROUNDWATER REPLENISHMENT SYSTEM TYPE PROJECT WITH LOS ANGELES COUNTY SANITATION DISTRICT NO. 2 IN THE CITY OF CARSON

WHEREAS, the Orange County Water District (OCWD) was formed by a special act of the California Legislature in 1933 to sustainably manage and protect the Orange County Groundwater Basin and protect the area's rights to flows in the Santa Ana River; and

WHEREAS, the Orange County Sanitation District (OCSD) is a duly organized County Sanitation District existing pursuant to the County Sanitation District Act of 1923, California Health and Safety Code section 4700, et seq., providing for the ownership, operation, and maintenance of wastewater collection, treatment and disposal facilities within Orange County, California.

WHEREAS, OCWD and OCSD have worked very closely to recycle all wastewater that is available at OCSD Reclamation Plant Number 1 with the Groundwater Replenishment System (GWRS); and

WHEREAS, the GWRS is the world's largest advanced water purification facility of its kind and is now producing approximately 100 million gallons per day of new water supply and plans are being developed by OCWD and OCSD to expand the facility up to 130 million gallons per day, which is enough water for more than one million residents and businesses in north and central Orange County; and

WHEREAS, OCWD and OCSD have garnered more than 40 awards for the development, construction and operation of the GWRS from organizations around the world, including the 2008 Stockholm Industry Water Prize, the 2014 U.S. Water Prize, and the 2014 Lee Kuan Yu Prize, bestowed upon OCWD by the nation of Singapore for its GWRS, groundwater management and education programs; and

WHEREAS, OCWD has committed to purchase and recharge 650,000 acre-feet of untreated full service imported water supply from the Metropolitan Water District of Southern California (MWD) through MWD's representative, the Municipal Water District of Orange County, over the next ten years; and

WHEREAS, the purified water from the new water reuse project proposed by MWD and the Los Angeles County Sanitation District (LACSD) No.2 could replace a portion of the 650,000 acre-foot commitment or provide additional water to OCWD to recharge the Orange County Groundwater Basin; and

WHEREAS, OCWD and OCSD have acquired significant technical and public engagement expertise in planning, developing, funding, building, and operating the GWRS that could be beneficial to MWD and LACSD No. 2 in building the most efficient and cost effective project in a timely manner; and

WHEREAS, the reliability of imported water supply sources is being challenged as numerous environmental, agricultural and urban interests maneuver to obtain greater shares of these water sources from the Colorado River and State Water Project; and

WHEREAS, the local multi-billion dollar economy requires a reliable and sustainable water source to remain healthy and strong; and

NOW, THEREFORE, the Board of Directors of the Orange County Water District and the Orange County Sanitation District does hereby resolve as follows:

Section 1: OCWD and OCSD will provide technical support as needed to MWD and the LACSD to assist in developing the proposed water reuse project.

Section 2: The types of technical support provided will include, but not be limited to: (1) Permitting, (2) Injection well construction and operation, (3) Treatment plant design, (4) Optimizing plant operations, (5) Public engagement and support, (6) Recharging the water, and (7) Institutional coordination.

Section 3: OCWD and OCSD will work with the MWD and the LACSD to maximize how much of the water being created from this project can be annually recharged into the Orange County Groundwater Basin.

Section 4: OCWD, OCSD, the MWD, the and LACSD should all work collaboratively to ensure the proposed project is successfully constructed and operated with communitywide support and minimal delays and in the most effective, cost efficient and environmentally sound manner as possible. As such, entering into a memorandum of understanding between the four agencies is strongly encouraged.

AGENDA ITEM SUBMITTAL

Meeting Date: January 11, 2016

To: GWRS Steering Committee

From: Mike Markus/Jim Herberg

Staff Contact: M. Patel/P. Bouyounes

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Program/Line Item No.: N/A
Funding Source: N/A
General Counsel Approval: N/A
Project Report Approved: N/A
CEQA Compliance: N/A

Subject: JOINT SECURITY VULNERABILITY ASSESSMENT

SUMMARY

Orange County Sanitation District (OCSD) and Orange County Water District (OCWD) have an executed Joint Exercise of Powers Agreement for the Development, Operation, and Maintenance of the GWRS and the Green Acres Project (GAP) last amended on May 5, 2010. This agreement calls for a joint security vulnerability assessment of the joint campus to occur every 5 years.

Attachment(s): Joint Exercise of Powers Agreement for the Development, Operation, and Maintenance of the Groundwater Replenishment System and the Green Acres Project

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for the January 20 OCWD Board meeting: Authorize issuance of Agreement to Pinkerton for an amount not to exceed $15,000 for a joint security vulnerability assessment of the joint OCWD and OCSD Fountain Valley campus as a cost shared item between both agencies.

DISCUSSION/ANALYSIS

The existing OCWD/OCSD joint agreement that governs the GWRS project includes a provision item 38 that calls for a joint security vulnerability assessment of the joint campus to occur every 5 years based on changing circumstances or knowledge of a threat. OCWD and OCSD would like to have the assessment down now that the GWRS Initial Expansion construction is over.

BACKGROUND

The Joint Exercise of Powers Agreement for the Development, Operation, and Maintenance of the Groundwater Replenishment System (GWRS) and the Green Acres Project (GAP) governs the operation, maintenance, and ownership responsibilities associated with the GWRS project. The agreement includes a provision calling for a joint security vulnerability assessment of the joint campus. OCSD has recently completed a similar assessment of just their property boundary. In discussions with general managers of both agencies it was decided that the same consultant used by OCSD for their recent assessment could also do another assessment adding in the

OCWD Fountain Valley property. This additional assessment would be smaller than the one recently completed for OCSD and could be done with the next few months. The cost for the study of the OCSD campus, which is larger than OCWD, was about $40,000. This means the cost to look at the OCWD and OCSD as a joint campus should be less.. It is proposed that the cost of this joint vulnerability assessment would be cost shared by the two agencies. The cost could be approved under the general manager signing authority based on the price offered by the existing consultant used by OCSD for their recent security vulnerability assessment. This issue has been discussed by the committee in the past and this new study would help address those concerns while also be in keeping with the requirements of the joint agreement. A verbal update on this proposed study will be given to committee.

PRIOR BOARD/COMMITTEE ACTIONS

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: R. Herndon/K. Underhill

Budgeted: Yes
Budgeted Amount: $35,000
Cost Estimate: $36,000
Funding Source: General Fund
Program/ Line Item No.: 1075.51112.9900
General Counsel Approval: Yes
Engineers/Feasibility Report: NA
CEQA Compliance: NA

Subject: ANNUAL SANTA ANA RIVER STREAM GAUGING JOINT FUNDING WITH THE UNITED STATES GEOLOGICAL SURVEY(USGS)

SUMMARY

The United States Geological Survey (USGS) has proposed to continue providing stream gauging (flow and quality) services along the Santa Ana River and Santiago Creek for the period November 1, 2015 to October 31, 2016. The District's share of the stream gauging costs is $36,000 for 2015-16.

Attachment(s): Joint Funding Agreement for November 1, 2015 to October 31, 2016

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting:

1. Approve and authorize execution of Joint Funding Agreement with USGS to conduct stream gauging of the Santa Ana River below Prado Dam and Santiago Creek at Santa Ana for the period of November 1, 2015 to October 31, 2016; and

2. Authorize payment of $36,000 to the USGS for OCWD's share of costs for stream gauging services

BACKGROUND/ANALYSIS

Flow and quality measurements along the Santa Ana River (SAR) and Santiago Creek are key data used by District staff for a wide range of programs, including calculation of base and storm flows for the annual SAR Watermaster Report, estimation of Forebay recharge and losses to the ocean, and the Prado Water Conservation Program. Data from these stream gauging stations were integral to the District's successful completion of its water rights permit from the State Water Resources Control Board in 2008. Several upstream stations along the SAR and its tributaries were determined by the Watermaster to be vital to the calculation of base and storm flows. OCWD has established joint funding of SAR stream gauging at the Prado and Santiago Creek stations, while San Bernardino Valley Municipal Water District has agreed to continue

managing the joint funding agreement for upstream gauges.
Staff recommends that the District continue to contract with the USGS to conduct stream gauging at the Santa Ana River at Prado and Santiago Creek stations for the 2015-16 year. The USGS will fund approximately 34 percent of the program, with 66 percent financial participation by OCWD for most tasks, except the flow-weighted electrical conductance computations ($2,700) that are fully funded by OCWD. Total cost to OCWD for FY15-16 is $36,000.

PRIOR RELEVANT BOARD ACTION(S)

9/21/2005, R05-9-105 Approval of Annual Joint Funding Agreement with the U.S. Geological Survey (Annual authorization)

United States Department of the Interior

U.S. GEOLOGICAL SURVEY

California Water Science Center
6000 J Street, Placer Hall
California State University
Sacramento, California 95819-6129
Phone: (916) 278-3000 Fax: (916) 278-3070
http://water.wr.usgs.gov

December 22, 2015

Mr. Michael R. Markus, P.E., General Manager
Orange County Water District
Post Office Box 8300
Fountain Valley, California 92728-8300

Attn: Karen Underhill

Dear Mr. Markus:

This letter confirms discussions between our respective staffs, concerning the continuation of the cooperative water resources program between the Orange County Water District (District) and the U.S. Geological Survey (USGS) for the period November 1, 2015 to October 31, 2016.

The program contains two elements (see Enclosure 1). The first element consists of the operation and maintenance of one streamflow station, Santiago Creek at Santa Ana (11077500), which was added to the program in Fiscal Year 2005. The second element consists of the continued collection of water-quality data at the Santa Ana River below Prado Dam (11074000) gaging station (streamflow for this site is now funded by the National Streamflow Information Program (NSIP)). The USGS will continue to monitor continuous specific conductance and temperature, and collect samples for dissolved solids concentration twice monthly. Mean conductivity weighted by discharge will also be computed and furnished to your agency.

The proposed program and associated costs are as follows:

Program Element		OCWD Funds	USGS Funds	Total Funds
1. – Streamflow monitoring				
11077500	Santiago Creek at Santa Ana	$14,250	$7,200	$21,450
2. – Water Quality monitoring				
11074000	Santa Ana River below Prado Dam			
	A. Continuous temperature and Continuous conductance	11,450	5,750	17,200
	B. Bi-monthly sampling for TDS	7,600	3,850	11,450
	C. Mean conductance computation	2,700	-0-	2,700
	TOTAL	**$36,000**	**$16,800**	**$52,800**

Total cost of the proposed program is $52,800. Cost to the District is $36,000, and subject to the availability of Federal matching funds, the USGS will provide $16,800.

Enclosed are two originals of Joint Funding Agreement (JFA) 16WSCA02400, signed by our agency, for your approval. If you are in agreement with this proposed program, please return one fully executed JFA to our office. Work performed with funds from this agreement will be conducted on a fixed-price basis. Auditors are now enforcing a regulation that requires agreements where cooperator funding is at or exceeds $25,000 to be billed quarterly. Therefore, this agreement reflects a quarterly billing, however, per requests made by your staff, billing for the full annual cost for this agreement will be issued with the first quarter bills of the Federal fiscal year (January) or as close to that date as is achievable.

The USGS is required to have an agreement in place prior to any work being performed on a project. We request that a fully executed JFA be returned prior to February 15. 2016. If it is not received by February 15, we will be required to suspend operations until an agreement is received.

If you have any questions concerning this program, please contact Bob Blanchard, in our Redlands office at (909) 798-3272, or Scott Patterson, in our Poway Field Office at (858) 679-4015. If you have any administrative questions, please contact Tammy Seubert, in our Sacramento Office, at (916) 278-3040.

Sincerely,

Eric G. Reichard
Director, USGS California Water Science Center

Enclosures

cc: Scott Nygren,
Director of Field Operations
Orange County Water District
Field Headquarters
4060 E. La Palma Ave.
Anaheim, California 92807

Roy Herndon
Orange County Water District
Post Office Box 8300
Fountain Valley, California 92728-8300

Bob Blanchard, USGS CAWSC

Scott Patterson, USGS, CAWSC

Enclosure 1 Proposed Program - November 1, 2015 to October 31, 2016

WATERMASTER SERVICE
Santa Ana River - Fiscal Year 2016
Agreements with USGS for Surface-Water Measurements and Quality Monitoring

Station Number	Station Name	Type Service	Total Cost	USGS	Others	Santa Ana River	Western - S. Bndo.	Contracting Agency
11051499 [B]	Santa Ana River near Mentone (main river gage)	SW	21,450	7,200	14,250		X	SBVMWD
11051502 [B]	Santa Ana River near Mentone (supplementary gage)	SW	12,850	4,300	8,550		X	SBVMWD
11055000 [D]	Mill Creek near Mentone	SW	15,300	-0-	15,300		X	SBVMWD
11055500	Plunge Creek near East Highlands	SW	21,450	7,200	14,250		X	SBVMWD
11055700	City Creek Canal near Highland	SW	12,850	4,300	8,550		X	SBVMWD
11055800	City Creek near Highland	SW	21,450	7,200	14,250		X	SBVMWD
11057500	San Timoteo Creek near Loma Linda	SW	23,750	23,750	-0-		X	N/A (NSIP)
11058500	East Twin Creek near Arrowhead Springs	SW	21,450	7,200	14,250		X	SBVMWD
11058600	Waterman Canyon Creek near Arrowhead Springs	SW	21,450	7,200	14,250		X	SBVMWD
11059300	Santa Ana River at E Street near San Bernardino	SED	15,200	-0-	15,200		X	SBVMWD
11060400	Warm Creek near San Bernardino	SW	21,450	7,200	14,250		X	SBVMWD
11061000 [C]	Fontana UWC Infiltration line near Fontana (MVM)	SW	5,000	1,700	3,300		X	SBVMWD
11062000 [A & E]	Lytle Creek near Fontana (includes extra measurements)	SW Extra meas.	23,750 -0-	23,750 -0-	-0- -0-		X	N/A (NSIP) SBVMWD
11062399 [A] 11062400 [A]	Fontana UWC Surface Diversion near Fontana (Weirs # 2&3)	SW	14,250	-0-	14,250		X	SBVMWD
11062450 [A]	Fontana PH forebay Spillway near Fontana	SW	14,250	-0-	14,250		X	SBVMWD
11062700 [A]	Fontana PH tailrace Weir near Fontana	SW	14,250	-0-	14,250		X	SBVMWD
11062800 [A]	Fontana UWC Return from Afterbay	SW	14,250	-0-	14,250		X	SBVMWD
11062820 [A]	Fontana UWC Diversion near Fontana	SW	14,250	-0-	14,250		X	SBVMWD
11063510	Cajon Creek below Lone Pine Creek near Keenbrook	SW	21,450	7,200	14,250		X	SBVMWD
11063680	Devil Canyon Creek near San Bernardino	SW	21,450	7,200	14,250		X	SBVMWD
11065000	Lytle Creek at Colton	SW	21,450	7,200	14,250		X	SBVMWD
11066460 [A & D]	Santa Ana River at MWD Crossing (includes extra measurements)	SW QW/TDS	30,150 12,500	10,100 4,200	20,050 8,300	X X		SBVMWD SBVMWD
11071900	Temescal Creek at Corona Lake near Corona	SW	16,000	-0-	16,000	X		SBVMWD
11072100	Temescal Creek above Main St., near Corona	SW	21,450	7,200	14,250	X		SBVMWD
11073360 [A]	Chino Creek at Schaefer Avenue	SW	21,450	7,200	14,250	X		SBVMWD
11073495 [A]	Cucamonga Creek near Mira Loma	SW	21,450	7,200	14,250	X		SBVMWD

Mr. Michael R. Markus, General Manager- Orange County Water District

Station Number	Station Name	Type Service	Total Cost	USGS	Others	Santa Ana River	Western - S. Bndo.	Contracting Agency
340742117161701	Gilbert Street Precipitation Gage at San Bernardino	Precipitation	8,300	-0-	8,300	X		SBVMWD
NEW	Forest Falls Precipitation Gage	Precipitation	8,300	-0-	8,300			SBVMWD
		Construction	9,200	-0-	9,200			SBVMWD
NEW	Big Bear Precipitation Gage	Precipitation	8,300	-0-	8,300			SBVMWD
		Construction	9,200	-0-	9,200			SBVMWD
341509117312601 [E]	Middle Fork Lytle Creek Precipitation Gage near Lytle Creek	Precipitation	8,300	8,300	-0-	X		N/A (NSIP)
11074000 [B, D & E]	Santa Ana River below Prado Dam	SW	23,750	23,750	-0-	X		N/A (NSIP)
		QW	17,200	5,750	11,450	X		OCWD
		TDS	11,450	3,850	7,600	X		OCWD
	Conductance Program	QW	2,700	-0-	2,700	X		OCWD
11077500	Santiago Creek at Santa Ana	SW	21,450	7,200	14,250	X		OCWD
11078000 [A & E]	Santa Ana River at Santa Ana	SW	23,750	23,750	-0-			N/A (NSIP)
	TOTALS		**647,900**	**231,100**	**416,800**			

[A] Data furnished quarterly to Watermaster.

[B] Data furnished monthly to Watermaster.

[C] Reduced Cost based on Magnetic Meter Installation, records provided by Fontana Water Company and reviewed by USGS.

[D] Includes two USGS discharge measurements per month, plus review and publication of measurements made by San Bernardino Valley Water Conservation District.

[E] Data used in support of the Santa Ana Watermaster Program.

2016 FY
TOTAL FUNDING BREAKDOWN FOR ENCLOSURE 1

	Agency Funds	USGS Funds	Agreement Total Funds
San Bernardino Valley Municipal WD (SBVMWD)	$380,800	$111,000	$491,800
Orange County Water District (OCWD)	36,000	16,800	52,800
National Streamflow Information Program [E]	-0-	103,300	103,300
TOTAL	**$416,800**	**$231,100**	**$647,900**

Form 9-1366 (April 2015) Page 1 of 2	U.S. Department of the Interior U.S. Geological Survey Joint Funding Agreement FOR Water Resource Investigations	Agreement#: 16WSCA02400 Customer#: 6000000805 Project #: ZG009J5 TIN #: 95-6002277 USGS DUNS #: 1761-38857

Fixed Cost Agreement YES[X] NO[ ]

THIS AGREEMENT is entered into as of the 1st day of November, 2015, by the U.S. GEOLOGICAL SURVEY, California Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the ORANGE COUNTY WATER DISTRICT, party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation for cooperative water resources investigations in the Orange County Water District area, herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50, and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) include In-Kind-Services in the amount of $0.00.

(a) $16,800.00 by the party of the first part during the period November 1, 2015 to October 31, 2016

(b) $36,000.00 by the party of the second part during the period November 1, 2015 to October 31, 2016

(c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of : $0.00

Description of the USGS regional/national program:
Not Applicable

(d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.

(e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.

6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.

8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program and, if already published by the party of the first part shall, upon request; be furnished by the party of the first part; at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties.

9. USGS will issue billings utilizing Department of the Interior Bill for Collection (form DI-1040). Billing documents are to be rendered **quarterly**. Payments of bills are due within 60 days after the billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30 day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983.).

U.S. Department of the Interior
U.S. Geological Survey
Joint Funding Agreement
FOR
Water Resource Investigations

Agreement#: 16WSCA02400
Customer#: 6000000805
Project #: ZG009J5
TIN #: 95-6002277
USGS DUNS #: 1761-38857

USGS Technical Point of Contact

Name:	Bob Blanchard Supervisory Hydrologist
Address:	1653 Plum Lane Redlands, CA 92374
Telephone:	(909) 798-3272
Fax:	(909) 335-3407
Email:	rblanch@usgs.gov

Customer Technical Point of Contact

Name:	Mr. Michael R. Markus, P.E. General Manager
Address:	Post Office Box 8300 Fountain Valley, CA 92728-8300
Telephone:	(714) 378-3200
Fax:	
Email:	

USGS Billing Point of Contact

Name:	Tamara Seubert Budget Analyst
Address:	6000 J Street - Placer Hall Sacramento, CA 95819
Telephone:	(916) 278-3040
Fax:	(916) 278-3070
Email:	tseubert@usgs.gov

Customer Billing Point of Contact

Name:	
Address:	
Telephone:	
Fax:	
Email:	

U.S. Geological Survey
United States
Department of Interior

Signature

By _____ **Date:** 12/22/2015
Name: Eric G. Reichard
Title: Director, USGS California Water Science Center

ORANGE COUNTY REGIONAL WATER DISTRICT

Signatures

By_____ **Date:** _____
Name:
Title:

By_____ **Date:** _____
Name:
Title:

By_____ **Date:** _____
Name:
Title:

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: G. Woodside

Budgeted: No
Budgeted Amount: 0
Cost Estimate: $55,800/3 year period
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: OCWD PARTICIPATION IN COUNTY OF ORANGE ADOPT A CHANNEL PROGRAM

SUMMARY

The County of Orange launched an "Adopt A Channel" program in 2014, patterned after Caltrans' Adopt-A-Highway program. District staff is recommending adopting a portion of the Santa Ana River channel owned by OCWD and a portion owned by OC Flood Control District where OCWD conducts recharge operations. OCWD would assume responsibility for graffiti and trash removal. Staff recommends OCWD entering into a contract with the Orange County Conservation Corps to conduct graffiti and trash removal. Staff has identified a potential source of funds to be used for this program.

Attachment(s):

- County of Orange Public Works: Adopt A Channel Guidance Manual, October 2014
- Orange County Conservation Corps Graffiti and Trash Removal Proposal
- Orange County Conservation Corps Brochure

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting:

1) Authorize participation in the OC Public Works Adopt A Channel program;

2) Approve and authorize execution of an Encroachment Permit application and a Certificate of Liability Insurance with OC Public Works, and

3) Approve and authorize issuance of Agreement with the Orange County Conservation Corps to conduct graffiti and trash removal for three years for a total expenditure of up to $55,800

BACKGROUND/ANALYSIS

OC Flood Control District staffed by OC Public Works operates and maintains flood control channels in Orange County. Maintenance functions include trash, debris and graffiti removal. The aim of the Adopt A Channel program is to enlist outside organizations to assist the County in maintaining the physical appearance of the channels and improving water quality. Adoption tasks include regular inspections, removal of trash and debris on an as-needed basis, and graffiti abatement. The program is open to individuals or organizations that meet minimum liability insurance requirements. The initial commitment is for a period of one year with automatic annual renewals at the request of the adopting agency and at the discretion of OC Public Works.

OCWD staff has been discussing with the County the possibility of adopting the portion of the Santa Ana River channel in which the District conducts recharge operations. In response to a discussion of this program at the March 2015 WIC meeting, the Board directed staff to continue discussing the Adopt A Channel program with County of Orange staff and return to the Committee with a proposal for consideration.

The Adopt A Channel program was launched with the adoption of a flood control channel by the Disneyland Resort. Disney entered into a contract with the Orange County Conservation Corps (OCCC) to remove trash and graffiti in the channel. The OCCC is a 501(c)(3) founded in 1993 to provide work for at-risk and disadvantaged youths. The program grants youth a chance to earn a living while learning valuable employment skills through job training and attending an on-site charter school to earn a high school diploma. The group, associated with AmeriCorps, is funded by the California Department of Conservation, individual contributions, grants, and contracts.

The area under discussion for inclusion in this program is the Santa Ana River in Anaheim and Orange that includes the six-mile stretch the District owns and the approximately two-mile stretch from Ball Road to near Chapman Avenue that is owned by the County and is used by the District for recharge operations, as shown in Figure 1. While OCWD is currently managing recharge in these sections of the river, graffiti and trash removal is the responsibility of the OC Flood Control District. To participate in the Adopt A Channel program, OCWD would have to assume the responsibility and cost of graffiti and trash removal in these sections of the river. Any issues related to homeless encampments in this area will continue to be the responsibility of the County of Orange and will not change with OCWD's participation in the Adopt A Channel program.

Staff recommends that OCWD enter into a contract with OCCC to remove graffiti and trash along the Santa Ana River Channel. OCCC proposes to conduct this work for an

annual cost of $18,576. While the OCCC would be paid through a contract with OCWD, the work in the river channel would be supervised by OC Public Works who maintains flood control responsibilities in the channel. OCCC has indicated that they currently have insurance coverage to satisfy District requirements.

Staff has identified a potential source of funding to be used for the Adopt A Channel program. The County of Orange established a fund in 1972 for Santa Ana River Environmental Enhancement. The 'Fund 403', held by the county, accumulated revenue from the sale of sediment in the river. The Fund contains approximately $60,000, and is to be spent by OCWD for a project approved by the county for environmental enhancement, according to a 1972 agreement between the county and OCWD. Staff plans to request that the county approve using the funds for the Adopt A Channel program.

If the District participates in the Adopt A Channel, the County will install a program sign at the channel site displaying the organization's commitments and recognizing contributors to the program. The adopter agrees to complete an Encroachment Permit Application and report annually on work performed.

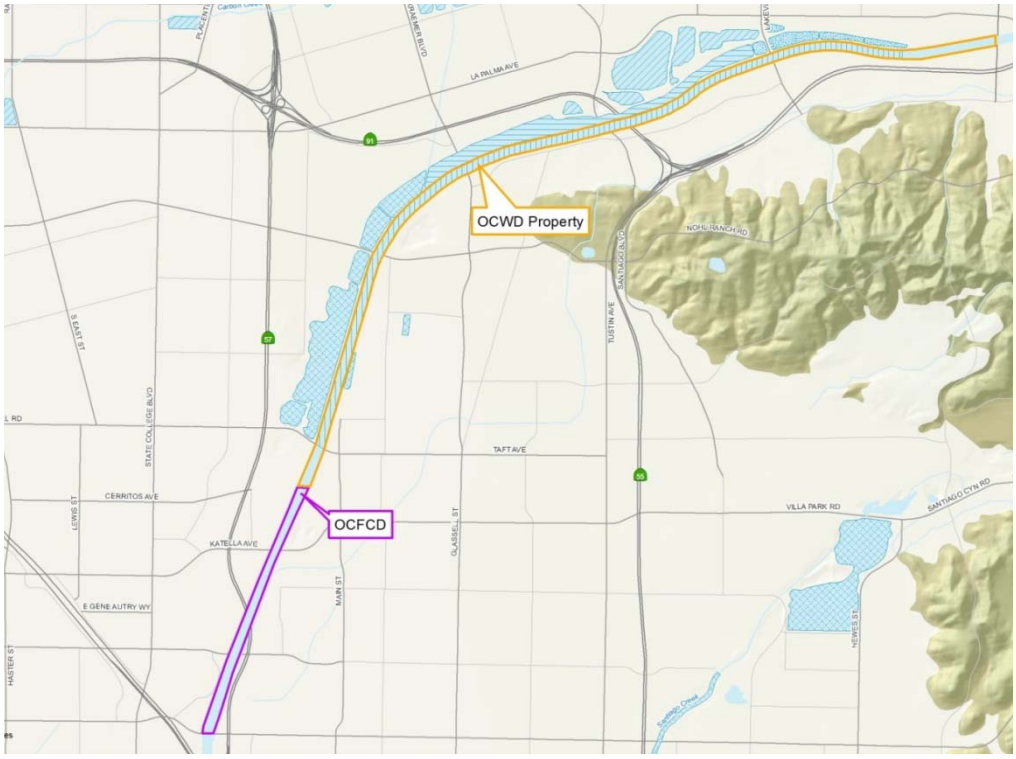


Figure 1: Portions of Santa Ana River proposed for the Adopt A Channel Program

PRIOR RELEVANT BOARD ACTION(S) N/A

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: G. Woodside

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/ Line Item No. N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: AGREEMENTS FOR ON-CALL ENVIRONMENTAL SERVICES

SUMMARY

The District has three pre-qualified firms available for on-call environmental consulting services. These firms are used to supplement the District's in-house staff person that prepares environmental documentation. Staff recommends renewing agreements with two of the existing firms, adding one additional firm that was previously pre-qualified, and terminating the agreement with one firm.

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting:

1. Authorize renewal of existing Agreements for on-call environmental analysis services with Bonterra Psomas Consulting and Environmental Advisors for an additional term of three years, extending the termination date to August 31, 2019; and

2. Approve and authorize execution of Agreement with Environmental Science Associates for on-call environmental analysis services with a termination date of August 31, 2019

BACKGROUND/ANALYSIS

The District has three pre-qualified firms available for on-call environmental consulting services. These firms, Bonterra Consulting, Environmental Advisors and First Carbon Solutions (which purchased Michael Brandman Associates) supplement the District's in-house staff person that prepares environmental documentation. For example, one of these firms, Environmental Advisors, is currently preparing the Environmental Impact Report for the Ball Road Basin General Plan Amendment/Rezoning.

Both Bonterra Consulting and Environmental Advisors have provided excellent services for the District. Staff recommends renewing the existing agreements with these two firms for an additional three years. Bonterra has been purchased by Psomas and does business as Bonterra Psomas.

The District originally contracted with Michael Brandman Associates for on-call services in 2010. Michael Brandman Associates was purchased by First Carbon Solutions and subsequently the key staff that OCWD works with have left the firm. Due to the loss of key staff at the firm, District staff recommends not renewing the agreement with First Carbon Solutions.

In 2010, the District pre-qualified and selected five firms. Environmental Science Associates (ESA) was one of the firms initially pre-qualified in 2010 and the District had a three-year agreement with ESA for on-call environmental analysis services. When the three-year agreement with ESA expired in 2013, it was not renewed because the District did not anticipate having sufficient workload to justify having agreements with five on-call firms. Staff recommends entering into a new agreement with ESA for on-call services based on their previous pre-qualification. This will provide the District with three on-call consultants. It is beneficial to have three on-call firms so that District staff can request proposals from three firms for large work items. Staff has reviewed ESA's previous proposal to the District and has verified that the ESA staff identified in their proposal continue to work for ESA. Additionally, ESA prepared the EIR for the District's Santa Ana River Water Rights Application and the ESA staff that worked on this project in 2004-2007 remain with ESA.

ESA, Environmental Advisors, and Bonterra Psomas have each agreed that they would abide by the current hourly rate fee schedule through August 31, 2019.

For those firms with on-call agreements with the District, individual work activities are managed through work orders issued by the District. A work order for a cost less than $20,000 is issued under the General Manager's authority. A work order for a cost of $20,000 or greater is only issued after review and approval by the Board of Directors.

PRIOR RELEVANT BOARD ACTION(S)

7-24-2013 R13-7-86 - Authorize renewal of Agreements for on-call environmental analysis services with Bonterra Consulting, Environmental Advisors, and Michael Brandman Associates for an additional term of three years, extending the termination date to August 31, 2016

8-1-2012, R12-8-97 - Include Environmental Advisors on the District's list of pre-qualified on-call environmental consulting firms and authorize execution of a professional services agreement with the company

8-18-2010, R10-8-132 - Authorize issuance of non-exclusive Professional Service Agreements to Bonterra Consulting, Chambers Group, Environmental Science Associates, and Michael Brandman Associates for on-call environmental analysis services.

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: C. Olsen

Budgeted: Yes
Budgeted Amount: $100,000
Cost Estimate: $100,000
Funding Source: CIP
Program/Line Item No: C15003
General Counsel Approval: Yes
Engineers Report: N/A
CEQA Compliance: To be filed

Subject: REQUEST FOR PROPOSALS FOR CONROCK-WARNER TRANSFER TUBE DESIGN SERVICES

SUMMARY

The existing drain tubes between Conrock and Warner Basin are undersized and in need of refurbishment. Staff desires to begin the permitting and design work for a large diameter lower transfer tube between the two basins. Staff is requesting authorization to issue a Request for Proposals (RFP) for the Conrock-Warner Transfer Tube Project design.

Attachment(s): Draft RFP

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Authorize issuance of Request for Proposals for the Conrock-Warner Transfer Tube Project Design.

BACKGROUND/ANALYSIS

During normal basin operations, water is transferred to Warner Basin from Conrock Basin via four 48-inch diameter surface transfer tubes. There are also two small diameter lower drain tubes (24-inch and 36-inch diameter) that convey water from Conrock to Warner Basin during basin refills and draining of Conrock Basin during dewatering events.

Construction of a large diameter lower transfer tube with a flow meter will allow Conrock and Warner Basins to fill and drain quickly while increasing the desilting capability of Warner Basin since it would be constructed at the north end and water is transferred out of Warner Basin at the south end. Currently, the surface transfer tubes are at the south end and do not allow for efficient use of basin storage and provide relatively little retention time for desilting. During the design phase, an evaluation will be performed to determine if the existing smaller diameter tubes should be abandoned or retrofitted to be used with a new larger tube. If retrofitted, the headwalls and outlet structures for the small diameter lower drain tubes will be constructed with new valves and electric actuators. Staff requests authorization to issue a Request for Proposals for design services.

PRIOR RELEVANT BOARD ACTION(S) None

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: C. Olsen/R. Bouley

Budgeted: Yes
Budgeted Amount: $50,000
Cost Estimate: $50,000
Funding Source: R&R
Program/Line Item No. R14021
General Counsel Approval: Yes
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: **REQUEST FOR PROPOSALS FOR CENTER LEVEE CORRUGATED METAL PIPE (CMP) TRANSFER PIPES REPAIR PROJECT DESIGN SERVICES**

SUMMARY

Staff performed a survey of the culverts that connect the Santa Ana River and the Off-River system through the Center Levee. Three areas, consisting of nine individual pipes, were identified that are in need of lining or rehabilitation. Staff recommends issuing a Request for Proposals (RFP) for the Center Levee Corrugated Metal Pipe (CMP) Transfer Pipes Repair Project Design Services.

Attachment(s): Draft RFP

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Authorize issuance of a Request for Proposals for Center Levee CMP Transfer Pipes Repair Project Design Services.

BACKGROUND/ANALYSIS

Recently staff performed an inspection of all pipelines and structures that discharge into the Santa Ana River (SAR). OCWD owns and maintains transfer pipes between the SAR and Off-River in several locations. Staff identified culvert crossings at two of these locations that need major repair or replacement. One location is near Olive Basin and consists of four 36-inch CMP transfer pipes. The other location also consists of four 36-inch CMP transfer pipes between the SAR and Weir Pond 4. In addition, OCWD owns and maintains one 33-inch diameter bare steel transfer pipe between Lower Five Coves and Lincoln Basin that is highly susceptible to corrosion. The locations of the culverts are shown in the following Figure 1:

Figure 1: Project Locations

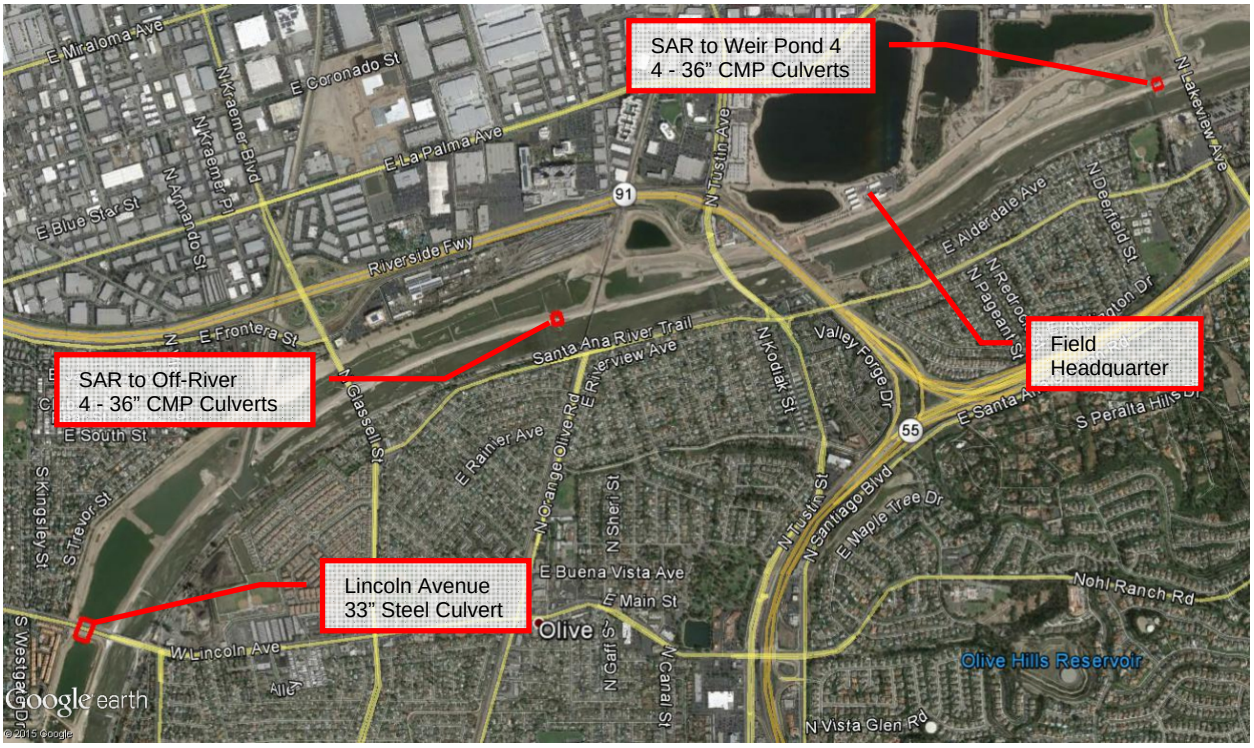


Figure 2, below, shows the condition of the culverts needing repairs:

Figure 2: Culvert Photos

OCWD has previously used in-place lining techniques as a cost-effective alternative to rehabilitate damaged culverts. Staff believes that these culverts can also be lined in lieu of replacement. Staff requires the services of a consultant to determine the best lining alternatives and produce project construction documents. Staff is requesting authorization to issue a Request for Proposals for the Center Levee CMP Transfer Pipes Repair Project Design Services.

PRIOR RELEVANT BOARD ACTION(S): None

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: G. Woodside/A. Hutchinson

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No. N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: NOTIFICATION TO DEPARTMENT OF WATER RESOURCES TO EXPLORE BULLETIN 118 BASIN BOUNDARY MODIFICATIONS

SUMMARY

On January 1, 2015, the Sustainable Groundwater Management Act (Act) took effect. In accordance with the Act, the Department of Water Resources (DWR) adopted regulations that allow agencies to propose modifications to groundwater basin boundaries described in DWR's Bulletin 118. In accordance with these regulations, staff recommends that the District notify DWR that it is exploring a scientific boundary modification to Basin 8-1, Coastal Plain of Orange County Groundwater Basin.

Attachment(s):
- Presentation
- DWR Basin Boundary Emergency Regulation Fact Sheet

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Authorize staff to notify DWR and local agencies of its decision to explore scientific boundary modifications to Bulletin 118, Basin 8-1, Coastal Plain of Orange County Groundwater Basin.

BACKGROUND/ANALYSIS

On September 16, 2014 Governor Brown signed three bills (SB1168, AB1739, and SB1319), which comprise the Sustainable Groundwater Management Act (Act).

The Act requires that all high- and medium- priority basins designated by the Department of Water Resources (DWR) be sustainably managed by 2020 or 2022 depending on basin conditions. In June 2014, DWR published a report on basin prioritization and designated the Coastal Plain of Orange County Groundwater Basin (Basin 8-1) as a medium-priority basin. This was primarily due to heavy reliance on groundwater within the basin and how this was accounted for in the ranking system. It is not an indication that the basin needs to be managed differently.

The Act directed DWR to develop regulations to allow agencies to propose modifications to the boundaries of groundwater basins described in DWR's Bulletin 118. The

regulations, which became effective on November 16, 2015, can be found in the California Code of Regulations (CCR), Title 23, Division 2, Chapter 1.5, Subchapter 1. More information about the regulation can be found in the attached fact sheet prepared by DWR.

Two basic types of basin boundary modifications are identified in the regulation:

- Scientific
- Jurisdictional

A scientific modification to a basin or subbasin boundary involves the addition, deletion, or relocation of a boundary based on the geologic or hydrologic conditions that define a groundwater basin or subbasin. Jurisdictional modifications involve the addition, deletion, or relocation of a basin or subbasin boundary that is not a scientific modification but promotes sustainable groundwater management.

In summary, the boundary modification process contains the following steps:

1. Notify DWR that agency is exploring basin boundary modifications;
2. Post proposed boundary modification on agency website;
3. Notify all interested and local agencies affected by the proposed boundary modification;
4. Hold public hearing to receive public input and comments;
5. Adopt resolution formally requesting the boundary modification;
6. Submit required information to DWR to support boundary modification; and,
7. File notice of exemption per CEQA guidelines.

Once the District notifies DWR of its intent to explore modifications to the Bulletin 118 Basin 8-1 boundary, the proposed boundary modifications will be made available on OCWD's website. All OCWD water supply agencies as well as any agency that could be affected will be notified by mail. Public comments will be received until a public hearing is held at the District's regular Board of Directors meeting, tentatively scheduled for February 17, 2016 at 5:30 pm. Following the public hearing, OCWD will submit the required information, including a required board resolution and any public comments received, to DWR so they can begin evaluating the request.

DWR will receive basin boundary modification requests from January 1 to March 31, 2016. The aggressive schedule is primarily to allow agencies to modify basin boundaries prior to the deadline for Alternative Submittals (January 1, 2017) or Groundwater Sustainability Agency (GSA) formation (June 30, 2017).

Proposed Modifications to Basin 8-1 Boundaries

The first Bulletin 118 was published in 1975. The boundaries established for Basin 8-1, the Coastal Plain of Orange County Groundwater Basin, have significant off-sets in some areas from current geographic information system (GIS) data. This off-set could be due

to distortions caused by digitizing maps created in the 1970s and then projecting them onto current GIS base maps.

To improve the accuracy of the Basin 8-1 boundary, staff reviewed available geologic information and modified the boundary as shown on Figure 1. The proposed modifications are consistent with the written description of the basin in Bulletin 118. Since these modifications are based on geologic and hydrogeologic data, the proposed change is classified as a scientific boundary modification.

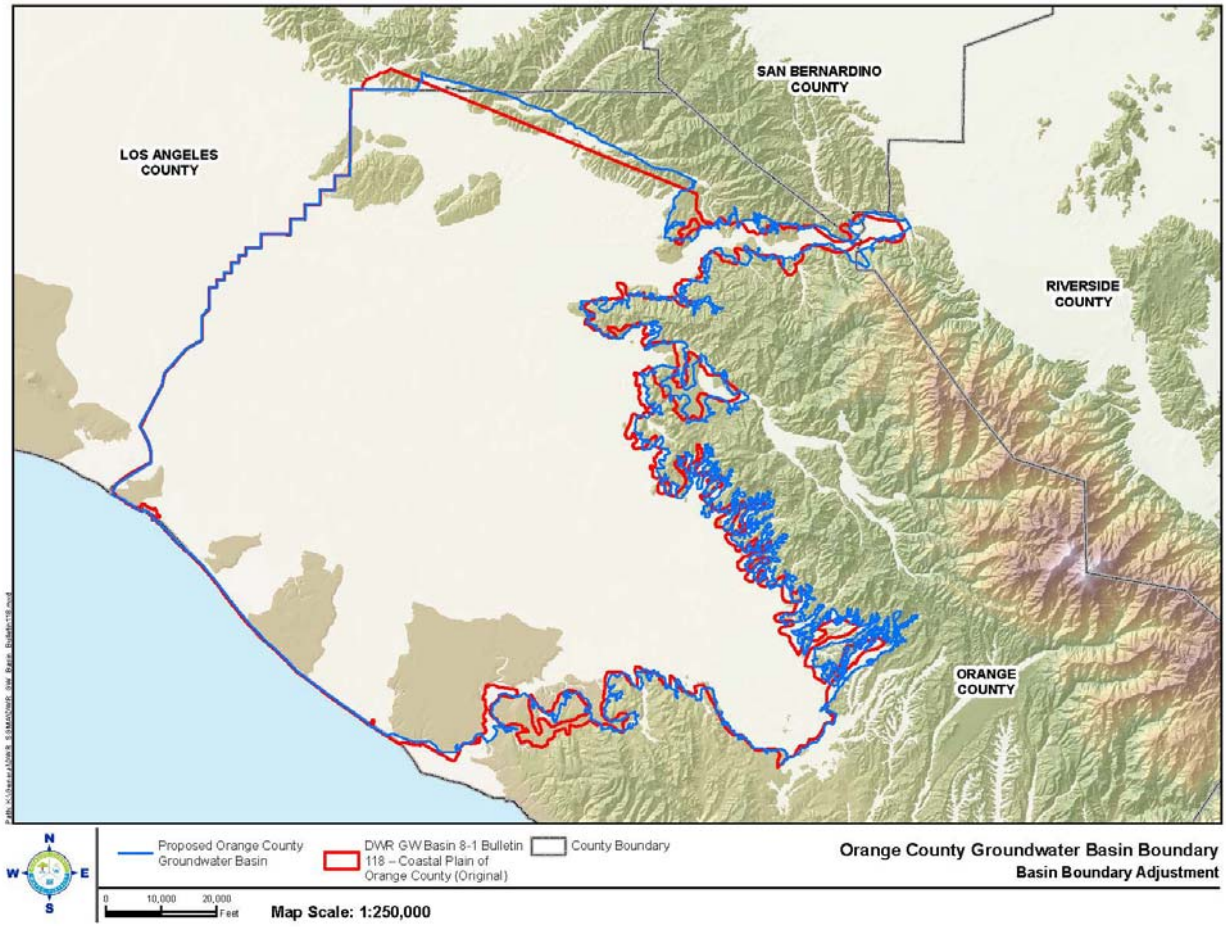


Figure 1
Current (Red) and Proposed (Blue) Bulletin 118 Boundary, Coastal Plain of Orange County Groundwater Basin (Basin 8-1)

Proposed Boundary Change by City of La Habra

The City of La Habra is also proposing to modify the basin boundaries to create a new La Habra Basin as a separate basin or as a subbasin of Basin 8-1. Figure 2 shows the approximate extent of the proposed La Habra Basin/Subbasin. The proposed La Habra basin would include the city limits of La Habra and Brea. This proposed boundary change is considered a jurisdictional modification.

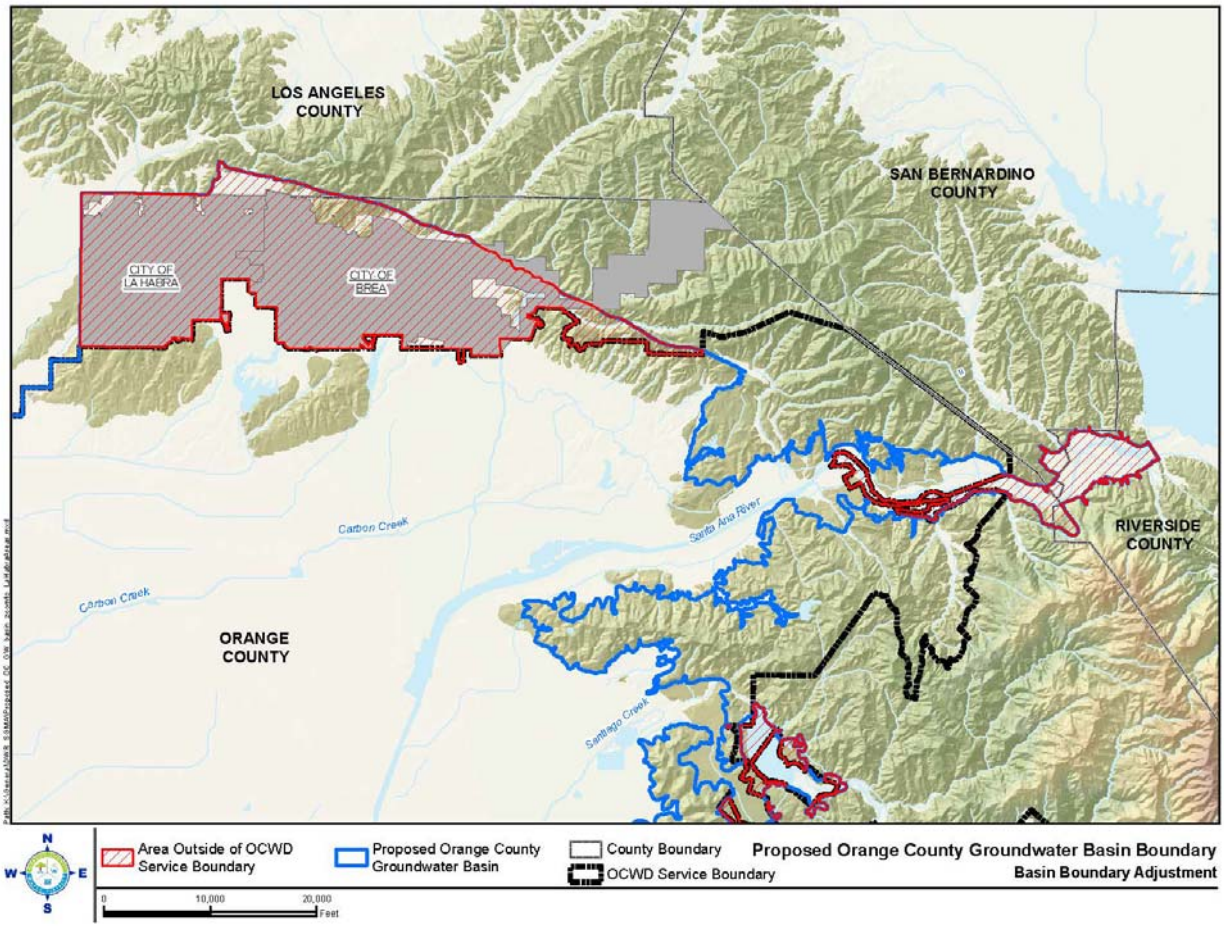


Figure 2
Approximate Extent of Proposed La Habra Basin/Subbasin

PRIOR RELEVANT BOARD ACTION(S)

10-15-14, M14-160 Direct staff to Identify Steps for Managing Groundwater Outside of District Boundaries (Sustainable Groundwater Management Act)

8-20-14, M14-119 Adopt Support if Amended Position on State Legislation - SB1168/ AB1739 (Groundwater Management Legislation)

7-16-14, R14-7-104 Adopt Groundwater Management Legislation Policy Principles

Sustainable Groundwater Management Act

PROPOSED BASIN BOUNDARY EMERGENCY REGULATIONS

California Department of Water Resources

http://water.ca.gov/groundwater/sgm/basin_boundaries.cfm

In September 2014, the Governor signed into law the Sustainable Groundwater Management Act (SGMA). The Department has developed a program and is currently implementing new and expanded responsibilities identified in SGMA. One of these responsibilities is developing emergency regulations to modify groundwater basin boundaries. SGMA established a process for local agencies to request that DWR revise the boundaries of a groundwater basin or subbasin, including the creation of new subbasins. California's existing groundwater basins and subbasins are described and delineated in **DWR's Bulletin 118-Update 2003**; – and the key definitions of basin, subbasin, and aquifer used in the emergency regulation are as follows:

- A **basin** refers to an area specifically defined as a basin or "groundwater basin" in Bulletin 118, and shall refer generally to an aquifer or stacked series of aquifers with reasonably well-defined boundaries in a lateral direction, based on features that significantly impede groundwater flow, and a definable bottom, as further defined or characterized in Bulletin 118
- A **subbasin** refers to an area specifically defined as a subbasin or "groundwater subbasin" in Bulletin 118, and shall refer generally to any subdivision of a basin based on geologic and hydrologic barriers or institutional boundaries, as further described or defined in Bulletin 118.
- An **Aquifer** refers to a three-dimensional body of porous and permeable sediment or sedimentary rock that contains sufficient saturated material to yield significant quantities of groundwater to wells and springs, as further defined or characterized in Bulletin 118.

By January 1, 2016, DWR is required to adopt emergency regulations that specify the information required to comply with Water Code §10722.2, which outlines the process that local agencies shall follow when requesting modifications to existing boundaries of groundwater basins and subbasins or the creation of new subbasins . The emergency regulations also identify the methodology and criteria that will be applied by DWR when evaluating modification requests. In general, DWR will apply the following criteria when evaluating boundary modification requests.

- How to assess the likelihood that the proposed basin can be sustainably managed.
- How to assess whether the proposed basin would limit the sustainable management of adjacent basins.
- How to assess whether there is a history of sustainable management of groundwater levels in the proposed basin.

Existing groundwater basin and subbasin boundaries have been defined and revised based on the best available information during each past update of Bulletin 118. The emergency regulations create a process that builds off this historical knowledge and provides a mechanism to modify basin and subbasin boundaries or create new subbasins based on new scientific information and local groundwater management knowledge to improve coordination and promote statewide sustainable groundwater management.

The emergency regulations have been organized in a manner to encompass the variety of modifications that may be requested by a local agency (Requesting Agency). The requirements for each boundary modification vary according to the type of modification requested. Requesting Agencies are required to the greatest extent practicable, combine all boundary modification requests that affect the same basin or subbasin and coordinate with other affected local agencies and affected public water systems, as necessary, to present the information as a single request.

SUMMARY OF REGULATION ARTICLES

The emergency regulations will be part of the California Code of Regulations Title 23 - Waters, Division 2 - Department of Water Resources, Chapter 1.5 – Groundwater Management, Subchapter 1 – Groundwater Basin Boundaries, and are arranged into seven articles. The following is a brief summary of each article:

1. **Introductory Provisions**: Provides the authority and intent of the subchapter.
2. **Definitions**: Provides definitions to key terms used in the regulations.
3. **Boundary Modification Categories**: Provides a description for characterizing the type of modification being requested.
4. **Procedures for Modification Request and Public Input**: Describes procedural requirements related to boundary modification requests and public input to those requests.
5. **Supporting Information**: Description of the required information to support the proposed basin modification.
6. **Methodology and Criteria for Evaluation**: Description of the criteria by which information provided in Article 5 will be evaluated.
7. **Adoption of Boundary Modification**: Procedure for the adoption of boundary modifications by DWR.

MODIFICATION TYPES

There are two types of basin modifications, scientific and jurisdictional, each with specific requirements to justify the modification request. The following is a description and graphical representation of the types of basin or subbasin modifications:

Scientific	Hydrogeologic
Jurisdictional	Internal
	Consolidation
	Subdivision

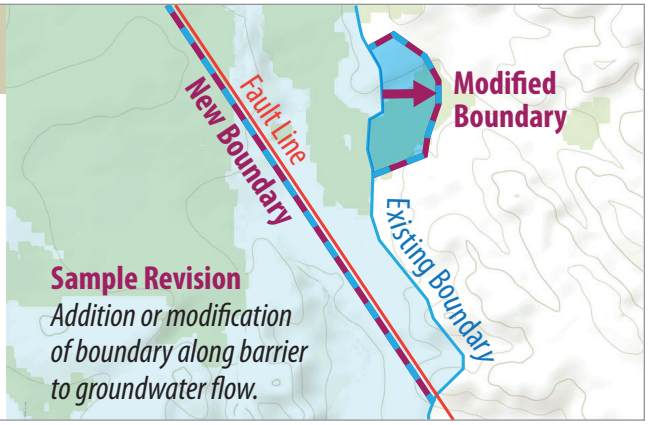
Scientific Modifications: A scientific modification to a basin or subbasin boundary involves the addition, deletion, or relocation of a boundary based on the geologic or hydrologic conditions that define a groundwater basin or subbasin.

Jurisdictional Modifications: A jurisdictional modification involves the addition, deletion, or relocation of a basin or subbasin boundary that is not a scientific modification but promotes sustainable groundwater management.

Examples of Modification Types

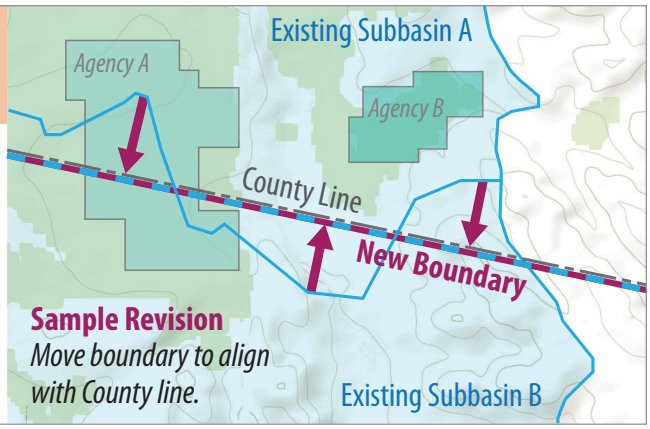
SCIENTIFIC

A **scientific** revision to a basin boundary consists of the addition, deletion, or relocation of a boundary based on the geologic or hydrologic conditions that define that basin.



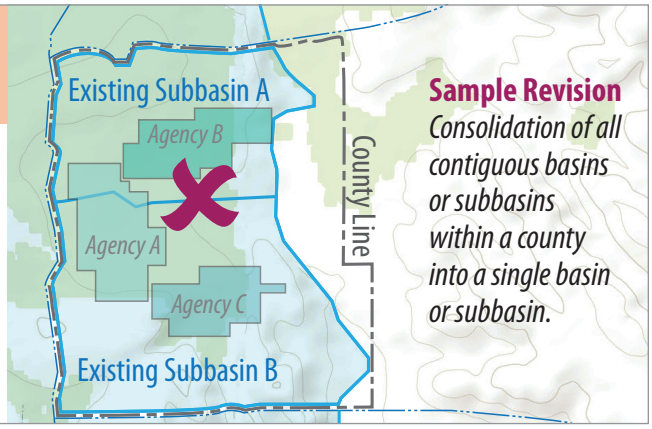
INTERNAL
(Jurisdictional)

Internal Boundary Revision refers to any boundary modification that would adjust the location of a boundary between subbasins, within a basin, or the shared boundary between adjacent basins.



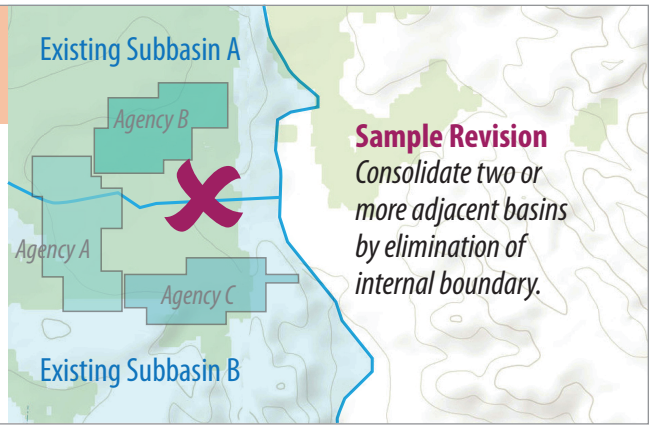
COUNTY BASIN CONSOLIDATION
(Jurisdictional)

County Basin Consolidation means the consolidation of all contiguous basins or subbasins within a county into a single basin or subbasin whose boundaries do not extend beyond those of the county.



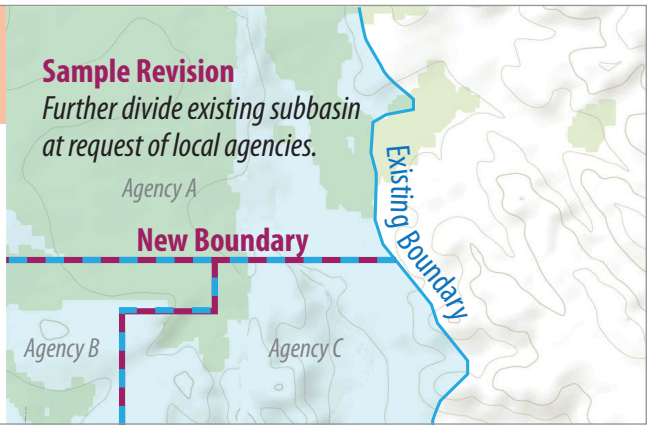
BASIN CONSOLIDATION
(Jurisdictional)

Basin Consolidation refers to any boundary modification that would reduce the number of subbasins within a basin, or merge two or more adjacent basins, but would change only shared boundaries and would not change the external boundary of any basin or subbasin.



BASIN SUBDIVISION
(Jurisdictional)

Basin Subdivision refers to any boundary modification that would increase the number of subbasins within a basin or subbasin.



REQUIRED COMPONENTS OF BOUNDARY MODIFICATION

The information submitted by a Requesting Agency to justify a boundary modification will be evaluated using the criteria described in SGMA (Water Code § 10722.2(c)(1)-(3)). The criteria are general, as described below, but provide a context in which to present information to support the boundary modification request.

- How to assess the likelihood that the proposed basin can be sustainably managed.
- How to assess whether the proposed basin would limit the sustainable management of adjacent basins.
- How to assess whether there is a history of sustainable management of groundwater levels in the proposed basin.

All of the following three components are required for boundary modifications relate to Water Code §10722.2(a):

Component 1 – General Information

A Requesting Agency will be required to provide general information including: contact information, evidence of statutory or other legal authority of the agency, a narrative description of the proposed boundary modification and a copy of an adopted board resolution initiating the boundary modification request. This information is important as it provides the opportunity to explain what type of boundary modification is being proposed and an explanation of how the boundary modification will promote sustainable groundwater management in the proposed basin or subbasin. It also provides for the evaluation of eligibility as a local agency and provides contact information to assure that the boundary modification request is coordinated properly.

Component 2 – Notification, Consultation, and Public and Local Agency Input

A Requesting Agency will need to demonstrate evidence of notification and consultation with local agencies and public water systems and, along with DWR, provide opportunities for public input. The purpose of these requirements are to establish communication and coordination between local agencies, public water systems, and the public on each boundary modification. This will allow DWR to receive and evaluate relevant comments, both for and against a boundary modification, from as any entities and individuals as possible in order to make the most informed decision when approving boundary modification requests. Key requirements for notification, consultation, and local agency and public input are described below and in more detail in Article 4 and 5 of the regulations:

Public Input (§343.12) - Any person may provide information to support or oppose a proposed boundary modification request and DWR will consider such comments as part of its evaluation of a boundary modification request.

Local Agency Input (§344.8) - All requests are required to include the following (Article 5):

- Evidence that the requesting agency provided information to affected local agencies and affected public water systems regarding the proposed boundary modification as required by Section 344.4 and provided those affected local agencies and affected public water systems an opportunity to comment in support or opposition.
- Copies of all comments and documents from affected local agencies and affected public water systems in support of or opposition to the proposed modification.
- Any evidence the Requesting Agency believes will rebut any opposition to the proposed boundary modification or otherwise assist the Department in its evaluation.

Any affected local agency or affected public water system that elects to support or oppose the proposed boundary modification is required to provide the requesting agency with one of the following:

- A copy of a resolution formally adopted by the decision-making body of the affected local agency or affected public water system.
- A letter signed by an executive officer or other official with appropriate delegated authority who represents the affected local agency or affected public water system.

A request that involves basin subdivision pursuant to Section 342.4(c) shall provide information demonstrating that the proposed boundary modification is supported by at least three-fourths of the local agencies and public water systems in the affected basins.

The level of detail provided by public input and by an affected local agency or affected public water system in support or opposition to a proposed boundary modification need not be as comprehensive as that contained in the request, but the support or opposition must rely on similar scientific and technical information as the particular boundary modification request to which it is addressed, and will be evaluated by the Department using the same criteria.

Component 3 – Technical Information

Technical information describing and supporting the three criteria identified in Water Code § 10722.2(c) is required for boundary modification. Requesting Agencies are required to provide evidence to justify the modification of a basin boundary and show compliance with the legislative intent of the SGMA. The technical supporting information required for each modification types are illustrated in the boundary modification process graphic below and described in detail in Article 5.

STAKEHOLDER INPUT OPPORTUNITIES

Local agencies, as defined in the SGMA, are eligible to request boundary modifications. The emergency regulations have been established to provide multiple opportunities for stakeholder input and notification of basin modification requests. The initial opportunity is direct communication with the Requesting Agency or an affected local agency through typical hearing processes at the local level. The notice, consultation, and public and local agency input components require at least one public meeting to occur prior to all boundary modification requests.

The emergency regulations includes a Public Input provision (§343.12), which defines a process for any person to provide information to support or oppose a proposed boundary modification request after a request is officially submitted to the DWR.

After DWR evaluates all boundary modification requests, DWR will make a draft list of approved boundary modifications available on its website and will hold at least one public meeting to present and discuss the proposed boundary modifications. Another opportunity to provide input is when DWR presents the draft list of approved boundary modifications to the California Water Commission (CWC) for hearing and comment.

NEXT STEPS FOR ADOPTING REGULATIONS

The following are the anticipated next steps for adopting the emergency regulations:

October 21, 2015 – Presentation of proposed emergency regulations to CWC for adoption.

October – November, 2015 – Formal Notice of Proposed Rulemaking and supporting information.

October – November, 2015 – Submission of adopted emergency regulations to Office of Administrative Law.

January 1, 2016 – Boundary modification requests accepted by DWR within 90 day period.

*All dates are subject to change

Basin Boundary Modification Process

All basins begin with existing Bulletin 118 boundaries.

Boundary modification requested by local agency?

YES → Notify DWR

NO

Stakeholder input opportunities shown in blue.

Required Components of Submittal
Information required is dependent upon type of modification.

Reason	Type of Modification	(1) Local Info: Agency Information and Resolution	(1) Local Info: Notification & Consultation	(2) Local Agency Input: Affected Agencies and Systems - *Must be Notified* - *Provided an Opportunity to Support or Oppose*	(2) Local Agency Input: Supported by 75% of Agencies and Systems	(3) Technical Information: Desc. of Basin Boundaries *(Map, GIS data)*	(3) Technical Information: Existing Water Management in Basin	(3) Technical Information: Hydrogeologic Conceptual Model	(3) Technical Information: Historic and Current Conditions	(3) Technical Information: Technical Study
Scientific	Hydrogeologic	✓	✓	✓		✓		✓		✓
Jurisdictional	Internal	✓	✓	✓		✓	✓	✓[1]		
Jurisdictional	Consolidation	✓	✓	✓		✓	✓	✓		
Jurisdictional	Subdivision	✓	✓		✓	✓	✓	✓	✓	

Request Review Process

Opportunity for Public Input [2]	DWR Review & Public Notification	CA Water Commission Review
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓

DRAFT APPROVAL

HEAR & COMMENT

If **DWR** determines requested modification is acceptable, **Boundary Modification is Approved**

Local agencies may submit multiple modification types.

If any required components are missing, request may not be approved and original boundaries will be used.

Review process may determine modification is not acceptable.

GSA/GSP formed in existing basin(s)

Approved Boundaries Published in *California's Groundwater* ***Bulletin 118 Updates*** *(2017 and years ending in 0 and 5)*

B-118 2017
2020
2025

[1] DWR may waive this requirement if the requesting agency is able to demonstrate that the proposed boundary modification is unlikely to affect sustainable groundwater management.

[2] Public input submittal must rely on similar scientific and technical information as the request to which it is addressed.

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/Finance Issues Cte.
Board of Directors

From: Mike Markus

Staff Contact: R. Fick/V. Sharma

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers Report: N/A
CEQA Compliance: N/A

Subject: **MONTHLY CASH CONTROL REPORT**

SUMMARY

The following monthly financial information is provided in the staff report.

Attachment(s):
- Summary Cash and Cash Equivalent Control Report
- Summary of Cash Reserves
- Summary Sources and Disbursements
- Sources of Funds
- Disbursement of Funds

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Receive and file Summary Cash and Cash Equivalents Control Reports dated December 31, 2015.

PRIOR RELEVANT BOARD ACTION(S) Monthly

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/Finance Issues Cte.
Board of Directors

From: Mike Markus

Staff Contact: B. Dosier/D. Jackson

Budgeted: Yes
Budgeted Amount: Average annual: $32,000
Cost Estimate: Average Annual: $32,000
Funding Source: General Fund
Program/Line Item No. 1069.51206
General Counsel Approval: Required
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: RENEWAL OF LICENSE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR GWRS SOUTHEAST BARRIER PIPELINE AND GREEN ACRES PROJECT PIPELINE

SUMMARY

Two current five-year license Agreements with Southern California Edison (SCE) expire on January 31, 2016 for the Green Acre Project Pipeline and September 30, 2016 for a portion of the GWRS Southeast Barrier pipeline. SCE has submitted two subsequent (i.e., renewed) License Agreements for additional five-year periods (years 2016 through 2021) with a revised annual fee schedule.

Attachment(s):
- License Agreement Contract No. 9.4068 (L2110) for Green Acres Project Pipeline
- License Agreement Contract No. 9.4172 (L3272) for GWRS Southeast Barrier Pipeline

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting:

1) Authorize renewal of SCE License Contract No. 9.4068 (formerly Contract No. L2110) required for the Green Acres Project pipeline for a five-year period commencing February 1, 2016 for a total fee of $99,218;
2) Authorize renewal of SCE License Contract No. 9.4172 (formerly Contract No. L3272) required for the GWRS Southeast Barrier Pipeline for a five-year period commencing October 1, 2016 for a total fee of $59,835.

BACKGROUND/ANALYSIS

Green Acres Project Pipeline, Contract 9.4068 (Contract No. L2110)

Approximately 1 mile of the Green Acres Project pipeline crosses SCE property that lies adjacent to the Santa Ana River in Huntington Beach. The total area of SCE property utilized by the pipeline is 42,341 square feet (approximately 1 acre). The District constructed the Green Acres Project pipeline under a temporary permit issued by SCE in 1986. In 1990, the first license agreement was executed and subsequently renewed in 1995, 2001, 2006 and 2011.

On December 30, 2015 a new five-year license agreement, Contract No. 9.4068, with graduated fees of 3% per year was received from SCE for a term of February 1, 2016 to January 31, 2021. This replaces the current license agreement for Contract No. 9.4068 (formerly Account No. L2110) which expires on January 31, 2016, and is to be replaced with the attached renewed license agreement. Either party may cancel the license agreement upon providing a 30-day written notice. The annual license fee for each year is as follows:

2016 - $ 18,688
2017 - $ 19,249
2018 - $ 19,826
2019 - $ 20,421
2020 - $ 21,034

GWRS Southeast Barrier Pipeline, Contract No. 9.4172 (Contract No.L3272)

Approximately 1 mile of the GWRS Southeast Barrier pipeline is located on SCE property that is adjacent to the Santa Ana River in Huntington Beach. The total area of SCE property utilized by the pipeline is 42,341 square feet (approximately 1 acre). The District executed an initial license agreement for GWRS Southeast Barrier pipeline with SCE in 2001 and renewed on July 19, 2006 and November 2, 2011.

On November 30, 2015, a new five-year license agreement, Contract No. 9.4172, with graduated fees of 3% per year was received from SCE for a term of October 1, 2016 to September 30, 2021. This replaces the current license agreement for Contract No. 9.4172 (formerly Account No. L3272), which expires on September 30, 2016 and is to be replaced with the attached renewed license agreement. Either party may cancel the license agreement upon providing a 30-day written notice. The annual license fee for each year is as follows:

2016 - $11,270
2017 - $11,608
2018 - $11,957
2019 - $12,315
2020 - $12,685

Staff has reviewed the terms and conditions of the renewed license agreement and finds them to be acceptable.

PRIOR RELEVANT BOARD ACTION(S)

Green Acres Project Pipeline 9.4068 (Contract No.L2110)

11/02/11, R11-11-162, Authorizing Renewal of License with SCE for Green Acres Project pipeline, Southeast Barrier pipeline, and Talbert West End Improvement Project (Harper Park)

1/18/06 R06-1-3- Authorize renewal of License for SCE property for Green Acres Project Pipeline 2110, Reach 3 in Huntington Beach.

2/21/01 R01-2-28 - Authorize renewal of SCE License Agreement No. POBEL85E71 (2110) (formerly No. P84S2032-1-33) required for Green Acres Pipeline for a period of five years commencing February 1, 2001 for a total fee of $63,680 payable as follows; 2001-$11,995 2002-$12,355, 2003-$12,725, 2004-$13,105, 2005-$13,500.

04/12/95 R95-4-42 - Accept Southern California Edison Company License Agreement Required for Green Acres Project Pipeline in Huntington Beach.

9/5/90 R90-9-178 - Authorize execution of Southern California Edison Company License Agreement Required for Green Acres Project Pipeline;

Southeast Barrier Pipeline 9.4172 (L3272)

11/02/11, R11-11-162, Authorizing Renewal of License with SCE for Green Acres Project pipeline, Southeast Barrier pipeline, and Talbert West End Improvement Project (Harper Park)

07/19/2006, R06-7-94, for Southeast Barrier pipeline located on SCE property that is adjacent to the Santa Ana River in Huntington Beach 3272

ORANGE COUNTY WATER DISTRICT

L I C E N S E A G R E E M E N T

I N D E X O F A R T I C L E S

1. USE
2. TERM
3. CONSIDERATION
4. INSURANCE
5. LICENSOR'S USE OF THE PROPERTY
6. LICENSEE'S IMPROVEMENTS
7. LICENSEE'S PERSONAL PROPERTY
8. HEIGHT LIMITATIONS AND VERTICAL CLEARANCES
9. ACCESS AND CLEARANCES
10. PARKING
11. WEEDS, BRUSH, RUBBISH AND DEBRIS (WEED ABATEMENT)
12. FLAMMABLES, WASTE AND NUISANCES
13. PESTICIDES AND HERBICIDES
14. HAZARDOUS WASTE
15. SIGNS
16. FENCING
17. PARKWAYS AND LANDSCAPING
18. IRRIGATION EQUIPMENT
19. UNDERGROUND TANKS
20. UNDERGROUND FACILITIES
21. UTILITIES
22. TAXES, ASSESSMENTS AND LIENS
23. EXPENSE
24. ASSIGNMENTS
25. COMPLIANCE WITH LAW
26. GOVERNING LAW
27. INDEMNIFICATION
28. TERMINATION
29. EVENTS OF DEFAULT
30. REMEDIES
31. NON-POSSESSORY INTEREST
32. WAIVER
33. AUTHORITY
34. ATTORNEY FEES
35. ELECTRIC AND MAGNETIC FIELDS
36. INDUCED VOLTAGES

Initial (_____)/(_____)
Licensor/Licensee

37. NOTICES
38. RECORDING
39. COMPLETE AGREEMENT
40. SIGNATURE AUTHORITY
APPENDIX: GUIDELINES FOR STANDARD LICENSEE IMPROVEMENTS
ADDENDUM(S)
POLELINE, PIPELINE OR UNDERGROUND CABLE

Initial (_____)/(_____)
Licensor/Licensee

LICENSE AGREEMENT

THIS AGREEMENT between SOUTHERN CALIFORNIA EDISON COMPANY, a corporation organized under the laws of the State of California, hereinafter called "Licensor", and ORANGE COUNTY WATER DISTRICT, hereinafter called "Licensee";

WITNESSETH: That Licensor, for and in consideration of the faithful performance by Licensee of the terms, covenants and agreements hereinafter set forth to be kept and performed by Licensee, does hereby give to Licensee the license to use that certain real property solely for the purpose hereinafter specified, upon and subject to the terms, reservations, covenants and conditions hereinafter set forth, hereinafter designated as "Property" on the Exhibit "A" attached hereto and made a part hereof, being a portion of Assessor's Parcel Number 155-301-00, situated in the City of Huntington Beach, County of Orange, State of California.

SUBJECT TO:

Covenants, conditions, restrictions, reservations, exceptions, rights and easements, whether or not of record.

1. Use: Licensee will use the Property for pipeline purposes only. Licensor makes no representation, covenant, warranty or promise that the Property is fit for any particular use, including the use for which this Agreement is made and Licensee is not relying on any such representation, covenant, warranty or promise. Licensee's failure to utilize the Property in accordance with this License as determined by the Licensor in its sole discretion will be grounds for immediate termination of this Agreement in accordance with Article 29.

2. Term: Unless otherwise terminated as provided herein, this Agreement will be in effect for a term of five (5) years commencing on the first day of February, 2016 and ending on the last day of January, 2021. Licensee acknowledges that this Agreement does not entitle Licensee to any subsequent agreement, for any reason whatsoever, regardless of the use Licensee makes of the Property, the improvements Licensee places on or makes to the Property, or for any other reason.

3. Consideration: Licensee will pay to Licensor the sum of Eighteen Thousand Six Hundred Eighty Eight and 10/100 Dollars ($18,688.10) upon the execution and delivery of this Agreement with subsequent annual payments. Payment to Licensor must be in the form of a check or money order payable to Southern California Edison Company. No cash payments will be accepted by Licensor. Payment schedule as follows:

Term	**Year Due**	**Yearly Amount**	**Payment Due First Day Of**
First Year	2016	$18,688.10	February
Second Year	2017	$19,248.75	February
Third Year	2018	$19,826.21	February
Fourth Year	2019	$20,421.00	February
Fifth Year	2020	$21,033.63	February

Initial (_____)/(_____)
Licensor/Licensee

All accounts not paid by the agreed upon due date may be subject to a late fee of up to 20% of the full amount that was due on said date.

All payments subsequent to the initial payment will be paid to the Southern California Edison Company, Post Office Box 800 Rosemead, California, 91770, and Attention: Corporate Accounting Department – Accounts Receivable.

4. Insurance: During the term of this Agreement, Licensee shall maintain the following insurance:

(a) Workers' Compensation with statutory limits, in accordance with the laws of the State of California and Employer's Liability with limits of not less than $1,000,000.00 each accident, disease/each employee, and disease/policy limit. Licensee shall require its insurer to waive all rights of subrogation against Licensor, its officers, agents and employees, except for any liability resulting from the willful or grossly negligent acts of the Licensor.

(b) Commercial General Liability Insurance, including contractual liability and products liability, with limits not less than $1,000,000.00 per occurrence. Such insurance shall: (i) name Licensor, its officers, agents and employees as additional insureds, but only for Licensee's acts or omissions; (ii) be primary for all purposes and (iii) contain separation of insureds or cross-liability clause, and (iv) require its insurer to waive all rights of subrogation against Licensor, its officers, agents and employees, except for any liability resulting from the willful or grossly negligent acts of the Licensor.

(c) Commercial Automobile Liability insurance with a combined single limit of $1,000,000.00. Such insurance shall cover the use of owned, non-owned and hired vehicles on the Property.

Licensee shall provide Licensor with proof of such insurance by submission of certificates of insurance, pursuant to Article 37 "Notices", at least ten days prior to the effective date of this Agreement, and thereafter at least ten days prior to each insurance renewal. Such insurance shall not be canceled nor allowed to expire, nor be materially reduced, without thirty days prior written notice to Licensor, ten days for non-payment of premium. The required insurance policies shall be maintained with insurers reasonably satisfactory to Licensor, and shall be primary and non-contributory with any insurance or self-insurance maintained by Licensor.

5. Licensor's Use of the Property: Licensee agrees that Licensor, its successors and assigns, have the right to enter upon the Property, at all times, for any purpose, and the right to conduct any activity on the Property. Exercise of these rights by Licensor, its successors and assigns, will not result in compensation to Licensee for any damages whatsoever to personal property and/or crops located on the Property.

6. Licensee's Improvements: Licensee must submit, for Licensor's prior written approval, complete improvement plans, including, but not limited to, grading, lighting, landscaping, grounding, and irrigation plans, - identifying all existing and proposed improvements, a minimum of sixty (60) days prior to making any use of the Property. Licensee's conceptual plans for proposed improvements shall be developed in accordance with the guidelines contained in the Appendix to this License. It is understood and agreed that the general guidelines contained in the Appendix are intended to provide a

Initial (_____)/(_____)
Licensor/Licensee

framework for the development of conceptual plans only; and that Licensor may modify or add to the conditions contained in the Appendix hereto, based on individual site characteristics, Licensor's existing or potential operating needs or Licensee's proposed use(s). Licensee must submit, for Licensor's prior written approval plans for any modifications to such improvements. Written approval may be modified and/or rescinded by Licensor for any reason whatsoever. At any time, Licensee may be required to modify and/or remove any or all such previously approved improvements at Licensee's risk and expense and without any compensation from Licensor. Licensor is not required, at any time, to make any improvements, alterations, changes or additions of any nature whatsoever to the Property. Licensee expressly acknowledges that any expenditures or improvements will in no way alter Licensor's right to terminate in accordance with Article 28.

7. Licensee's Personal Property: All approved equipment and other property brought, placed or erected on the Property by Licensee shall be and remain the Property of Licensee, except as otherwise set forth herein. If Licensee is not in default hereunder, Licensee shall have the right to remove the same from the Property at any time prior to the expiration or earlier termination of this Agreement; provided, however, that Licensee shall promptly restore any damage to the Property caused by the removal. If Licensee is in default, however, such equipment or other property shall not be removed by Licensee without Licensor's written consent until Licensee has cured such default, and Licensor shall have a lien thereon to the extent thereof. Licensee further acknowledges and agrees that Licensor is not responsible for Licensee's property. Licensor further assumes no duty or obligation to maintain or secure Licensee's property including, but not limited to such times when Licensee's property may not be removed by Licensee from the Property in the event of a default.

8. Height Limitations and Vertical Clearances: Any equipment used by Licensee or its agents, employees or contractors, on and/or adjacent to the Property, will be used and operated so as to maintain minimum clearances from all overhead electrical conductors as designated in the table below:

Vehicle/ Equipment Vertical Clearance	
500 kV	36 feet
220 kV – 66kV	30 feet
<66kV (Distribution facilities)	25 feet
Telecom	18 feet

All trees and plants on the Property will be maintained by Licensee at a maximum height of fifteen (15) feet. If requested by Licensor, Licensee will remove, at Licensee's expense, any tree and/or other planting.

9. Access and Horizontal Clearances: Licensee will provide Licensor with adequate access to all of Licensor's facilities on the Property and at no time will there be any interference with the free movement of Licensor's equipment and materials over the Property. Licensor may require Licensee to provide and maintain access roads within the Property, at a minimum usable width of sixteen (16) feet, together with commercial driveway aprons and curb depressions capable of supporting a gross load of forty (40) tons on a three-axle vehicle. The minimum width of all roads shall be increased on curves by a distance equal to 400/inside radius of curvature. All curves shall have a radius of not less than 50 feet measured at the inside edge of the usable road surface. Unless otherwise specified in writing by Licensor, Licensee will make no use of the area directly underneath Licensor's towers and will maintain the following minimum clearances at all times:

Initial (_____)/(_____)
Licensor/Licensee

a. A 50-foot-radius around suspension tower legs, H-Frames and poles and 100-foot radius around dead-end tower legs, H-Frames and poles.
b. A 25-foot-radius around all other poles.

NOTE: Additional clearance may be required for structures.

10. Parking: Licensee will not park, store, repair or refuel any motor vehicles or allow parking, storage, repairing or refueling of any motor vehicles on the Property unless specifically approved in writing by Licensor.

11. Weeds, Brush, Rubbish and Debris (Weed Abatement): Licensee will keep the Property clean, free from weeds, brush, rubbish and debris and in a condition satisfactory to Licensor.

12. Flammables, Waste and Nuisances: Unless permitted by Licensor in writing, Licensee will not, or allows others to place, use, or store any flammable or combustible materials or waste materials on the Property or commit any waste or damage to the Property or allow any to be done. Licensee will be responsible for the control of and will be liable for any damage or disturbance, caused by dust, odor, flammable or waste materials, noise or other nuisance disturbances. Licensee will not permit -dogs on the Property.

13. Pesticides and Herbicides: Any pesticide or herbicide applications and disposals will be made in accordance with all Federal, State, County and local laws. Licensee will dispose of all pesticides, herbicides and any other toxic substances declared to be either a health or environmental hazard, as well as all materials contaminated by such substances, including but not limited to, containers, clothing and equipment, in the manner prescribed by law.

14. Hazardous Waste: Licensee will not engage in, or permit any other party to engage in, any activity on the Property that violates federal, state or local laws, rules or regulations pertaining to hazardous, toxic or infectious materials and/or waste. Licensee will indemnify and hold Licensor, its directors, officers, agents and employees, and its successors and assigns, harmless from any and all claims, loss, damage, actions, causes of action, expenses and/or liability arising from leaks of, spills of, and/or contamination by or from hazardous materials as defined by applicable laws or regulations, which may occur during and after the Agreement term, and are attributable to the actions of, or failure to act by, Licensee or any person claiming under Licensee.

15. Signs: Licensee must obtain written approval from Licensor prior to the construction or placement of any sign, signboard or other form of outdoor advertising. Licensee shall within three (3) days from the date on which the Licensee becomes aware of the graffiti remove any signs containing graffiti or shall otherwise remove such graffiti from the signs in a manner reasonably acceptable to Licensor. Licensee shall not advertise on any Sign any product, service, or good which is offensive to the public or which Licensor, in its reasonable discretion, deems objectionable.

16. Fencing: Licensee may install fencing on the Property with prior written approval from Licensor. Such fencing will include double drive gates, a minimum of twenty (20) feet in width, designed to accommodate Licensor's locks, in locations specified by Licensor. Licensee will ground and maintain all fencing in a manner acceptable to Licensor. Grounding plans must be prepared and stamped by a licensed electrical engineer and submitted to Licensor.

Initial (_____)/(_____)
Licensor/Licensee

17. Parkways and Landscaping: Licensee will keep parkway and sidewalk areas adjacent to the Property free of weeds, brush, rubbish and debris. Licensee will maintain parkways on the Property and provide landscaping that is compatible with adjoining properties and that is satisfactory to Licensor.

18. Irrigation Equipment: Any irrigation equipment located on the Property prior to the commencement of this Agreement, including but not limited to pipelines, well pumping equipment and other structures, is the property of Licensor and will remain on and be surrendered with the Property upon termination of this Agreement. Should Licensee desire to use the irrigation equipment, Licensee will maintain, operate, repair and replace, if necessary, all irrigation equipment at its own expense.

19. Underground and Above-Ground Tanks: Licensee will not install underground or above-ground storage tanks, as defined by any and all applicable laws or regulations, without Licensor's prior written approval.

20. Underground Facilities: Licensee must contact Dig Alert prior to any underground installation. Any underground facilities installed or maintained by Licensee on the Property must have a minimum cover of three feet from the top of the facility and be capable of withstanding a gross load of forty (40) tons on a three-axle vehicle. Licensee will compact any earth excavated to a compaction of ninety percent (90%). Licensee will relocate its facilities at its own expense so as not to interfere with Licensor's proposed facilities.

21. Utilities: Licensee will pay all charges and assessments for, or in connection with, water, electric current or other utilities which may be furnished to or used on the Property.

22. Taxes, Assessments and Liens: Licensee will pay all taxes and assessments which may be levied upon any crops, personal property, and improvements, including but not limited to, buildings, structures, and fixtures on the Property. Licensee will keep the Property free from all liens, including but not limited to, mechanics liens and encumbrances by reason of use or occupancy by Licensee, or any person claiming under Licensee. If Licensee fails to pay the above-mentioned taxes, assessments or liens when due, Licensor will have the right to pay the same and charge the amount to the Licensee. All accounts not paid within 30 days of the agreed upon due date will be charged a "late fee" on all amounts outstanding up to the maximum rate allowed by law.

23. Expense: Licensee will perform and pay all obligations of Licensee under this Agreement. All matters or things herein required on the part of Licensee will be performed and paid for at the sole cost and expense of Licensee, without obligation on the part of Licensor to make payment or incur cost or expense for any such matters or things.

24. Assignments: This Agreement is personal to Licensee, and Licensee will not assign, transfer or sell this Agreement or any privilege hereunder in whole or in part, and any attempt to do so will be void and confer no right on any third party.

25. Compliance with Law: Licensee will comply with all applicable federal, state, county and local laws, all covenants, conditions and restrictions of record and all applicable ordinances, zoning restrictions, rules, regulations, orders and any requirements of any duly constituted public authorities now or hereafter in any manner affecting the Property or the streets and ways adjacent thereto. Licensee will obtain all permits and other governmental approvals required in connection with Licensee's activities hereunder.

Initial (_____)/(_____)
Licensor/Licensee

26. Governing Law: The existence, validity, construction, operation and effect of this Agreement and all of its terms and provisions will be determined in accordance with the laws of the State of California.

27. Indemnification: Licensee shall hold harmless, defend and indemnify Licensor, its officers, agents and employees, and its successors and assigns, from and against all claims, loss, damage, actions, causes of actions, expense and/or liability arising from or growing out of loss or damage to property, including that of Licensor, or injury to or death of persons, including employees of Licensor resulting in any manner whatsoever, directly or indirectly, by reason of this Agreement or the use or occupancy of the Property by Licensee or any person claiming under Licensee.

28. Termination: Licensor may cancel and terminate this agreement, at any time, for any reason for all or any portion of the licensed Property, upon thirty (30) days notice in writing, unless otherwise extended by Licensor at the sole and absolute discretion of the Licensor. Licensee may cancel and terminate this agreement at any time, for any reason for all of the licensed Property, upon thirty (30) days notice in writing. In the event Licensee wishes to cancel and terminate this agreement for a portion of the licensed property, Licensee will request Licensor's consent to either an amendment or a new license, such consent may be withheld in Licensor's sole and absolute discretion. To the extent an amendment or new license is granted, Licensee shall peaceably quit, surrender and, prior to termination date, restore the Property being vacated to the condition in which it existed prior to Licensee's use of the Property in a manner satisfactory to Licensor. Termination, cancellation or expiration does not release Licensee from any liability or obligation (indemnity or otherwise) which Licensee may have incurred. Licensee's continued presence after termination shall be deemed a trespass. To the event of a termination for any reason other than non-payment of the License fee, Licensor shall refund any previously collected/pre-paid License fees covering the unused portion of the remaining term.

29. Events of Default: The occurrence of any of the following shall constitute a material default and breach of this Agreement by Licensee:

(a) Any failure by Licensee to pay the consideration due in accordance with Article 3, or to make any other payment required to be made by Licensee hereunder when due.

(b) The abandonment or vacating of the Property by Licensee.

(c) Any attempted assignment or subletting of this Agreement by Licensee in violation of Article 24.

(d) The violation by Licensee of any resolution, ordinance, statute, code, regulation or other rule of any governmental agency in connection with Licensee's activities pursuant to this Agreement.

(e) A failure by Licensee to observe and perform any other provision of this Agreement to be observed or performed by Licensee, where such failure continues for the time period specified in a written notice thereof by Licensor to Licensee.

(f) Any attempt to exclude Licensor from the licensed premises.

Initial (_____)/(_____)
Licensor/Licensee

(g) The making by Licensee of any general assignment for the benefit of creditors; the appointment of a receiver to take possession of substantially all of Licensee's assets located on the Property or of Licensee's privileges hereunder where possession is not restored to Licensee within five (5) days; the attachment, execution or other judicial seizure of substantially all of Licensee's assets located on the Property or of Licensee's privileges hereunder, where such seizure is not discharged within five (5) days.

(h) Any case, proceeding or other action brought against Licensee seeking any of the relief mentioned in "clause g" of this Article which has not been stayed or dismissed within thirty (30) days after the commencement thereof.

30. Remedies: In the event of any default by Licensee, then in addition to any other remedies available to Licensor at law or in equity, Licensor shall have the immediate option to terminate this Agreement and all rights of Licensee hereunder by giving written notice of termination to Licensee. Upon termination, Licensor will have the right to remove any and all of Licensee's personal property from the Property, including but not limited to, buildings, structures, fixtures, or goods. In addition, Licensor may immediately recover from Licensee all amounts due and owing hereunder, plus interest at the maximum rate permitted by law on such amounts until paid, as well as any other amount necessary to compensate Licensor for all the detriment proximately caused by Licensee's failure to perform its obligations under this Agreement. Such amounts shall include, but are not limited to environmental studies and environmental remediation and/or cleanup attributable to Licensee's use of the Property. Licensor shall have no obligation to keep or otherwise maintain Licensee's property and may, at its option sell such property or otherwise dispose of it.

31. Non-Possessory Interest: Licensor retains full possession of the Property and Licensee will not acquire any interest temporary, permanent, irrevocable, possessory or otherwise by reason of this Agreement, or by the exercise of the permission given herein. Licensee will make no claim to any such interest. Any violation of this provision will immediately void and terminate this Agreement.

32. Waiver: No waiver by Licensor of any provision hereof shall be deemed a waiver of any other provision hereof or of any subsequent breach by Licensee of the same or any other provision. Licensor's consent to or approval of any act shall not be deemed to render unnecessary the obtaining of Licensor's consent to or approval of any subsequent act by Licensee.

33. Authority: This License Agreement is executed subject to General Order No. 69-C of the Public Utilities Commission of the State of California dated and effective July 10, 1985, incorporated herein by this reference. As set forth in General Order 69-C, this License is made conditional upon the right of the Licensor either on order of the Public Utilities Commission or on Grantor's own motion to resume the use of the property in question (including, but not limited to the removal of any obstructions) whenever, in the interest of Licensor's service to its patrons or consumers, it shall appear necessary or desirable to do so. Licensee agrees to comply with all applicable federal, state and local laws and regulations. This License Agreement should not be construed as a subordination of Licensor's rights, title and interest in and to its fee ownership, nor should this License Agreement be construed as a waiver of any of the provisions contained in said License or a waiver of any costs of relocation of affected Licensor facilities.

34. Attorneys' Fees: In the event of any action, suit or proceeding against the other, related to this Agreement, or any of the matters contained herein, the successful party in such action, suit or proceeding shall be entitled to recover from the other party reasonable attorney fees incurred.

Initial (_____)/(_____)
Licensor/Licensee

35. Electric and Magnetic Fields ("EMF"): There are numerous sources of power frequency electric and magnetic field ("EMF"), including household or building wiring, electrical appliances and electric power transmission and distribution facilities. There have been numerous scientific studies about the potential health effects of EMF. Interest in a potential link between long-term exposures to EMF and certain diseases is based on the combination of this scientific research and public concerns.

While some 40 years of research have not established EMF as a health hazard, some health authorities have identified magnetic field exposures as a possible human carcinogen. Many of the questions about specific diseases have been successfully resolved due to an aggressive international research program. However, potentially important public health questions remain about whether there is a link between EMF exposures in homes or work and some diseases including childhood leukemia and a variety of other adult diseases (e.g. adult cancers and miscarriages). While scientific research is continuing on a wide range of questions relating to exposures at both work and in our communities, a quick resolution of the remaining scientific uncertainties is not expected.

Since Licensee plans to license or otherwise enter Licensor property that is in close proximity to Licensor electric facilities, Licensor wants to share with Licensee and those who may enter the property under this agreement, the information available about EMF. Accordingly, Licensor has attached to this document a brochure that explains some basic facts about EMF and that describes Licensor policy on EMF. Licensor also encourages Licensee to obtain other information as needed to assist in understanding the EMF with respect to the planned use of this property.

36. Induced Voltages: Licensee hereby acknowledges that any structures (including, but not limited to, buildings, fences, light poles) that exist or may be constructed on the Property licensed herein, (hereinafter, the "Structures") in close proximity to one or more high voltage (66 kilovolt or above) electric transmission lines and/or substation facilities may be susceptible to induced voltages, static voltages and/or related electric fault conditions (hereinafter collectively referred to as "Induced Voltages") unless appropriate grounding or other mitigation measures are incorporated into the Structures. If not properly mitigated, Induced Voltages can result in a variety of safety and/or nuisance conditions including, but not limited to, electric shocks or other injuries to individuals contacting the Structures or other utilities connected to the Structures (including, but not limited to, natural gas lines, water lines or cable television lines), or interference with or damage to sensitive electronic equipment located in or around the Structures. Appropriate measures to mitigate Induced Voltages, if required, will vary from case to case because of factors such as electric facility configuration and voltage, other utilities involved, or sensitivity of electronic equipment. Licensee will be responsible to determine what, if any, Induced Voltages mitigation measures should be undertaken regarding the Structures and to implement such mitigation measures at its sole cost and expense.

Licensee agrees for itself and for its contractors, agents, licensees, invitees, and employees, to save harmless and indemnify Licensor, its parent, subsidiaries and affiliated entities and their respective officers and employees from and against any and all claims, loss, damage, actions, causes of action, expenses and/or liability arising from or growing out of loss or damage to property, including Licensor's own personal property, or injury to or death of persons, including employees of Licensor caused by or resulting from or connected to Induced Voltages on or related to the Structures.

37. Notices: All notices required to be given by either party will be made in writing and deposited in the United States mail, first class, postage prepaid, addressed as follows:

Initial (_____)/(_____)
Licensor/Licensee

To Licensor: Southern California Edison Company
Real Properties Department
Land Management – Southern Re
2131 Walnut Grove Avenue
Rosemead, CA 91770

To Licensee: Orange County Water District
P.O. Box 8300
Huntington Beach, CA 92728-8300

Business Telephone No. (714) 378-3265

Licensee will immediately notify Licensor of any address change.

38. Recording: Licensee will not record this Agreement.

39. Complete Agreement: Licensor and Licensee acknowledge that the foregoing provisions and any appendix, addenda and exhibits attached hereto constitute the entire Agreement between the parties.

40. Signature Authority: Each of the persons executing this Agreement warrants and represents that he or she has the full and complete authority to enter into this Agreement on behalf of the Party for which he or she is signing, and to bind said party to the agreements, covenants and terms contained herein.

(this space left intentionally blank)

Initial (_____)/(_____)
Licensor/Licensee

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in duplicate.

SOUTHERN CALIFORNIA EDISON COMPANY

By_____
LICENSOR

_____
Date

MARISOL R. SANCHEZ
Supervisor
Land Management – Metro Region
Real Properties Department

ORANGE COUNTY WATER DISTRICT

By_____
LICENSEE

_____
Date

Print Name: _____

Initial (_____)/(_____)
Licensor/Licensee

APPENDIX

Guidelines for Standard Licensee Improvements

The following criteria are provided to aid in the development of a conceptual plot plan to be submitted to Southern California Edison Company herein after referred to as "Licensor" for consideration and approval *prior to the start of any construction on* "Licensor" *property*.

Plans should be developed indicating the size and location of all planned improvements. The plan should specify the dimensions of all planned improvements as well as the distance of all planned improvements from property lines and all adjacent "Licensor" towers, poles, guy wires or other "Licensor" facilities.

The plan must show the locations of all "Licensor" towers and poles, 16-foot wide access roads, main water lines and water shut-off valves, electrical service lines and parking areas. All plans must indicate adjacent streets and include a "north arrow" and the Licensee's name.

SHADE STRUCTURES
(Definition: A non-flammable frame covered on the top with a material designed to provide shade to aid in growing plants)

1. Shade structures must maintain minimum spacing of 50 feet between shade structure locations, should be placed perpendicular to Licensor's overhead electrical conductors (wires) unless otherwise approved in writing by Licensor, and should not exceed maximum dimensions of:
    a. 100 feet in length
    b. 50 feet in width
    c. 15 feet in height
2. Shade structures will not be permitted within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles
    c. 100 foot radius around dead-end tower legs, H-Frames and poles
    d. 25 foot radius around anchors/guy wires, poles and wood poles
3. Shade structures must utilize the following design:
    a. Temporary/slip joint construction only
    b. Non-flammable frame only
    c. Adequately grounded by a licensed electrical engineer
    d. Shade covering must be non-flammable and manufactured with non-hydrocarbon materials.

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SHADEHOUSES/HOTHOUSES

*(Definition: A simple, non-flammable, enclosed structure designed to control temperature **without** the benefit of heating and/or air conditioning units to aid in propagating and/or growing plants)*

1. Shadehouses/hothouses must maintain minimum spacing of 50 feet between shadehouse/hothouse locations, should be placed in perpendicular to Licensor's overhead electrical conductors (wires) unless otherwise approved in writing by Licensor, and should not exceed maximum dimensions of:
    a. 100 feet in length
    b. 50 feet in width
    c. 15 feet in height
2. Shadehouses/hothouses will not be permitted within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles
    c. 100 foot radius around dead-end tower legs, H-Frames and poles
    d. 25 foot radius around anchors/guy wires, poles and wood poles
3. Shadehouses/hothouses must utilize the following design:
    a. Temporary/slip joint construction only
    b. Non-flammable frame only
    c. Adequately grounded by a licensed electrical engineer
    d. Covering must be non-flammable and manufactured with non-hydrocarbon materials

GREENHOUSES

(Definition: An enclosed structure designed to control temperature and/or humidity by the use of heating and/or air conditioning units to aid in propagating and/or growing plants)
Greenhouses will be considered on a case-by-case basis.

IRRIGATION SYSTEMS / WELLS

1. Maximum diameter of pipe: 3 inches
2. All pipe must be plastic Schedule 40 or better
3. No irrigation system will be permitted within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles

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c. 100 foot radius around dead-end tower legs, H-Frames and poles

4. Sprinkler and drip irrigation controllers must be located at the edge of the right of way
5. Suitable identification markers will be required on main controllers and valves
6. Locations of main shut off valve will be provided and shown on a plot plan
7. Underground facilities must have a minimum cover of three feet
8. Earth disturbed must be compacted to ninety percent (90%)

LANDSCAPING

1. No trees will be permitted under the overhead electrical conductors or within 20 feet of the "drip line" of the conductors
2. Trees must have slow to moderate growth, and must be of a variety that grows to a maximum height of no more than 40 feet and must be maintained by the Licensee at a height not to exceed 15 feet
3. Placement of large rocks (boulders) must be approved in writing by Licensor
4. Any mounds or change of grade must be approved in writing by Licensor
5. No cactus or thorny shrubs will be permitted
6. Retaining walls, planters, etc. may be considered on a case by case basis and must be approved in writing by Licensor

TRAILERS *(Definition: Removable / portable office modules are not permitted without Licensor's prior permission. Trailers must meet the following criteria to be considered:* Trailers must meet the following criteria:

a. Must have axles and wheel and be able to be moved at any time
b. Maximum length: 40 feet
c. Maximum height: 15 feet
d. Maximum width: 12 feet

2. No trailers will be permitted within the following areas reserved for Licensor's access:

a. Within 2 feet from edge of 16-foot wide access roads
b. 50 foot radius around suspension tower legs, H-Frames and poles
c. 100 foot radius around dead-end tower legs, H-Frames and poles
d. 25 foot radius around anchors/guy wires, poles and wood poles
e. Under or within 10 feet of the conductor "drip lines"

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Licensor/Licensee

3. Sewer or gas lines to trailers must be approved in writing by Licensor
4. Location of all electrical and telephone lines must be approved in writing by Licensor
5. Electrical lines must be installed by a licensed -general contractor.
6. Trailers shall not be used for residential purposes
7. Toxic or flammable materials will not be permitted in trailers
8. Adequately grounded by a licensed -general contractor

PARKING AREAS

Parking areas should not be designed under the overhead electrical conductors or within 10 feet of the "drip lines" without Licensor's prior written approval. Parking spaces to be identified in accordance with the approved site plan. "No Parking" striping may be required in areas where additional clearance is required.

MATERIAL STORAGE

1. In the event of an emergency, Licensee must immediately - relocate all materials specified by Licensor in order to provide Licensor clear access to its facilities.
2. Licensee must provide Licensor with a list of material stored on the right of way
3. No toxic or flammable materials will be permitted
4. No materials shall be stored within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles
    c. 100 foot radius around dead-end tower legs, H-Frames and poles
    d. 25 feet from anchors/guy wires, poles and wood poles
5. Storage of materials not to exceed a maximum height of 15 feet
6. No storage of gasoline, diesel or any other type of fuel will be permitted
7. Any fencing around the storage areas must have Licensor's prior written approval.

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A D D E N D U M

POLELINE, PIPELINE OR UNDERGROUND CABLE

A. Licensee must obtain prior written approval from the Licensor for the installation of any facilities, including any subsequent modifications. Licensee will maintain all facilities in a safe condition satisfactory to Licensor.

B. At any time, Licensor may require the removal, modification, or relocation of any portion of the facility. Licensee will remove, modify, or relocate same, at its expense, to a location satisfactory to Licensor within sixty (60) days after receiving notice to remove, modify, or relocate from Licensor.

C. Licensee will construct, use, maintain, or remove facilities so as not to damage, endanger or interfere with the construction, use and maintenance of existing facilities, including but not limited to, pipelines, underground cables, electric or telephone lines, and/or any subsequent modifications. Licensee must place its facilities at safe distance under or from existing pipelines and underground cables. Licensee must give Licensor ten (10) days prior written notice of the time and place of the commencement of any work to be performed on the Property.

D. Licensee must mark the location of all pipelines and underground cables with permanent markers. Licensee will maintain and repair the markers.

E. Pipelines and underground cables must be constructed and made of materials sufficient and safe for their intended use.

F. Pipelines must be constructed to withstand a pressure equal to at least one hundred and fifty percent (150%) of its maximum operating pressure. All pipelines must be tested upon completion of construction. Licensee must give Licensor twenty-four (24) hours prior written notice of the time and place of testing and provide a copy of the test results upon request.

G. No valves or controllers for the pipeline are allowed on the property.

H. Licensee agrees that pole line, pipeline or underground cable shall be removed upon cancellation or termination of this Agreement. Licensee shall provide the following information on Pipelines to Licensor:

1. Material Safety Data Sheets (MSDS) for all oil products that have been moved in the pipeline.

2. Repair and replacement records.

3. Hydro Test Records.

4. Records on spills or releases.

5. Test results of the area beneath meter stations, valves, or other potential spill points for any area that has not always been over concrete.

6. Copies of correspondence with any state or local regulatory agency regarding the pipeline.

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Licensor/Licensee

ORANGE COUNTY WATER DISTRICT

L I C E N S E A G R E E M E N T

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ADDENDUM(S)

POLELINE, PIPELINE OR UNDERGROUND CABLE

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LICENSE AGREEMENT

THIS AGREEMENT between SOUTHERN CALIFORNIA EDISON COMPANY, a corporation organized under the laws of the State of California, hereinafter called "Licensor", and ORANGE COUNTY WATER DISTRICT, a political subdivision of the State of California organized under Chapter 924 of the Statutes of 1933, as amended, hereinafter called "Licensee";

WITNESSETH: That Licensor, for and in consideration of the faithful performance by Licensee of the terms, covenants and agreements hereinafter set forth to be kept and performed by Licensee, does hereby give to Licensee the license to use that certain real property solely for the purpose hereinafter specified, upon and subject to the terms, reservations, covenants and conditions hereinafter set forth, hereinafter designated as "Property" on the Exhibit "A" attached hereto and made a part hereof, being a portion of Assessor's Parcel Numbers 155-301-02 and 155-301-06, situated in the City of Huntington Beach, County of Orange, State of California.

SUBJECT TO:

Covenants, conditions, restrictions, reservations, exceptions, rights and easements, whether or not of record.

1. Use: Licensee will use the Property for pipeline purposes only. Licensor makes no representation, covenant, warranty or promise that the Property is fit for any particular use, including the use for which this Agreement is made and Licensee is not relying on any such representation, covenant, warranty or promise. Licensee's failure to utilize the Property in accordance with this License as determined by the Licensor in its sole discretion will be grounds for immediate termination of this Agreement in accordance with Article 29.

2. Term: Unless otherwise terminated as provided herein, this Agreement will be in effect for a term of five (5) years commencing on the first day of October, 2016 and ending on the last day of September, 2021. Licensee acknowledges that this Agreement does not entitle Licensee to any subsequent agreement, for any reason whatsoever, regardless of the use Licensee makes of the Property, the improvements Licensee places on or makes to the Property, or for any other reason.

3. Consideration: Licensee will pay to Licensor the sum of Eleven Thousand Two Hundred Seventy and 26/100 Dollars ($11,270.26) upon the execution and delivery of this Agreement with subsequent annual payments. Payment to Licensor must be in the form of a check or money order payable to Southern California Edison Company. No cash payments will be accepted by Licensor. Payment schedule as follows:

Term	Year Due	Yearly Amount	Payment Due First Day Of
First Year	2016	$11,270.26	October
Second Year	2017	$11,608.37	October
Third Year	2018	$11,956.62	October
Fourth Year	2019	$12,315.32	October
Fifth Year	2020	$12,684.78	October

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All accounts not paid within 30 days of the agreed upon due date will be charged a late fee equal to ten percent (10%) of the full amount that was due on said date. To the extent a payment is not made within sixty (60) days, Licensor may increase the late fee to twenty percent (20%) of the full amount that was due on the agreed upon date. Licensor shall further be entitled to any other fees associated with collection of the unpaid amounts (including, but not limited to attorney's fees and costs).

All payments subsequent to the initial payment will be paid to the Southern California Edison Company, Post Office Box 800 Rosemead, California, 91770, and Attention: Corporate Accounting Department – Accounts Receivable.

4. Insurance: During the term of this Agreement, Licensee shall maintain the following insurance:

(a) Workers' Compensation with statutory limits, in accordance with the laws of the State of California and Employer's Liability with limits of not less than $1,000,000.00 each accident, disease/each employee, and disease/policy limit. Licensee shall require its insurer to waive all rights of subrogation against Licensor, its officers, agents and employees, except for any liability resulting from the willful or grossly negligent acts of the Licensor.

(b) Commercial General Liability Insurance, including contractual liability and products liability, with limits not less than $1,000,000.00 per occurrence. Such insurance shall: (i) name Licensor, its officers, agents and employees as additional insureds, but only for Licensee's acts or omissions; (ii) be primary for all purposes and (iii) contain separation of insureds or cross-liability clause, and (iv) require its insurer to waive all rights of subrogation against Licensor, its officers, agents and employees, except for any liability resulting from the willful or grossly negligent acts of the Licensor.

(c) Commercial Automobile Liability insurance with a combined single limit of $1,000,000.00. Such insurance shall cover the use of owned, non-owned and hired vehicles on the Property.

Licensee shall provide Licensor with proof of such insurance by submission of certificates of insurance, pursuant to Article 37 "Notices", at least ten days prior to the effective date of this Agreement, and thereafter at least ten days prior to each insurance renewal. Such insurance shall not be canceled nor allowed to expire, nor be materially reduced, without thirty days prior written notice to Licensor, ten days for non-payment of premium. The required insurance policies shall be maintained with insurers reasonably satisfactory to Licensor, and shall be primary and non-contributory with any insurance or self-insurance maintained by Licensor.

5. Licensor's Use of the Property: Licensee agrees that Licensor, its successors and assigns, have the right to enter upon the Property, at all times, for any purpose, and the right to conduct any activity on the Property. Exercise of these rights by Licensor, its successors and assigns, will not result in compensation to Licensee for any damages whatsoever to personal property and/or crops located on the Property.

6. Licensee's Improvements: Licensee must submit, for Licensor's prior written approval, complete improvement plans, including, but not limited to, grading, lighting, landscaping, grounding, and irrigation plans, - identifying all existing and proposed improvements, a minimum of sixty (60)

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Licensor/Licensee

days prior to making any use of the Property. Licensee's conceptual plans for proposed improvements shall be developed in accordance with the guidelines contained in the Appendix to this License. It is understood and agreed that the general guidelines contained in the Appendix are intended to provide a framework for the development of conceptual plans only; and that Licensor may modify or add to the conditions contained in the Appendix hereto, based on individual site characteristics, Licensor's existing or potential operating needs or Licensee's proposed use(s). Licensee must submit, for Licensor's prior written approval plans for any modifications to such improvements. Written approval may be modified and/or rescinded by Licensor for any reason whatsoever. At any time, Licensee may be required to modify and/or remove any or all such previously approved improvements at Licensee's risk and expense and without any compensation from Licensor. Licensor is not required, at any time, to make any improvements, alterations, changes or additions of any nature whatsoever to the Property. Licensee expressly acknowledges that any expenditures or improvements will in no way alter Licensor's right to terminate in accordance with Article 28.

7. Licensee's Personal Property: All approved equipment and other property brought, placed or erected on the Property by Licensee shall be and remain the Property of Licensee, except as otherwise set forth herein. If Licensee is not in default hereunder, Licensee shall have the right to remove the same from the Property at any time prior to the expiration or earlier termination of this Agreement; provided, however, that Licensee shall promptly restore any damage to the Property caused by the removal. If Licensee is in default, however, such equipment or other property shall not be removed by Licensee without Licensor's written consent until Licensee has cured such default, and Licensor shall have a lien thereon to the extent thereof. Licensee further acknowledges and agrees that Licensor is not responsible for Licensee's property. Licensor further assumes no duty or obligation to maintain or secure Licensee's property including, but not limited to such times when Licensee's property may not be removed by Licensee from the Property in the event of a default.

8. Height Limitations and Vertical Clearances: Any equipment used by Licensee or its agents, employees or contractors, on and/or adjacent to the Property, will be used and operated so as to maintain minimum clearances from all overhead electrical conductors as designated in the table below:

Vehicle/ Equipment Vertical Clearance	
500 kV	36 feet
220 kV – 66kV	30 feet
<66kV (Distribution facilities)	25 feet
Telecom	18 feet

All trees and plants on the Property will be maintained by Licensee at a maximum height of fifteen (15) feet. If requested by Licensor, Licensee will remove, at Licensee's expense, any tree and/or other planting.

9. Access and Horizontal Clearances: Licensee will provide Licensor with adequate access to all of Licensor's facilities on the Property and at no time will there be any interference with the free movement of Licensor's equipment and materials over the Property. Licensor may require Licensee to provide and maintain access roads within the Property, at a minimum usable width of sixteen (16) feet, together with commercial driveway aprons and curb depressions capable of supporting a gross load of forty (40) tons on a three-axle vehicle. The minimum width of all roads shall be increased on curves by a distance equal to 400/inside radius of curvature. All curves shall have a radius of not less than 50 feet measured at the inside edge of the usable road surface. Unless otherwise specified in

Initial (_____)/(_____)
Licensor/Licensee

writing by Licensor, Licensee will make no use of the area directly underneath Licensor's towers and will maintain the following minimum clearances at all times:

a. A 50-foot-radius around suspension tower legs, H-Frames and poles and 100-foot radius around dead-end tower legs, H-Frames and poles.
b. A 25-foot-radius around all other poles.

NOTE: Additional clearance may be required for structures.

10. Parking: Licensee will not park, store, repair or refuel any motor vehicles or allow parking, storage, repairing or refueling of any motor vehicles on the Property unless specifically approved in writing by Licensor.

11. Weeds, Brush, Rubbish and Debris (Weed Abatement): Licensee will keep the Property clean, free from weeds, brush, rubbish and debris and in a condition satisfactory to Licensor.

12. Flammables, Waste and Nuisances: Unless permitted by Licensor in writing, Licensee will not, or allows others to place, use, or store any flammable or combustible materials or waste materials on the Property or commit any waste or damage to the Property or allow any to be done. Licensee will be responsible for the control of and will be liable for any damage or disturbance, caused by dust, odor, flammable or waste materials, noise or other nuisance disturbances. Licensee will not permit -dogs on the Property.

13. Pesticides and Herbicides: Any pesticide or herbicide applications and disposals will be made in accordance with all Federal, State, County and local laws. Licensee will dispose of all pesticides, herbicides and any other toxic substances declared to be either a health or environmental hazard, as well as all materials contaminated by such substances, including but not limited to, containers, clothing and equipment, in the manner prescribed by law.

14. Hazardous Waste: Licensee will not engage in, or permit any other party to engage in, any activity on the Property that violates federal, state or local laws, rules or regulations pertaining to hazardous, toxic or infectious materials and/or waste. Licensee will indemnify and hold Licensor, its directors, officers, agents and employees, and its successors and assigns, harmless from any and all claims, loss, damage, actions, causes of action, expenses and/or liability arising from leaks of, spills of, and/or contamination by or from hazardous materials as defined by applicable laws or regulations, which may occur during and after the Agreement term, and are attributable to the actions of, or failure to act by, Licensee or any person claiming under Licensee.

15. Signs: Licensee must obtain written approval from Licensor prior to the construction or placement of any sign, signboard or other form of outdoor advertising. Licensee shall within three (3) days from the date on which the Licensee becomes aware of the graffiti remove any signs containing graffiti or shall otherwise remove such graffiti from the signs in a manner reasonably acceptable to Licensor. Licensee shall not advertise on any Sign any product, service, or good which is offensive to the public or which Licensor, in its reasonable discretion, deems objectionable.

16. Fencing: Licensee may install fencing on the Property with prior written approval from Licensor. Such fencing will include double drive gates, a minimum of twenty (20) feet in width, designed to accommodate Licensor's locks, in locations specified by Licensor. Licensee will ground and maintain all fencing in a manner acceptable to Licensor. Grounding plans must be prepared and stamped by a licensed electrical engineer and submitted to Licensor.

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Licensor/Licensee

17. Parkways and Landscaping: Licensee will keep parkway and sidewalk areas adjacent to the Property free of weeds, brush, rubbish and debris. Licensee will maintain parkways on the Property and provide landscaping that is compatible with adjoining properties and that is satisfactory to Licensor.

18. Irrigation Equipment: Any irrigation equipment located on the Property prior to the commencement of this Agreement, including but not limited to pipelines, well pumping equipment and other structures, is the property of Licensor and will remain on and be surrendered with the Property upon termination of this Agreement. Should Licensee desire to use the irrigation equipment, Licensee will maintain, operate, repair and replace, if necessary, all irrigation equipment at its own expense.

19. Underground and Above-Ground Tanks: Licensee will not install underground or above-ground storage tanks, as defined by any and all applicable laws or regulations, without Licensor's prior written approval.

20. Underground Facilities: Licensee must contact Dig Alert prior to any underground installation. Any underground facilities installed or maintained by Licensee on the Property must have a minimum cover of three feet from the top of the facility and be capable of withstanding a gross load of forty (40) tons on a three-axle vehicle. Licensee will compact any earth excavated to a compaction of ninety percent (90%). Licensee will relocate its facilities at its own expense so as not to interfere with Licensor's proposed facilities.

21. Utilities: Licensee will pay all charges and assessments for, or in connection with, water, electric current or other utilities which may be furnished to or used on the Property.

22. Taxes, Assessments and Liens: Licensee will pay all taxes and assessments which may be levied upon any crops, personal property, and improvements, including but not limited to, buildings, structures, and fixtures on the Property. Licensee will keep the Property free from all liens, including but not limited to, mechanics liens and encumbrances by reason of use or occupancy by Licensee, or any person claiming under Licensee. If Licensee fails to pay the above-mentioned taxes, assessments or liens when due, Licensor will have the right to pay the same and charge the amount to the Licensee. All accounts not paid within 30 days of the agreed upon due date will be charged a "late fee" on all amounts outstanding up to the maximum rate allowed by law.

23. Expense: Licensee will perform and pay all obligations of Licensee under this Agreement. All matters or things herein required on the part of Licensee will be performed and paid for at the sole cost and expense of Licensee, without obligation on the part of Licensor to make payment or incur cost or expense for any such matters or things.

24. Assignments: This Agreement is personal to Licensee, and Licensee will not assign, transfer or sell this Agreement or any privilege hereunder in whole or in part, and any attempt to do so will be void and confer no right on any third party.

25. Compliance with Law: Licensee will comply with all applicable federal, state, county and local laws, all covenants, conditions and restrictions of record and all applicable ordinances, zoning restrictions, rules, regulations, orders and any requirements of any duly constituted public authorities now or hereafter in any manner affecting the Property or the streets and ways adjacent thereto. Licensee will obtain all permits and other governmental approvals required in connection with Licensee's activities hereunder.

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Licensor/Licensee

26. Governing Law: The existence, validity, construction, operation and effect of this Agreement and all of its terms and provisions will be determined in accordance with the laws of the State of California.

27. Indemnification: Licensee shall hold harmless, defend and indemnify Licensor, its officers, agents and employees, and its successors and assigns, from and against all claims, loss, damage, actions, causes of actions, expense and/or liability arising from or growing out of loss or damage to property, including that of Licensor, or injury to or death of persons, including employees of Licensor resulting in any manner whatsoever, directly or indirectly, by reason of this Agreement or the use or occupancy of the Property by Licensee or any person claiming under Licensee.

28. Termination: Licensor may cancel and terminate this agreement, at any time, for any reason for all or any portion of the licensed Property, upon thirty (30) days notice in writing, unless otherwise extended by Licensor at the sole and absolute discretion of the Licensor. Licensee may cancel and terminate this agreement at any time, for any reason for all of the licensed Property, upon thirty (30) days notice in writing. In the event Licensee wishes to cancel and terminate this agreement for a portion of the licensed property, Licensee will request Licensor's consent to either an amendment or a new license, such consent may be withheld in Licensor's sole and absolute discretion. To the extent an amendment or new license is granted, Licensee shall peaceably quit, surrender and, prior to termination date, restore the Property being vacated to the condition in which it existed prior to Licensee's use of the Property in a manner satisfactory to Licensor. Termination, cancellation or expiration does not release Licensee from any liability or obligation (indemnity or otherwise) which Licensee may have incurred. Licensee's continued presence after termination shall be deemed a trespass. To the event of a termination for any reason other than non-payment of the License fee, Licensor shall refund any previously collected/pre-paid License fees covering the unused portion of the remaining term.

29. Events of Default: The occurrence of any of the following shall constitute a material default and breach of this Agreement by Licensee:

(a) Any failure by Licensee to pay the consideration due in accordance with Article 3, or to make any other payment required to be made by Licensee hereunder when due.

(b) The abandonment or vacating of the Property by Licensee.

(c) Any attempted assignment or subletting of this Agreement by Licensee in violation of Article 24.

(d) The violation by Licensee of any resolution, ordinance, statute, code, regulation or other rule of any governmental agency in connection with Licensee's activities pursuant to this Agreement.

(e) A failure by Licensee to observe and perform any other provision of this Agreement to be observed or performed by Licensee, where such failure continues for the time period specified in a written notice thereof by Licensor to Licensee.

(f) Any attempt to exclude Licensor from the licensed premises.

Initial (_____)/(_____)
Licensor/Licensee

(g) The making by Licensee of any general assignment for the benefit of creditors; the appointment of a receiver to take possession of substantially all of Licensee's assets located on the Property or of Licensee's privileges hereunder where possession is not restored to Licensee within five (5) days; the attachment, execution or other judicial seizure of substantially all of Licensee's assets located on the Property or of Licensee's privileges hereunder, where such seizure is not discharged within five (5) days.

(h) Any case, proceeding or other action brought against Licensee seeking any of the relief mentioned in "clause g" of this Article which has not been stayed or dismissed within thirty (30) days after the commencement thereof.

30. Remedies: In the event of any default by Licensee, then in addition to any other remedies available to Licensor at law or in equity, Licensor shall have the immediate option to terminate this Agreement and all rights of Licensee hereunder by giving written notice of termination to Licensee. Upon termination, Licensor will have the right to remove any and all of Licensee's personal property from the Property, including but not limited to, buildings, structures, fixtures, or goods. In addition, Licensor may immediately recover from Licensee all amounts due and owing hereunder, plus interest at the maximum rate permitted by law on such amounts until paid, as well as any other amount necessary to compensate Licensor for all the detriment proximately caused by Licensee's failure to perform its obligations under this Agreement. Such amounts shall include, but are not limited to environmental studies and environmental remediation and/or cleanup attributable to Licensee's use of the Property. Licensor shall have no obligation to keep or otherwise maintain Licensee's property and may, at its option sell such property or otherwise dispose of it.

31. Non-Possessory Interest: Licensor retains full possession of the Property and Licensee will not acquire any interest temporary, permanent, irrevocable, possessory or otherwise by reason of this Agreement, or by the exercise of the permission given herein. Licensee will make no claim to any such interest. Any violation of this provision will immediately void and terminate this Agreement.

32. Waiver: No waiver by Licensor of any provision hereof shall be deemed a waiver of any other provision hereof or of any subsequent breach by Licensee of the same or any other provision. Licensor's consent to or approval of any act shall not be deemed to render unnecessary the obtaining of Licensor's consent to or approval of any subsequent act by Licensee.

33. Authority: This License Agreement is executed subject to General Order No. 69-C of the Public Utilities Commission of the State of California dated and effective July 10, 1985, incorporated herein by this reference. As set forth in General Order 69-C, this License is made conditional upon the right of the Licensor either on order of the Public Utilities Commission or on Grantor's own motion to resume the use of the property in question (including, but not limited to the removal of any obstructions) whenever, in the interest of Licensor's service to its patrons or consumers, it shall appear necessary or desirable to do so. Licensee agrees to comply with all applicable federal, state and local laws and regulations. This License Agreement should not be construed as a subordination of Licensor's rights, title and interest in and to its fee ownership, nor should this License Agreement be construed as a waiver of any of the provisions contained in said License or a waiver of any costs of relocation of affected Licensor facilities.

34. Attorneys' Fees: In the event of any action, suit or proceeding against the other, related to this Agreement, or any of the matters contained herein, the successful party in such action, suit or proceeding shall be entitled to recover from the other party reasonable attorney fees incurred.

Initial (_____)/(_____)
Licensor/Licensee

35. Electric and Magnetic Fields ("EMF"): There are numerous sources of power frequency electric and magnetic field ("EMF"), including household or building wiring, electrical appliances and electric power transmission and distribution facilities. There have been numerous scientific studies about the potential health effects of EMF. Interest in a potential link between long-term exposures to EMF and certain diseases is based on the combination of this scientific research and public concerns.

While some 40 years of research have not established EMF as a health hazard, some health authorities have identified magnetic field exposures as a possible human carcinogen. Many of the questions about specific diseases have been successfully resolved due to an aggressive international research program. However, potentially important public health questions remain about whether there is a link between EMF exposures in homes or work and some diseases including childhood leukemia and a variety of other adult diseases (e.g. adult cancers and miscarriages). While scientific research is continuing on a wide range of questions relating to exposures at both work and in our communities, a quick resolution of the remaining scientific uncertainties is not expected.

Since Licensee plans to license or otherwise enter Licensor property that is in close proximity to Licensor electric facilities, Licensor wants to share with Licensee and those who may enter the property under this agreement, the information available about EMF. Accordingly, Licensor has attached to this document a brochure that explains some basic facts about EMF and that describes Licensor policy on EMF. Licensor also encourages Licensee to obtain other information as needed to assist in understanding the EMF with respect to the planned use of this property.

36. Induced Voltages: Licensee hereby acknowledges that any structures (including, but not limited to, buildings, fences, light poles) that exist or may be constructed on the Property licensed herein, (hereinafter, the "Structures") in close proximity to one or more high voltage (66 kilovolt or above) electric transmission lines and/or substation facilities may be susceptible to induced voltages, static voltages and/or related electric fault conditions (hereinafter collectively referred to as "Induced Voltages") unless appropriate grounding or other mitigation measures are incorporated into the Structures. If not properly mitigated, Induced Voltages can result in a variety of safety and/or nuisance conditions including, but not limited to, electric shocks or other injuries to individuals contacting the Structures or other utilities connected to the Structures (including, but not limited to, natural gas lines, water lines or cable television lines), or interference with or damage to sensitive electronic equipment located in or around the Structures. Appropriate measures to mitigate Induced Voltages, if required, will vary from case to case because of factors such as electric facility configuration and voltage, other utilities involved, or sensitivity of electronic equipment. Licensee will be responsible to determine what, if any, Induced Voltages mitigation measures should be undertaken regarding the Structures and to implement such mitigation measures at its sole cost and expense.

Licensee agrees for itself and for its contractors, agents, licensees, invitees, and employees, to save harmless and indemnify Licensor, its parent, subsidiaries and affiliated entities and their respective officers and employees from and against any and all claims, loss, damage, actions, causes of action, expenses and/or liability arising from or growing out of loss or damage to property, including Licensor's own personal property, or injury to or death of persons, including employees of Licensor caused by or resulting from or connected to Induced Voltages on or related to the Structures.

37. Notices: All notices required to be given by either party will be made in writing and deposited in the United States mail, first class, postage prepaid, addressed as follows:

Initial (_____)/(_____)
Licensor/Licensee

To Licensor: Southern California Edison Company
Real Properties Department
Land Management – Metro Region
2131 Walnut Grove Avenue
Rosemead, CA 91770

To Licensee: Orange County Water District
P.O. Box 8300
Fountain Valley, CA 92783 28-8300

Business Telephone No. (714) 378-3265

Licensee will immediately notify Licensor of any address change.

38. Recording: Licensee will not record this Agreement.

39. Complete Agreement: Licensor and Licensee acknowledge that the foregoing provisions and any appendix, addenda and exhibits attached hereto constitute the entire Agreement between the parties.

40. Signature Authority: Each of the persons executing this Agreement warrants and represents that he or she has the full and complete authority to enter into this Agreement on behalf of the Party for which he or she is signing, and to bind said party to the agreements, covenants and terms contained herein.

(this space left intentionally blank)

Initial (_____)/(_____)
Licensor/Licensee

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate.

SOUTHERN CALIFORNIA EDISON COMPANY

By: _____
LICENSOR

Date: _____

MARISOL R. SANCHEZ
Supervisor
Land Management – Metro Region
Real Properties Department

ORANGE COUNTY WATER DISTRICT
a political subdivision of the State of California organized under Chapter 924 of the Statutes of 1933, as amended

By: _____
Cathy Green, President LICENSEE

Date: _____

By: _____
Michael R. Markus P.E., General Manager

Date: _____

APPROVED AS TO FORM:
RUTAN & TUCKER, LLP.

By: _____
General Counsel,
Orange County Water District

Initial (_____)/(_____)
Licensor/Licensee

APPENDIX

Guidelines for Standard Licensee Improvements

The following criteria are provided to aid in the development of a conceptual plot plan to be submitted to Southern California Edison Company herein after referred to as "Licensor" for consideration and approval *prior to the start of any construction on* "Licensor" *property*.

Plans should be developed indicating the size and location of all planned improvements. The plan should specify the dimensions of all planned improvements as well as the distance of all planned improvements from property lines and all adjacent "Licensor" towers, poles, guy wires or other "Licensor" facilities.

The plan must show the locations of all "Licensor" towers and poles, 16-foot wide access roads, main water lines and water shut-off valves, electrical service lines and parking areas. All plans must indicate adjacent streets and include a "north arrow" and the Licensee's name.

SHADE STRUCTURES
(Definition: A non-flammable frame covered on the top with a material designed to provide shade to aid in growing plants)

1. Shade structures must maintain minimum spacing of 50 feet between shade structure locations, should be placed perpendicular to Licensor's overhead electrical conductors (wires) unless otherwise approved in writing by Licensor, and should not exceed maximum dimensions of:
    a. 100 feet in length
    b. 50 feet in width
    c. 15 feet in height
2. Shade structures will not be permitted within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles
    c. 100 foot radius around dead-end tower legs, H-Frames and poles
    d. 25 foot radius around anchors/guy wires, poles and wood poles
3. Shade structures must utilize the following design:
    a. Temporary/slip joint construction only
    b. Non-flammable frame only
    c. Adequately grounded by a licensed electrical engineer
    d. Shade covering must be non-flammable and manufactured with non-hydrocarbon materials.

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Licensor/Licensee

SHADEHOUSES/HOTHOUSES
*(Definition: A simple, non-flammable, enclosed structure designed to control temperature **without** the benefit of heating and/or air conditioning units to aid in propagating and/or growing plants)*

1. Shadehouses/hothouses must maintain minimum spacing of 50 feet between shadehouse/hothouse locations, should be placed in perpendicular to Licensor's overhead electrical conductors (wires) unless otherwise approved in writing by Licensor, and should not exceed maximum dimensions of:
    a. 100 feet in length
    b. 50 feet in width
    c. 15 feet in height
2. Shadehouses/hothouses will not be permitted within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles
    c. 100 foot radius around dead-end tower legs, H-Frames and poles
    d. 25 foot radius around anchors/guy wires, poles and wood poles
3. Shadehouses/hothouses must utilize the following design:
    a. Temporary/slip joint construction only
    b. Non-flammable frame only
    c. Adequately grounded by a licensed electrical engineer
    d. Covering must be non-flammable and manufactured with non-hydrocarbon materials

GREENHOUSES
(Definition: An enclosed structure designed to control temperature and/or humidity by the use of heating and/or air conditioning units to aid in propagating and/or growing plants)
Greenhouses will be considered on a case-by-case basis.

IRRIGATION SYSTEMS / WELLS

1. Maximum diameter of pipe: 3 inches
2. All pipe must be plastic Schedule 40 or better
3. No irrigation system will be permitted within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles

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Licensor/Licensee

c. 100 foot radius around dead-end tower legs, H-Frames and poles

4. Sprinkler and drip irrigation controllers must be located at the edge of the right of way
5. Suitable identification markers will be required on main controllers and valves
6. Locations of main shut off valve will be provided and shown on a plot plan
7. Underground facilities must have a minimum cover of three feet
8. Earth disturbed must be compacted to ninety percent (90%)

LANDSCAPING

1. No trees will be permitted under the overhead electrical conductors or within 20 feet of the "drip line" of the conductors
2. Trees must have slow to moderate growth, and must be of a variety that grows to a maximum height of no more than 40 feet and must be maintained by the Licensee at a height not to exceed 15 feet
3. Placement of large rocks (boulders) must be approved in writing by Licensor
4. Any mounds or change of grade must be approved in writing by Licensor
5. No cactus or thorny shrubs will be permitted
6. Retaining walls, planters, etc. may be considered on a case by case basis and must be approved in writing by Licensor

TRAILERS *(Definition: Removable / portable office modules are not permitted without Licensor's prior permission. Trailers must meet the following criteria to be considered:* Trailers must meet the following criteria:

a. Must have axles and wheel and be able to be moved at any time
b. Maximum length: 40 feet
c. Maximum height: 15 feet
d. Maximum width: 12 feet

2. No trailers will be permitted within the following areas reserved for Licensor's access:

a. Within 2 feet from edge of 16-foot wide access roads
b. 50 foot radius around suspension tower legs, H-Frames and poles
c. 100 foot radius around dead-end tower legs, H-Frames and poles
d. 25 foot radius around anchors/guy wires, poles and wood poles
e. Under or within 10 feet of the conductor "drip lines"

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Licensor/Licensee

3. Sewer or gas lines to trailers must be approved in writing by Licensor
4. Location of all electrical and telephone lines must be approved in writing by Licensor
5. Electrical lines must be installed by a licensed -general contractor.
6. Trailers shall not be used for residential purposes
7. Toxic or flammable materials will not be permitted in trailers
8. Adequately grounded by a licensed -general contractor

PARKING AREAS

Parking areas should not be designed under the overhead electrical conductors or within 10 feet of the "drip lines" without Licensor's prior written approval. Parking spaces to be identified in accordance with the approved site plan. "No Parking" striping may be required in areas where additional clearance is required.

MATERIAL STORAGE

1. In the event of an emergency, Licensee must immediately - relocate all materials specified by Licensor in order to provide Licensor clear access to its facilities.
2. Licensee must provide Licensor with a list of material stored on the right of way
3. No toxic or flammable materials will be permitted
4. No materials shall be stored within the following areas reserved for Licensor's access:
    a. Within 2 feet from edge of 16-foot wide access roads
    b. 50 foot radius around suspension tower legs, H-Frames and poles
    c. 100 foot radius around dead-end tower legs, H-Frames and poles
    d. 25 feet from anchors/guy wires, poles and wood poles
5. Storage of materials not to exceed a maximum height of 15 feet
6. No storage of gasoline, diesel or any other type of fuel will be permitted
7. Any fencing around the storage areas must have Licensor's prior written approval.

Initial (_____)/(_____)
Licensor/Licensee

ADDENDUM

POLELINE, PIPELINE OR UNDERGROUND CABLE

A. Licensee must obtain prior written approval from the Licensor for the installation of any facilities, including any subsequent modifications. Licensee will maintain all facilities in a safe condition satisfactory to Licensor.

B. At any time, Licensor may require the removal, modification, or relocation of any portion of the facility. Licensee will remove, modify, or relocate same, at its expense, to a location satisfactory to Licensor within sixty (60) days after receiving notice to remove, modify, or relocate from Licensor.

C. Licensee will construct, use, maintain, or remove facilities so as not to damage, endanger or interfere with the construction, use and maintenance of existing facilities, including but not limited to, pipelines, underground cables, electric or telephone lines, and/or any subsequent modifications. Licensee must place its facilities at safe distance under or from existing pipelines and underground cables. Licensee must give Licensor ten (10) days prior written notice of the time and place of the commencement of any work to be performed on the Property.

D. Licensee must mark the location of all pipelines and underground cables with permanent markers. Licensee will maintain and repair the markers.

E. Pipelines and underground cables must be constructed and made of materials sufficient and safe for their intended use.

F. Pipelines must be constructed to withstand a pressure equal to at least one hundred and fifty percent (150%) of its maximum operating pressure. All pipelines must be tested upon completion of construction. Licensee must give Licensor twenty-four (24) hours prior written notice of the time and place of testing and provide a copy of the test results upon request.

G. No valves or controllers for the pipeline are allowed on the property.

H. Licensee agrees that pole line, pipeline or underground cable shall be removed upon cancellation or termination of this Agreement. Licensee shall provide the following information on Pipelines to Licensor:

1. Material Safety Data Sheets (MSDS) for all oil products that have been moved in the pipeline.

2. Repair and replacement records.

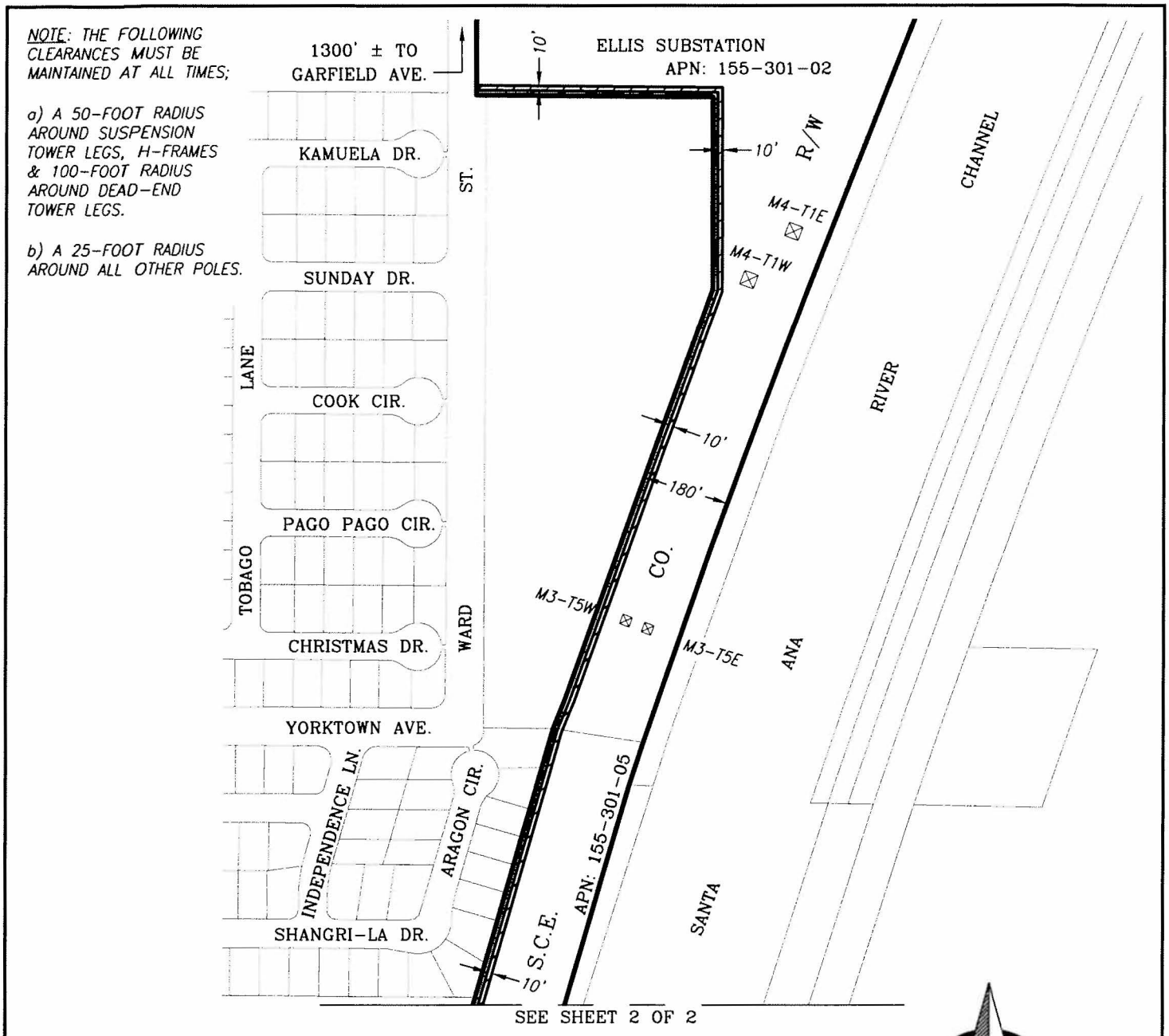
3. Hydro Test Records.

4. Records on spills or releases.

5. Test results of the area beneath meter stations, valves, or other potential spill points for any area that has not always been over concrete.

6. Copies of correspondence with any state or local regulatory agency regarding the pipeline.

Initial (_____)/(_____)
Licensor/Licensee



LEGEND

LANDS OF SOUTHERN CALIFORNIA EDISON COMPANY

AREA BEING LICENSED TO ORANGE COUNTY WATER DISTRICT FOR PIPELINE (WATER) PURPOSES ONLY (10' WIDE STRIP)

⊠ APPROXIMATE TOWER LOCATION

SHEET 1 OF 2

EXHIBIT "A"

FACILITY NAME: HUNTINGTON BEACH – ELLIS 220KV T/L R/W		**LICENSED AREA** (GROSS)	**SQ.FT.: 32,941**	**AC.: 0.75**
LICENSEE: ORANGE COUNTY WATER DISTRICT		CONTRACT NO.: 9.4172	ACCOUNT NO.: L3272	
CITY: HUNTINGTON BEACH	COUNTY: ORANGE	STATE: CA	T.G.: 858/F5	M.S.: 041-090
APN.(S): 155-301-02, 155-301-05		SCE DOCUMENT NO.: 169068, 162461, 169058		
SCE SANDERS MAP: 556828, 549260	SCE LAND BOOK: N/A	REF: N/A		
R.P. LAND AGENT: C. MC ELROY	LANDBASE MAPPING: R. CORDOVA	CHECKED BY: E. HERNANDEZ		
ORDER NO.: 801167052	NOT. NO.: 202714250	DATE: 12/03/2015	FILE NAME: 9.4172.DWG	

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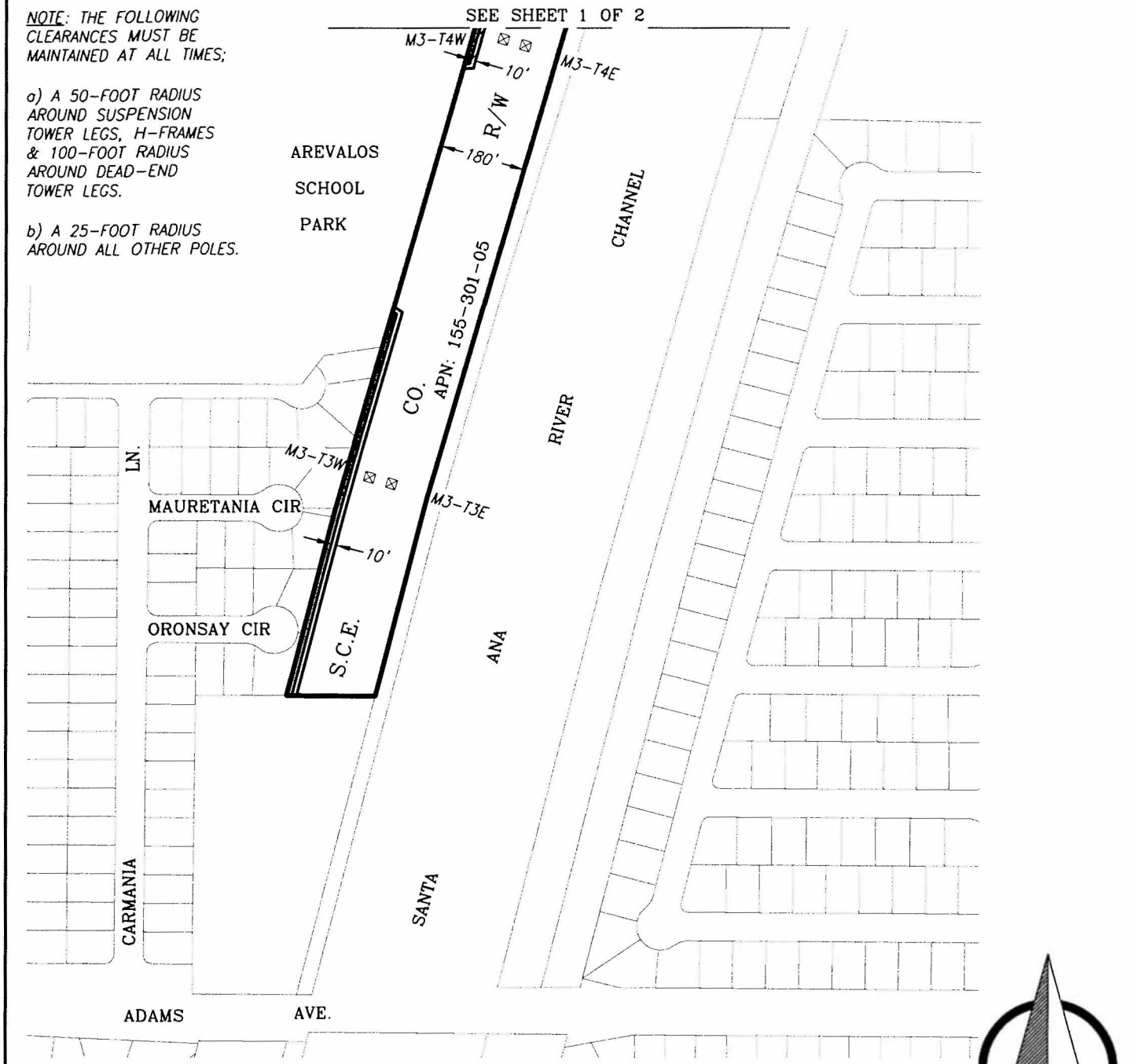
12/10/2015 10:09 AM, A:\EXHIBIT MAP LICENSE\2015\9.4172 ORANGE COUNTY WATER DISTRICT\ACAD 2012\9.4172.DWG



LEGEND

LANDS OF SOUTHERN CALIFORNIA EDISON COMPANY

AREA BEING LICENSED TO ORANGE COUNTY WATER DISTRICT FOR PIPELINE (WATER) PURPOSES ONLY(10'WIDE STRIP)

⊠ APPROXIMATE TOWER LOCATION

0 100 200

SCALE IN FEET

SHEET 2 OF 2

EXHIBIT "A"

FACILITY NAME: HUNTINGTON BEACH – ELLIS 220KV T/L R/W		**LICENSED AREA** (GROSS)	**SQ.FT.: 32,941**	**AC.: 0.75**
LICENSEE: ORANGE COUNTY WATER DISTRICT		CONTRACT NO.: 9.4172	ACCOUNT NO.: L3272	
CITY: HUNTINGTON BEACH	COUNTY: ORANGE	STATE: CA	T.G.: 858/F5	M.S.: 041-090
APN.(S): 155-301-02, 155-301-05		SCE DOCUMENT NO.: 169068, 162461, 169058		
SCE SANDERS MAP: 556828, 549260	SCE LAND BOOK: N/A	REF: N/A		
R.P. LAND AGENT: C. MC ELROY	LANDBASE MAPPING: R. CORDOVA	CHECKED BY: E. HERNANDEZ		
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12/10/2015 10:00 AM, A:\EXHIBIT MAP LICENSE\2015\9.4172 ORANGE COUNTY WATER DISTRICT\ACAD 2012\9.4172.DWG

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/Finance Issues Cte
Board of Directors

From: Mike Markus

Staff Contact: R. Herndon/D. Field

Budgeted: No
Budgeted Amount: $0
Cost Estimate: $73,000
Funding Source: General Fund
Program/Line Item No.: 1075
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: **LIMITED-TERM EMPLOYMENT AGREEMENT FOR ASSISTANT HYDROGEOLOGIST**

SUMMARY

As well construction and maintenance activities have increased and are expected to exceed Hydrogeology department staff resources in the coming year, staff requests approval of a limited-term contract for an assistant hydrogeologist for a one-year period.

Attachment(s): Limited Term Employment Agreement – Brendan Neel

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Approve and authorize execution of Limited-Term Employment Agreement for Assistant Hydrogeologist Brendan Neel for a one-year period commencing January 21, 2016.

BACKGROUND/ANALYSIS

Hydrogeology department staff is currently managing a number of well construction and maintenance projects, including the Alamitos Barrier Improvement Project, Sunset Gap seawater intrusion investigation, South Basin remedial investigation, and GWRS permit extension to recharge recycled water at Burris and Santiago Basins. These and several other field-intensive activities scheduled in the coming year will exceed the resources of staff members Dave Field and Gary Yoshiba, the department hydrogeologists dedicated to field activities. As such, staff is requesting Board authorization to hire a limited-term assistant hydrogeologist to assist Messrs. Field and Yoshiba with field oversight activities.

Staff's recommended person for the assistant hydrogeologist position is Brendan Neel, who is currently a part-time intern in the department. Mr. Neel has a bachelor's degree in Geology and is pursuing a master's degree in hydrogeology at California State University Long Beach. He is familiar with many of the department's field procedures and protocols, has demonstrated very good work skills, and is available to

fill this limited-term position. Specific activities in which staff plans to utilize Mr. Neel include:

- Decommissioning and replacement of monitoring well SCS-13
- Vault replacements for 4 wells - draft scope of work and field inspection
- Construction/borehole logging of monitoring well AM-52 at La Palma Basin
- Decommissioning of monitoring wells AM-36 and IDP-3
- East Newport Mesa Shallow Boreholes & Wells - conduct well siting, field inspection and lithologic logging. Assist with data analysis.
- Burris and Santiago Tracer Study Monitoring Wells - field inspection for mobilization and demobilization/vault installations and support for groundwater sampling during well development.
- Sunset Gap Seawater Intrusion Project - field inspection for demobilization/vault installation and groundwater sampling during well development
- Alamitos Barrier Improvement Project - groundwater sampling during well development.
- Assist with updating basin-wide geologic cross sections – QA/QC digitization of geophysical logs and plot cross section alignments
- Assist with cross sections and data analysis for Sunset Gap with supervision
- Assist with installation of casing liner in well OCWD-M46/2
- Continued water level monitoring

Staff recommends offering a one-year Limited-Term Employment Agreement to Brendan Neal for an $26.50/hour, plus benefits.

RELEVANT PRIOR BOARD ACTIONS - none

LIMITED TERM EMPLOYMENT AGREEMENT

(Brendan Neel)

THIS LIMITED TERM EMPLOYMENT AGREEMENT is entered into as of January 21, 2016 by and between the ORANGE COUNTY WATER DISTRICT, a political subdivision of the State of California (hereinafter, "OCWD"), Brendan Neel (hereinafter, "EMPLOYEE"), for the employment of EMPLOYEE by OCWD for the period commencing January 21, 2016 through the termination date as established in Section Three herein below, in accordance with the following terms and conditions:

SECTION ONE: EMPLOYMENT AND DUTIES OF EMPLOYEE

1.1 OCWD hereby employs EMPLOYEE, and EMPLOYEE hereby accepts employment from OCWD, in the capacity of Assistant Hydrogeologist, commencing as of January 21, 2016.

1.2 During EMPLOYEE's employment with OCWD, EMPLOYEE shall do and perform all services, acts or things necessary or advisable to fulfill the duties and responsibilities as directed by the District Geologist.

1.3 EMPLOYEE shall work forty (40) hours per week. The EMPLOYEE may apply accrued leave hours towards satisfying the minimum hours worked.

1.4 Unless otherwise, the employment services of EMPLOYEE shall be performed at the offices of OCWD, located at 18700 Ward Avenue, Fountain Valley, California; provided, however, that OCWD may require EMPLOYEE to travel temporarily to other locations to perform services for or on behalf of OCWD.

1.5 EMPLOYEE shall, to the best of EMPLOYEE's ability and experience, loyally and conscientiously perform all of the duties and obligations required of EMPLOYEE, either expressly or implicitly by the terms of this Agreement or the provisions of the OCWD Personnel Manual (hereinafter, the "Personnel Manual"), as adopted by the Board of Directors of OCWD and as may be amended by the Board of Directors in its legislative discretion from time to time (copy of which has

been provided to EMPLYEE); provided, however, that in the event of a conflict between this Agreement and the Personnel Manual, this Agreement shall supersede and prevail of the Personnel Manual.

SECTION TWO: COMPENSATION AND BENEFITS

2.1 As of the date of commencement of employment as set forth in Paragraph 1.1, EMPLOYEE shall receive wages based on an hourly rate of $26.50.

2.2 For and during the term of employment, EMPLOYEE shall be entitled to all of the benefits provided within the contract period and enjoyed by full-time employees of OCWD, as set forth in the Personnel Manual. EMPLOYEE acknowledges, however, that OCWD-paid layer two Money Purchase Plan retirement contributions vest to the EMPLOYEE only upon EMPLOYEE's accumulating five years of credited service, as defined in the retirement plan for employees of ORANGE COUNTY WATER DISTRICT.

SECTION THREE: TERM OF EMPLOYMENT

3.1 OCWD and EMPLOYEE hereby expressly understand and acknowledge that EMPLOYEE is employed by OCWD, for a period not to exceed one-year duration.

3.2 While OCWD and EMPLOYEE anticipate that the term of employment under this Agreement shall be approximately 1 year from the date of commencement of EMPLOYEE's employment pursuant to Paragraph 1.1 hereinabove, the actual date of termination of employment shall be determined by the completion of duties as determined by the District. In this regard, OCWD shall provide EMPLOYEE at least 14 days' written notice of the termination of employment due to the completion of duties.

3.3 Notwithstanding the provisions of Paragraphs 3.1 and 3.2 hereinabove, OCWD and, EMPLOYEE each reserve the right to terminate this Agreement and the EMPLOYEE's employment with OCWD, at any time, with or without cause.

SECTION FOUR: MISCELLANEOUS

4.1 Effect of Personnel Manual: To the extent not inconsistent with the provisions of this Agreement, the Personnel Manual is incorporated herein by this reference and shall govern the terms and conditions of EMPLOYEE's employment with OCWD, and the employment relationship of EMPLOYEE and OCWD, in all matters not expressly set forth herein.

4.3 Integration: This Agreement, together with all of the provisions of the Personnel Manual not inconsistent with any of the terms and conditions herein, represents the entire understanding of OCWD and EMPLOYEE as to the employment of EMPLOYEE by OCWD; and this Agreement, as complemented by the provisions of the Personnel Manual not inconsistent with the terms and conditions contained herein, supersedes any and all other agreements and understandings, either oral or in writing, between OCWD and EMPLOYEE with respect to the employment of EMPLOYEE by OCWD. Each party to this Agreement expressly acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or any person acting on behalf of any party, which are not embodied herein, and that no other agreement, statement, representation or promise not contained in this Agreement or in the Personnel Manual shall be of any force or effect.

4.4 Construction and Amendment: This Agreement shall be governed by the laws of the State of California. This Agreement may not be modified, altered or amended except in writing signed by OCWD and EMPLOYEE.

4.5 Effective Date: This Agreement shall be deemed executed by the parties as of the date first above written.

APPROVED AS TO FORM: **ORANGE COUNTY WATER DISTRICT**

By_____

President

By_____
General Counsel, OCWD

By_____

General Manager

By_____

Employee

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/Finance Issues Cte.
Board of Directors

From: Mike Markus

Staff Contact: R. Fick/V. Sharma

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: INVESTMENT PORTFOLIO HOLDINGS REPORTS

SUMMARY

The District's monthly Investment Portfolio Holdings Report will be discussed with the Committee.

Attachment(s): Investment Portfolio Holdings Reports dated December 31, 2015.

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Receive and file the Investment Portfolio Holdings Reports dated December 31, 2015.

BACKGROUND/ANALYSIS

The Investment Portfolio Holdings Report is a list of each of the District's fixed income investments and provides the market value at the end of each month. All securities within the District's Investment Portfolio are in compliance with the District's Statement of Investment Policy. The District's portfolio maturities provide cash liquidity sufficient to meet the District's projected six-month expenditures (as required by Government Code Section 53646).

Highlights since the previous report include:

- The yield on the one-year Treasury note as of the month end is at 0.65%; two-year at 1.06% and the five-year at 1.76%

- The last Federal Open Market Committee (FOMC) meeting was held on December 15-16, 2015. The FOMC changed the Federal funds rate to a range of 0.25% to 0.50% This is the rate prime banks lend to each other.

- The District's total rate of return on investments for December 2015 is 0.90%

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/ Finance Issues Cte.
Board of Directors

From: Mike Markus

Staff Contact: R. Fick /J. Kennedy

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: NA
CEQA Compliance: N/A

Subject: **REVISED DISTRICT RESERVE POLICY**

SUMMARY

Staff has reviewed the District's Reserve Policy and recommends adding the following two unrestricted reserve categories – Capital (Pay-go) Reserve and State Revolving Fund Loan Reserve.

Attachment(s):

- Proposed OCWD Reserve Policy
- Presentation

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for the January 20 Board meeting: Adopt revised District Reserve Policy.

BACKGROUND/ANALYSIS

OVERVIEW

The District's reserves (funds) are comprised of cash, cash equivalents, and investments. The District's unrestricted reserves totaled $151.7 million which is shown on Table 1 below at December 31, 2015 and the restricted reserves totaled $25.8 million (CIP, Debt Reserve, and Swap Collateral). It is essential that the District maintain adequate levels of unrestricted reserves to ensure its financial integrity so that the groundwater basin can be successfully managed and protected over the long term. More specifically cash reserves provide for the following:

1. Mitigate current and future risk due to revenue shortfalls and unanticipated expenditures
2. Ensure stable rates
3. Provide sufficient funds for cash flow purposes
4. Funds are available for necessary infrastructure repairs
5. Funds are available to purchase supplemental water when available
6. Support the District's credit ratings to allow access to low cost debt
7. Hedge against variable rate debt risk of the $129.8 million 2003A COP

Table 1
Unrestricted Reserves

	FYE 2013	FYE 2014	FYE 2015	12/31/15
R & R Fund	$67,034,849	$73,723,752	$70,457,911	$71,171,228
Toxic Cleanup Reserve	4,000,000	4,000,000	4,000,000	2,007,863
General Contingencies fund	3,000,000	3,000,000	3,000,000	3,000,000
Water Reserve Fund	21,854,419	11,781,603	2,254,162	6,052,666
SRF Loan Reserve	1,705,375	5,205,375	9,000,000	9,000,000
CIP Reserve (Pay-go)	0	18,781,926	13,792,454	16,792,454
Operating Reserve (15% of Op. Budget)	16,800,988	17,994,103	19,738,474	22,826,351
Operating (Cash) Fund	27,890,410	45,152,041	29,749,497	20,887,048
Total - Unrestricted Reserves	**$142,286,041**	**$179,638,800**	**$151,992,498**	**$151,737,610**

SUMMARY OF RECOMMENED RESERVE POLICY CATEGORY ADDITIONS

1. Establish an unrestricted Capital (Pay-go) Reserve for proceeds from the replenishment assessment (RA) revenues earmarked towards the District's Capital Improvement Program (CIP) as opposed to financing all the District's capital expenditures. Also, this reserve has no legal restrictions as bond proceeds require.

2. Establish an unrestricted State Revolving Fund (SRF) Loan Reserve equal to one year's debt service for the low cost SRF loans. The reserve fund shall be maintained for the full term of the finance agreement.

EXISTING RESERVE CATEGORIES AND DEFINITIONS

The District maintains three distinctly separate categories of fund balances or reserves: (1) unrestricted – undesignated or uncommitted, (2) unrestricted – designated or committed, and (3) restricted. The first two reserve types are either resource without constraints on spending or constraints placed upon the reserve by the District.

I. Unrestricted Reserves – Undesignated (Liquidity) Funds:

1 - "Operating Fund" is all funds collected and received by the District from the levy of the District's replenishment assessment (RA) and not designated. These monies shall be sufficient to enable the District to carry on any of the projects or purposes of the District as deemed by the Board of Directors. It can also include the expenditures necessary for the maintenance, operation and repairs of works and projects of the District as authorized by the Board of Directors. The funds can also be used for the purchase of supplemental water and the replenishment of groundwater supplies within the District. This fund may be routinely utilized, with proper approval, by staff to rectify temporary negative cash flow caused by timing differences between revenue and expenses or extraordinary losses in revenue or unexpected increases in expenses as it acts as the District's checking account.

The reserve policy permits broad use of the money's in this fund and moneys therein can be envisioned as the shock-absorber of the District's capital and liquidity needs. In order to establish adequate levels in this fund we first needed to understand some of the primary risks facing the District and reviewed such in light of the possible uses of the moneys.

Primary Risks:

a) swap termination - $19.8 million (as of 12/31/15)
b) loss of property taxes – approximately $22.9 million
c) earthquake or other cataclysmic event – estimated three months of general fund expenses- approximately $15.1 million

Further, the District can use this reserve to offset its interest rate exposure to $47.3 million of un-hedged variable rate debt.

Such amounts are significant to the District and its ability to financially withstand one or more of the aforementioned risks. This is critical to the operation of the District and its ability to continue to supply affordable water to 2.4 million people in Orange County. The affordability of the District's water is greatly enhanced by the strong financial position of the District and its ability to readily access the lowest cost funding in the bond market by virtue of its high ratings, Aa1/AAA/AAA. Having adequate reserves to mitigate financial risk are important to the financial strength of the District. Considering the nature of the risks and potential financial impact it is recommended that a minimum balance equal to six months of the annual budgeted general fund expenses plus annual debt service cost be maintained. Such expenses are budgeted at $88.0 million for FY 2015/16. Thus the recommended reserve amount is $44.0 million. As of December 31, 2015 there is approximately $20.9 million on deposit in the Operating Fund.

II. Unrestricted Reserves – Designated Funds

2 - "Operating Reserve Fund" as defined in the OCWD District Act, are funds established and allocated from the general fund to be used to meet the cash flow needs of the District before the proceeds of taxes or replenishment assessment collections. This fund may be used to meet emergency expenditures for operations, maintenance and the debt service payments of the District. The level of this operating reserve as established in the District Act shall not exceed 15% of the total current annual general and water reserve fund operating budget and acts as the District's savings account (subsequently the Board approved a slight change to reflect 15% of the District's total operating budget).

3 - "Toxic Cleanup Reserve" fund was established by the Board in 1986 to have funds available for toxic spill emergencies and cleanup. This fund may be used for toxic spill emergencies and cleanup with Board approval. The current target level established by the Board is $4 million and is to be replenished annually after the adoption of the annual OCWD budget.

4 - "Contingency Reserves" are funds that are established by the District Act to provide for expenditures that have not been anticipated or provided for in the District's annual budget. The money for this fund is to be allocated from the operating fund and the water reserve fund at the beginning of each fiscal year. This fund provides for expenditures that have not

been anticipated or provided for in the District's annual budget. The level of this fund as established by the District Act is not to exceed $ 3 million.

5 - "Water Reserve Fund" as defined by the OCWD District Act is a fund that is established to accumulate any basin equity assessment funds collected, unexpended water purchases budget, or any water production department general fund budget versus actual variance. These funds can be used for the purchase of supplemental water for groundwater replenishment, acquiring, constructing or developing any groundwater intrusion prevention projects, pipelines, wells or other works necessary for the purposes of the District. The maximum upper limit is set at enough funds to purchase 50% of water needed to have an accumulated basin overdraft of 125,000 acre-feet. Thus as the accumulated overdraft increases these reserves should increase to assist in refilling the groundwater basin.

6."Refurbishment and Replacement (R&R) Fund" is a fund that was established by the Board to be equal to thirty years of projected Replacement and Refurbishment costs as defined in the District's R&R model. Funds can be spent for existing infrastructure assets which require repair or replacement. The Board approves these expenditures during each budget cycle. The target is based on the detailed R&R model created by Brown & Caldwell.

III. Restricted Reserves

7. "Capital Funds" - are proceeds from bond issuances, any other debt financing, and reimbursements which are used for the District's new capital projects. These funds are restricted to specific capital projects which are authorized and approved by the Board of Directors.

8. "Debt Reserve Funds" - are funds that have been set aside from various bond issues. These funds are not available for the general needs of the District and must be maintained at specific levels, and are restricted by certain bond covenants. Any excess principal and/or interest earnings may be used to pay debt service on the bonds. The debt service reserve requirement is established at the time of the bond issuance. The amount may be recalculated as bonds are paid down.

PRIOR RELEVANT BOARD ACTION(S)

3/16/2011, R11-3-44 - Adopt Revised District Reserve Policy

District Reserve Policy

A key element of prudent financial planning is to ensure that sufficient funding is available for current operating, capital, and debt service needs. Additionally, fiscal responsibility requires anticipating the likelihood of, and preparing for, unforeseen events. The District will at all times strive to have sufficient funding available to meet its operating, capital, and debt service obligations. To preserve its strong credit ratings of AAA/AAA/Aa1, in every fiscal year the District will strive to maintain unrestricted cash and investment balances totaling a minimum of 625 days of budgeted operating expenses comprised of annual budgeted General Fund appropriations and annual budgeted Debt Service and strive to maintain a 3.50x – 4.00x senior lien annual debt service coverage and a 2.75x- 3.25x all-in annual debt service coverage in every fiscal year as defined by the District's bond indenture.

Operating Reserve Fund *- established by the District Act and allocated from the general fund to be used to meet the cash flow needs of the District before the proceeds of taxes or replenishment assessment collections are available to meet emergency expenditures for operations, maintenance and the debt service payments of the District. The level of this general operating reserve as established in the District Act shall not exceed 15% of the total current annual general and water reserve fund operating budget.*

Toxic Cleanup Reserve Fund *- established for toxic spill emergencies and cleanup. The current target level is $ 4 million and is to be replenished annually after the adoption of the annual OCWD budget.*

Contingency Reserve Fund *- established by the District Act to provide for expenditures that have not been anticipated or provided for in the District's annual budget. The money for this fund is to be allocated from the Operating Fund and the Water Reserve Fund at the beginning of each fiscal year. The level of this fund as established by the District Act is not to exceed $ 3 million.*

Water Replenishment Fund (to be known as the "Operating Fund") *- established for funds collected and received from the levy of the District's replenishment assessment. These monies shall be sufficient to enable the District to carry on any of the projects or purposes of the District as deemed by the Board of Directors. It can also include the expenditures necessary for the maintenance, operation and repairs of works and projects of the district as authorized by the board of directors. The funds can also be used for the purchase of supplemental water, and the replenishment of ground water supplies within the District. The District shall maintain a minimum balance equal to fifty percent of the sum of the (i) current annual budgeted General Fund appropriations, plus (ii) current annual budgeted debt service appropriations.*

Basin Equity Assessment Fund *- established for funds received from the levy of the District's Basin Equity Assessment. These funds are to be used only for the purchase of water for the purpose of groundwater replenishment and/or to reimburse producers assigned pumping limitations per the District Act.*

Water Reserve Fund *- established by the District Act to accumulate any excess general assessment, or unexpended funds, other than funds allocated to the operating reserve or operating contingencies by the Board of Directors. These funds can be used for the purchase of supplemental water for groundwater replenishment, acquiring, constructing or developing any groundwater intrusion prevention projects, pipelines, wells or other works necessary for the purposes of the district. Going forward, under the new Reserve Policy, this fund shall be designated only for purchases of supplemental water in order to have funds set aside and available. This will provide accountability and transparency to the Board and Groundwater Producers on funds collected and spent on water purchases. The maximum upper limit is set at enough funds to purchase 50% of water needed to have an accumulated basin overdraft of 125,000 acre-feet.*

Repair and Replacement Fund *- established for replacement or refurbishment of District facilities, to be equal to thirty years of projected Replacement and Refurbishment (R&R) costs as defined in the District's R&R model.*

Capital Fund (Pay-go) – established for proceeds from Replenishment Assessment revenues earmarked towards the capital improvement program as opposed to financing all the District's capital expenditures and has no legal restrictions such as bond proceeds would.

Debt Service Reserve Fund – establish an unrestricted reserve as a condition of the low cost State Revolving Fund loans equal to one year's debt service.

Capital Fund *– established for proceeds from bond issuances or any other debt financing, and are used for the District's capital projects and capital improvements. These funds are restricted to specific capital projects which are authorized and approved by the Board of Directors.*

Debt Reserve Fund *- established for various bond issues. These funds are not available for the general needs of the District and must be maintained at specific levels, and are restricted by certain bond covenants.*

Debt Service Fund ("Bond Fund" per District Act) *- established to meet the annual debt payments of principal and interest for the Certificates of Participation (COPs). These funds are allocated from property tax revenues and the fiscal replenishment assessment collections. In 1992 and 1993 the Board dedicated the District's ad valorem taxes to the payment of the bond debt. The District funds the annual debt payments from the property taxes received (first priority) and then from replenishment assessments (second priority). Under this policy, this fund shall cease to exist and funds included in this fund shall be incorporated into the Operating Fund.*

Section 2: The fund balances as of January 1, 2016 are adopted, as are the following funding target levels:

ACCOUNT	POLICY FUNDING TARGET
Restricted Funds & Reserves	
Capital Project Funds	No target
Debt Reserve Funds	Bond Covenants
BEA Funds	No Target
Designated Reserves & Funds	
Toxic Cleanup	$4 million
Contingency	$3 million
Capital Fund (pay-go)	**No target**
Debt Service Reserve Fund	**One year's annual debt service on State Revolving Fund loans**
Water Reserve Funds	Maximum of enough funds to purchase 50% of water needed to have an accumulated overdraft of 125,000 acre-feet
Operating Reserves	15% Operating & Water Budget
Repair & Replacement Reserves	Detailed R&R Model
Operating Funds (Water Replenishment Fund)	
Operating Cash	
RA & Annual Debt Payments	50% of current annual budgeted General Fund appropriations and 50% of annual budgeted debt service

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/Finance Issues Cte.
Board of Directors

From: Mike Markus

Staff Contact: M. Wehner/L. Yoo/ B. Dosier

Budgeted: Yes/partial
Budgeted Amount: $500,000
Cost Estimate: $721,000
Funding Source: CIP
Program/ Line Item No. C15001
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

SUBJECT: AGREEMENT TO AUTOSCRIBE INFORMATICS FOR LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS) IMPLEMENTATION

SUMMARY

On September 16, 2015, the Board authorized staff to issue a Request for Proposals (RFP) for Laboratory Information Management System (LIMS) Implementation. The District's Advanced Water Quality Assurance Laboratory (AWQAL) uses a LIMS to store, manage, and report the water quality data generated by staff and their analytical instruments. The current LIMS has been in service for over 14 years, is obsolete, is no longer supported and requires replacement. An RFP was sent to nine (9) companies of which four (4) responded. Staff evaluated proposals received and recommends awarding the Purchase Order and Agreement to Autoscribe Informatics.

Attachment(s): Autoscribe Informatics proposal dated October 21, 2015

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting:

1. Authorize increase 2015/2016 Capital Improvement Budget line item C15001 by $221,000 to $721,000; and
2. Approve and authorize issuance of Agreement to Autoscribe Informatics for an amount not to exceed $621,494 for the acquisition of the Autoscribe Matrix Gemini Laboratory Information Management System software and related implementation services

BACKGROUND/ANALYSIS

The AWQAL reports over 400,000 analytical results for over 20,000 samples annually, handling a wide range of analytical determinations in areas of microbiology, toxicology, trace-level contaminants and general chemistry. These tests are reported to the appropriate agencies as required by Federal and State environmental laws and regulations. LIMS is a category of software system that is used in laboratories for the management of samples, laboratory users, analytical instruments, standards and other laboratory functions such as specimen management and workflow automation. LIMS software receives, processes and stores information generated by laboratory processes

while interfacing with intricate and complex analytical instruments and other information systems such as the District's Water Quality Resource Management System (WRMS). Currently the AWQAL utilizes a 14 year-old LIMS called Aspen to manage the high volume of technical data and analytical activities relating to these tests. The Aspen LIMS is obsolete and no longer supported by the vendor.

Since 2012, Laboratory staff began to gather information about current LIMS technologies through conversations with contacts at other water/environmental laboratories, meeting LIMS vendors at Industry trade shows and viewing demonstrations by LIMS vendors. On November 20, 2013, the Board approved an agreement with Astrix Technology Group for consulting services in support of LIMS selection. Laboratory staff has worked with Astrix to understand how a prospective LIMS might meet AWQAL's numerous requirements in an effort to ensure a cost-effective and successful transition to a new LIMS. These efforts resulted in a list of objectives for the new LIMS, the most important of which include:

1. Being at the beginning of its lifecycle;
2. Using the Oracle database management system; and
3. Providing tools that enable laboratory staff to rapidly configure LIMS.

A LIMS at the beginning of its lifecycle is crucial because the LIMS upgrade path is well established. The selected LIMS vendor will periodically upgrade the LIMS which allows the AWQAL to keep up with technological advances in the software industry and to implement new features cost effectively if appropriate. There is no upgrade path for the current Aspen LIMS because the LIMS vendor is no longer in business.

The new LIMS will use the Oracle database management system (Oracle), which is the District's standard database management system also utilized by the District's WRMS, the District's JD Edwards Financial System and the District's Maximo Maintenance Management System.

As workflows change, administrative tools will allow the AWQAL to efficiently configure LIMS to accommodate new research projects, new regulations and higher sample load. These administrative tools are another example of technological advances that provide features not available in the current Aspen LIMS.

Request for Proposals

On September 16, 2015 The Board authorized staff to issue an RFP for LIMS Implementation. The RFP solicited proposals for a fixed price contract to provide LIMS software, implementation services and a 5-year Maintenance and Support services.

District staff prepared an RFP for the new LIMS. Below is a summary of the RFP's scope of work:

- Deliver and install a commercial-off-the-shelf LIMS.
- Configure and customize the LIMS to implement the functionality described in the requirements document such as provide 100 reports, access for 20 concurrent users, 50 instrument interfaces, the facility to transfer data from LIMS to the

Water Resources Management System (WRMS), and configuration/administrative tools.

- Deliver a project plan which describes in detail the work plan, the milestones and schedule for the completion of the LIMS project.
- Selected LIMS vendors will participate in a LIMS configured demonstration where District staff provides a list of requirements that the LIMS vendor must implement and demonstrate.
- Deliver a LIMS that operates using Oracle v11 database.
- Deliver a LIMS that contains all reference data such as quality control acceptance limits.
- Deliver a comprehensive user manual, written technical and functional training material. Conduct training sessions with laboratory staff on all aspects of LIMS.
- Conduct application and system testing.
- Provide Go-Live and post Go-Live Support.

An RFP was issued on September 17 and proposals were solicited from nine (9) prospective bidders and the RFP was placed on the District's website. Subsequent questions were answered and distributed to all prospective bidders and also placed on the District website. Proposals were due on October 23. Staff received four (4) proposals from Autoscribe Informatics, Inc. (Autoscribe), ThermoFisher Scientific (ThermoFisher), ChemWare LLC (ChemWare) and Labware, Inc. (Labware).

Proposal Evaluation

Proposals were evaluated by the LIMS Selection Committee composed of Laboratory Staff, Lee Yoo (Laboratory Director); Mark Yamamoto (Supervising Chemist); Phil Harrington (Supervising Chemist); Anny Lau (Supervising Chemist); Lily Sanchez (Supervising Chemist), Jeremy Davis (Supervising Chemist) and Information Services staff, Bruce Dosier (Director of Information Services/Property Management); Vu Truong (Senior Programmer/Analyst).

Although this RFP was for both the acquisition of software and Professional Services, it was evaluated per Resolution No. 96-4-73, Consultant Selection Procedures adopted by the Board on April 17, 1996 because it was anticipated by staff that a large portion of the cost would be Professional Services. The proposals were reviewed and scored based upon the following criteria, without consideration of the proposal fee (which was submitted in a sealed envelope separate from the rest of the proposal):

- Project Approach and Schedule
- Experience and Qualifications of the Project Manager
- Experience of Firm and Other Project Team Members
- Time Commitment of Key Staff
- Man-hour Estimate
- Record of Success on Recent Similar Projects
- Configured Demonstration

Since the functionality and configurability of the LIMS software is critical to the proposal, the bidders were also evaluated based on a configured demonstration of their LIMS software. Staff reviewed configured demonstrations presented by each of the four bidders to ascertain that the bidder understands the project and to provide clarification of the proposal. The configured demonstrations provided the Bidders with an opportunity to demonstrate how their LIMS meets the Districts requirements and why their LIMS should be selected.

Laboratory staff had prepared a very detailed set of Configured Demonstration Specifications that was provided to the Bidders. Staff evaluation of the LIMS vendors based on their ability to implement these specifications was a major consideration in the evaluation. It is difficult for staff to evaluate a LIMS that is not configured to the District's specifications. Terminology used by the vendors may differ from the terminology used by the District and workflow implemented in a prospective LIMS may differ from OCWD's workflow. Configured demonstrations allow staff to compare the features of a prospective LIMS to the District's current LIMS and workflow.

Goals of the configured demonstrations were to:

1. Evaluate the ability of the selected LIMS vendors to implement workflows as described in the Configured Demonstration Specifications document: login samples, enter analytical results, generate Quality Control reports, manage instrument files, approve data, generate Certificate of Analyses and demonstrate the capability of their configuration tools.
2. Increase staff understanding of changes to workflows required for a particular LIMS;
3. Increase LIMS vendors' understanding of the purpose of LIMS at OCWD and the context in which LIMS functions at OCWD.

The Bidders had approximately 30 days to prepare their respective configured demonstration and were allocated 2 hours to conduct their configured demonstration remotely via WebEx or similar remote webinar method.

Before the fee envelopes were opened, the proposals were evaluated by the LIMS Selection Committee on the basis of information provided by the bidders in their RFP responses, during the configured demonstrations and by follow-up questions. Table 1 shows the scores of the proposers following the technical proposal evaluation by the selection committee.

Table 1 – Technical Proposal Evaluation Scores

Criteria	Max Score	AutoScribe Matrix Gemini v.5.3	ThermoFisher Sample Manager v. 11.1	ChemWare Horizon LIMS v.11.1.3	LabWare LabWare LIMS
1. Project Approach & Schedule	25	22.9	19.0	18.7	14.3
2. Experience and Qualifications of Project Manager	15	13.4	13.0	14.3	12.0
3. Experience & Qualifications of Bidder & Key Team Members	15	13.0	12.0	11.9	8.2
4. Work Plan with Man-hour Estimate	10	9.1	8.2	7.6	7.5
5. Record of Success on Similar Projects	10	8.3	8.3	7.7	6.3
6. Time Commitment of Staff	10	8.7	8.2	8.0	6.0
7. Configured Demo	15	13.4	11.0	10.0	5.2
Total Score	100	**88.8**	**79.7**	**78.2**	59.5

The technical evaluation scores were ranked and the top 3 proposals were selected for fee consideration. The top three proposals were received from Autoscribe (score of 88.8), ThermoFisher (score of 79.7) and ChemWare (score of 78.2) with Autoscribe scoring almost 10 points higher than ThermoFisher and ChemWare, who were relatively close in technical evaluation score. Staff also conducted telephone interviews of references provided by these three bidders. The references were very positive for all three bidders.

Fee Proposal Evaluation

Staff then opened the fee proposals for the top three firms. Evaluation of the fee proposals shows that the lowest total fee proposed was by ChemWare ($531,128), followed by Autoscribe ($621,494) and the highest fee was ThermoFisher ($1,062,884). The fee proposal evaluation is shown in Table 2 – Fee Proposal Evaluation

Table 2 – Fee Proposal Evaluation

Criteria	ChemWare (Horizon LIMS v.11.1.3)	Autoscribe (Matrix Gemini v.5.3)	ThermoFisher (SampleManager v.11.1)
Software Licensing	$170,715	$124,760	$232,680
Professional Services	$237,525 (1,423 man-hours)	$376,450 (2,092 man-hours)	$613,700 (2,848 man-hours)
5 Years Software & Support	$122,915	$120,284	$216,504
Total	$531,128	$621,494	$1,062,884

ThermoFisher's fee proposal was significantly higher than either of the other fee proposals opened, being 71% higher than Autoscribe's proposal and 100% higher than ChemWare's. Since ThermoFisher's fee proposal was significantly higher and the technical score between ThermoFisher and ChemWare was relatively close, staff focused on finalizing its evaluation of Autoscribe's and ChemWare's proposals. Autoscribe's fee proposal was about 17% higher than ChemWare's, however Autoscribe ranked significantly higher in their technical evaluation score than did ChemWare. A comparison of the proposals technical evaluation scores and the fee proposals are shown in Table 3 - Top Three Bidders.

Table 3 - Top Three Bidders

Bidder	Technical Proposal Evaluation Score	Fee Proposal
Autoscribe	88.8	$621,494
ThermoFisher	79.7	$1,062,884
ChemWare	78.2	$531,128

Recommendation

Staff is recommending Autoscribe's proposal. In addition to receiving the highest of the technical evaluation score, staff is recommending Autoscribe's proposal because 1) Autoscribe's software was most intuitive to Lab staff; 2) Autoscribe had the highest ranked Configured Demonstration; 3) Autoscribe uses standard District Information Services technology; 4) Autoscribe has experience converting from the District's current LIMS; 5) Autoscribe was very responsive in presenting their proposal; 6) Autoscribe was specific in addressing key items in the District's RFP.

1) ***Autoscribe's software was most intuitive to Lab staff***
   During the configured demonstration, Autoscribe demonstrated their software and Lab staff found the software to be the most intuitive. Having software that is intuitive is important as it facilitates implementing and learning the software by staff.

2) ***Autoscribe had the highest ranked Configured Demonstration***
Autoscribe scored 13.4, ThermoFisher scored 11.0 and ChemWare scored 10.0 out of a total of 15 possible points. During the configured demonstration, Autoscribe demonstrated how easily Autoscribe's system could be configured. The District's LIMS must be configurable because of the changing regulatory requirements and related modifications to workflows that must be supported by LIMS.

3) ***Autoscribe uses District standard Information Services technology***
Although both Autoscribe's and ChemWare's software utilize the Oracle Database and Windows-based computer servers, Autoscribe's software utilizes other technology that Information Services staff is familiar with and supports such as .NET-based software and Crystal Reports reporting software. ChemWare's next version is planned to be .NET compliant, however that is not the version proposed by ChemWare to the District.

4) ***Autoscribe has experience converting from the District's current LIMS***
Autoscribe stated in their proposal that they have staff experienced in converting from Aspen to Autoscribe Matrix Gemini whereas ChemWare did not state this. Experience converting from the Aspen data model is important in a successful implementation.

5) ***Autoscribe was very responsive in presenting their proposal***
Autoscribe was very responsive in their proposal submission. They were the first to submit RFP response and first to schedule a configured demonstration (whereas the other bidders required reminders).

6) ***Autoscribe was specific in addressing key items in the District's RFP***

- Autoscribe submitted a schedule for the project whereas ChemWare did not.

- Autoscribe was specific in addressing the detailed requirements document that was included with the RFP, which ChemWare did not.

- Autoscribe clearly stated the number of hours required for delivering functionality required in the project, such as data migration and development of test protocols, which may have resulted in a greater number of hours proposed, whereas ChemWare was unclear about the number of hours for delivering that functionality.

- Autoscribe specifically states the number of on-site hours allocated to the implementation project (264 hours) versus remote hours whereas ChemWare did not specify. On-site time is extremely important, especially during the Go-Live period.

- Autoscribe specifically states that bi-directional instrument interfaces are included in their proposal whereas ChemWare did not. Bi-directional instrument interfaces are important to the Laboratory because they increase quality of the data collected and efficiency in collecting it.

Autoscribe Informatics Inc. provides development and support of LIMS software. Autoscribe has significant experience managing a number of LIMS implementations, including work with the City of Henderson, Nevada and the City of Charlotte, North Carolina who were provided as references to staff. Additionally, Autoscribe has staff experienced in converting from Aspen, the District's current LIMS, to Autoscribe Matrix Gemini software.

Autoscribe is ISO9001:2008 certified (as a Distributor of Proprietary Software mainly for Laboratory Use Design, Development, Marketing, Sales, lmplementation and Support of Software). ISO 9001 is an international business standard that specifies an effective way for organizations to manage the quality of the services and products they supply. It identifies how to implement and document a quality management system that can be externally audited to achieve certification.

Autoscribe proposes to use a combination of on-site and remote staff to complete the project, with some of the work being performed remotely. Based upon Autoscribe's proposal, the project is expected to be completed within seven (7) months, with an anticipated go-live date in September 2016 (assuming the project begins by March). The proposed project schedule is shown in Table 4 – Proposed Project Schedule.

Table 4 – Proposed Project Schedule

Description	Date Complete
Recommend to Committee for approval of LIMS purchase	Thu, Jan 14, 2016
Recommend to Board for approval of LIMS purchase	Wed, Jan 20, 2016
Execute Agreement	Fri, Feb 11, 2016
LIMS Installation	March 2016
LIMS Configuration	March 2016 – September 2016
LIMS Project Completion	September 2016

Because Autoscribe has the LIMS software, qualifications, experience and expertise necessary to implement a new LIMS, staff recommends execution of an agreement with Autoscribe for the LIMS at a cost not to exceed $621,494.

Budget Impact

The 2015/2016 Capital Improvement budget (project number C15001) allocated for the LIMS Upgrade is $500,000 for software acquisition and professional services. This budget amount was derived from the consulting work performed by Astrix. Astrix

provided estimated costs based on responses to a Request for Information (RFI) from several LIMS vendors, including Autoscribe, ChemWare and ThermoFisher.
The fee proposals received from these three vendors was more than their estimated cost provided by RFI. Among the factors increasing the fee proposal costs over the estimates in RFI include:

- The RFP called for 5 years Software & Support rather than 1 year in the RFI;
- The RFP contained more detailed requirements than the RFI regarding the LIMS requirements including integration requirements with the District's Water Resource Management System (WRMS);
- Computer hardware and system software estimates did not take into consideration requirements to meet District standards in terms of support, operations and disaster recovery and were therefore minimized in the RFI estimates.

The new LIMS will utilize more recent versions of computer server hardware and software and will require the acquisition of hardware and system and database software to support its implementation. Those requirements will be determined in conjunction with the new LIMS vendor, and will require additional funding. Estimated total additional hardware and system software should be approximately $100,000. Staff will return for Board consideration of additional hardware and software funding per Board established procurement policies.

Because the cost of $621,494 exceeds the budget by $121,494 and the estimated additional total hardware and system software will be approximately $100,000, staff is requesting the budget for program/line item number C15001 be increased by $221,000 for the LIMS Upgrade for total project funding of $721,000.

PRIOR RELEVANT BOARD ACTION:

09/16/15, M15-144 , Request for Proposals (RFP) authorized for a Laboratory Information Management System (LIMS) for the Advanced Water Quality Assurance Laboratory

11/20/13, R13-11-142, Agreement No. 0953 - Issuance of Professional Services Agreement to Astrix Technology Group, LIMS Consultant

AGENDA ITEM SUBMITTAL

Meeting Date: January 14, 2016

To: Administration/Finance Issues Cte.
Board of Directors

From: Mike Markus

Staff Contact: J. Kennedy/R. Fick

Budgeted: N/A
Budgeted Amount: N/A
Funding Source: N/A
Cost Estimate: N/A
Program/Line Item No: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: BASIN PRODUCTION PERCENTAGE AND REPLENISHMENT ASSESSMENT ESTIMATES FOR FISCAL YEAR 2016-17

SUMMARY

The District annually provides an estimate of the Basin Production Percentage (BPP) and the Replenishment Assessment (RA) for the following fiscal year to assist the Groundwater Producers in preparing their annual budgets for next year. Per the District Act, the RA and BPP must be set by the Board in the month of April.

Staff is currently preparing a recommended budget for review at the March 2, 2016 Board meeting which will directly impact the setting of the RA and BPP. For reasons discussed in this report, relatively large ranges are being provided for the FY2016-17 RA and BPP.

Item	Current	Estimated FY 2016-17
Replenishment Assessment – RA	$322/af	$395 to $431/acre-foot
Basin Production Percentage - BPP	75%	72 to 80%

Attachment(s): Presentation Material

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Provide the Fiscal Year 2016-17 Replenishment Assessment and Basin Production Percentage estimates to the Groundwater Producers along with any additional Board comments.

BACKGROUND/ANALYSIS

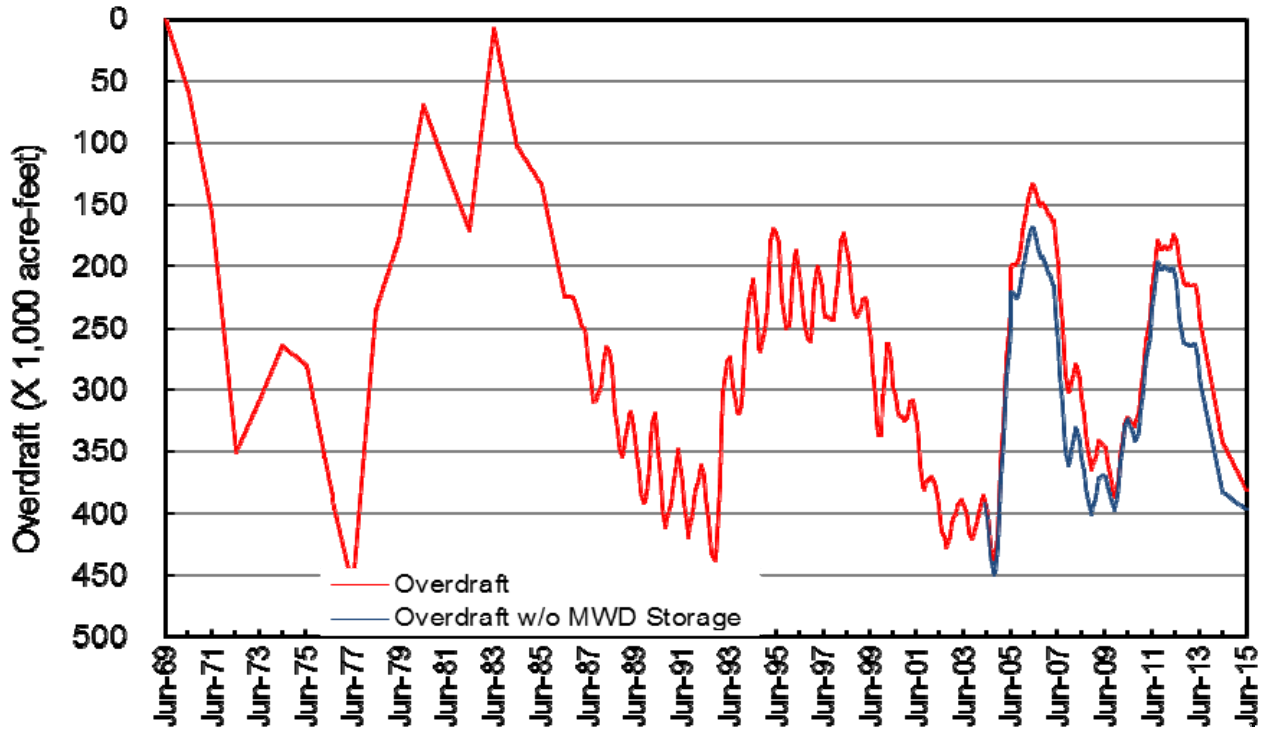
Preparing relatively precise estimates for the FY2016-17 RA and BPP is difficult at this time. Due to the groundwater basin's relatively high accumulated overdraft, the District will need to be conservative in setting the BPP and will have to consider lowering overall groundwater basin pumping especially if another dry winter occurs. In January 2013 the District established a basin management policy to lower the BPP whenever the accumulated overdraft exceeds

350,000 acre-feet which currently exist. However, if a wet winter is experienced, the basin would begin to refill, and some relief would be provided in setting the BPP. There is also uncertainty at the moment regarding the amount of imported water that could be available next year to purchase to recharge the groundwater basin which will have a large impact on District expenses. Additionally the state's decision to continue or lift the emergency regulations requiring a 25% reduction in total water demands will have an impact on basin pumping and expected revenues. All of these uncertainties make it difficult to predict the RA and BPP for FY2016-17 at this time.

Basin Production Percentage (BPP) Projection

The groundwater basin's accumulated overdraft is 381,000 acre feet as of June 30, 2015 as shown in Figure 1 or 397,000 acre-feet if you exclude the 16,000 acre-feet the Metropolitan Water District (MWD) had in their conjunctive use program (CUP) storage account at that time. The accumulated overdraft under average hydrological conditions and with the current 75% BPP is expected to remain about the same for the current fiscal year.

Figure 1
Groundwater Basin Accumulated Overdraft

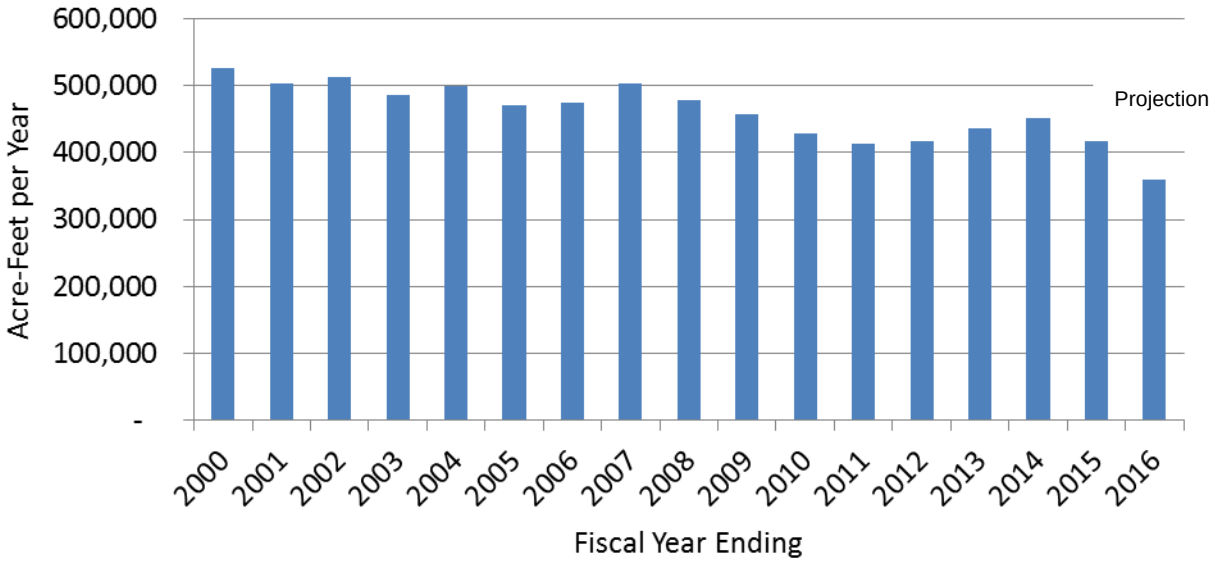


Several factors need to be considered and will impact the setting of next years BPP. They include:

- As the accumulated overdraft increases, the District needs to become more conservative in setting the BPP. The District's policy is to lower the BPP/basin pumping whenever the basin's accumulated overdraft exceeds 350,000 acre-feet.
- The amount of Metropolitan Water District (MWD) imported water supplies that could be available to recharge the groundwater basin to support basin pumping will likely not be known until approximately April or May after the winter.
- If the area experiences a relatively dry winter for the remainder of the fiscal year, the groundwater basin accumulated overdraft could increase further by approximately 50,000 acre-feet.
- As total water demands decrease, the BPP needs to be increased to maintain the same level of groundwater pumping as last year if that is a desired basin management goal.

Total water demands are predicted to be at a historic low for the current fiscal year as shown on the following Figure 2. The State's emergency restrictions requiring a 25% reduction in total water demands are causing the decline. Total demands are estimated at 360,000 acre-feet for the current fiscal year and would likely remain there for next year if another dry winter is experienced. If a wet winter is experienced the state could be expected to lift the emergency restrictions in place. Total water demands would likely begin an upward trend assuming normal future hydrology and could increase by about 20,000 to 30,000 acre-feet. Staff recommends using 380,000 acre-feet for the FY 2016-17 water demands which is reasonably close to any scenario that could occur next year.

Figure 2
Total Water Demands



Expected source waters to recharge the groundwater basin in FY 2016-17 are shown on the following Table 1. 65,000 acre-feet of MWD untreated full service water has been assumed to support the BPP for the Groundwater Producers. This is an increase of 10,000 acre-feet from

the current budget. The District has generally committed to purchasing an average of 65,000 acre-feet of MWD untreated full service water to recharge the groundwater basin.

Assuming average hydrological conditions for FY 2016-17 and a 75 percent BPP, the groundwater basin's accumulated overdraft would decrease by about 32,000 acre-feet. Estimated Groundwater Basin Pumping at a 75% BPP is shown below:

Total water demands =	380,000 afy
Minus Title 22 reclaimed supplies =	17,000 afy
Net total water demands =	363,000 afy

75% x 363,000 = 272,250 acre feet of basin pumping (round to 272,000)
Add ~ 22,000 acre feet of pumping above the BPP for BEA exempt water quality projects
Total expected pumping at 75% BPP = 294,000 acre-feet

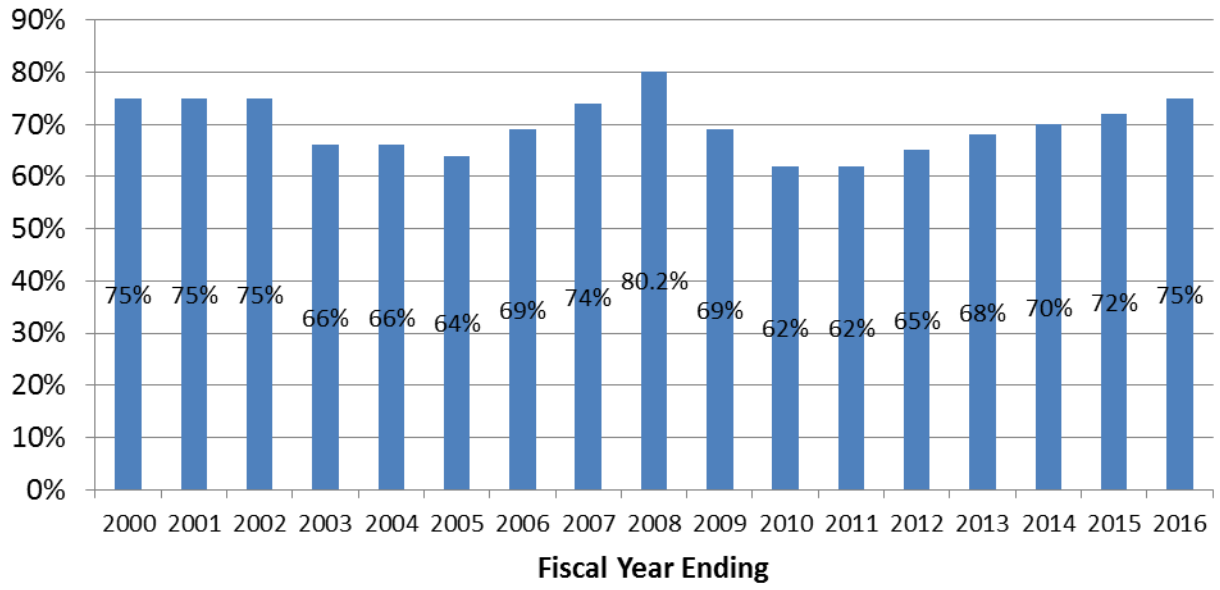
Table 1
Expected FY2016-17 Groundwater Basin Recharge Supplies

Sources (Average Hydrology)	Amount (af)
Captured Santa Ana River Baseflows	63,000
Captured Santa Ana River Stormflows (5 year average)	41,000
Natural Incidental Recharge (5 year average)	52,000
MWD Untreated Full Service water	65,000
GWR System	103,000
Alamitos Barrier	2,000
Total water recharged	**326,000**
Expected Basin Pumping at 75% BPP as shown above	**294,000**
Planned basin refill (decrease to accumulated overdraft)	32,000

At this time, given the analysis above and the current condition of the groundwater basin, staff recommends that the projected BPP for FY 2016-17 be established at 72 to 80%.

For reference, the historical BPP since FY 1999-00 is shown on Figure 3. The BPP has increased each of the last five years. These increases reduce the amount of treated MWD water the Groundwater Producers need to purchase.

Figure 3
Historical Basin Production Percentage



Replenishment Assessment (RA) Projection

The RA is determined by taking total expected operating costs which primarily consist of the general fund, debt service, water purchases and the Refurbishment & Replacement transfer amount, subtracting non-RA operating revenues, and dividing this net amount by expected groundwater basin pumping.

The District's department heads are beginning the preparation of their budgets which will be presented to the Board on March 2, 2016. Four significant changes to the FY 2016-17 operating budget will occur.

- The GWRS Initial Expansion state loan repayment of approximately $9.5 million annually will begin next year.

- MWD CUP revenues of approximately $4.2 million that were received in the current fiscal year will not be received next year. All of the MWD storage water will be extracted this fiscal year. This loss of revenue is somewhat offset by an increase in Property tax ad valorem and annexation fee revenue.

- The budget increases the amount of MWD untreated full service water from 55,000 acre-feet in the current year to 65,000 acre-feet. Staff originally proposed to include 65,000 acre-feet of MWD water in the current FY 2015-16 budget. However after discussions with the Groundwater Producers last April, the water budget was reduced to 55,000 acre-feet to reduce the amount of the FY 2015-16 Replenishment Assessment increase. The District has been working the past four years to gradually increase the amount of MWD untreated full service water in the budget. As previously mentioned, the District has committed to purchase an average of 65,000 acre-feet over the next ten years. Purchasing increasing amounts of this water creates a

need to also increase the RA to provide the necessary revenues. However OCWD's purchase and recharge of MWD untreated full service water into the groundwater basin supports a higher BPP which reduces the amount of treated full service water the Groundwater Producers need to purchase resulting in a net water supply cost savings to the region.

- At this time staff is assuming FY 2015-16 will be relatively dry and that the District will need to reduce basin pumping next year to begin refilling the groundwater basin ("Planned basin refill of 32,000 af from Table 1") to reduce the accumulated overdraft. This loss in sales creates a need to increase the RA approximately $32 per acre-foot to maintain revenues. This assumption can be modified as the winter progresses and actual conditions are realized.

For these four primary reasons and for three secondary reasons, staff has estimated that the RA will need to increase by up to a maximum "worst case" of approximately $109 per acre-foot to $431 per acre-foot for FY 2016-17 as shown on Figure 4. If groundwater basin conditions significantly improve this winter, the RA may only need to increase to approximately $395/acre-foot. The Historical RA since FY 1999-00 is shown on Figure 5.

Figure 4
Reasons for Estimated Replenishment Assessment Increase

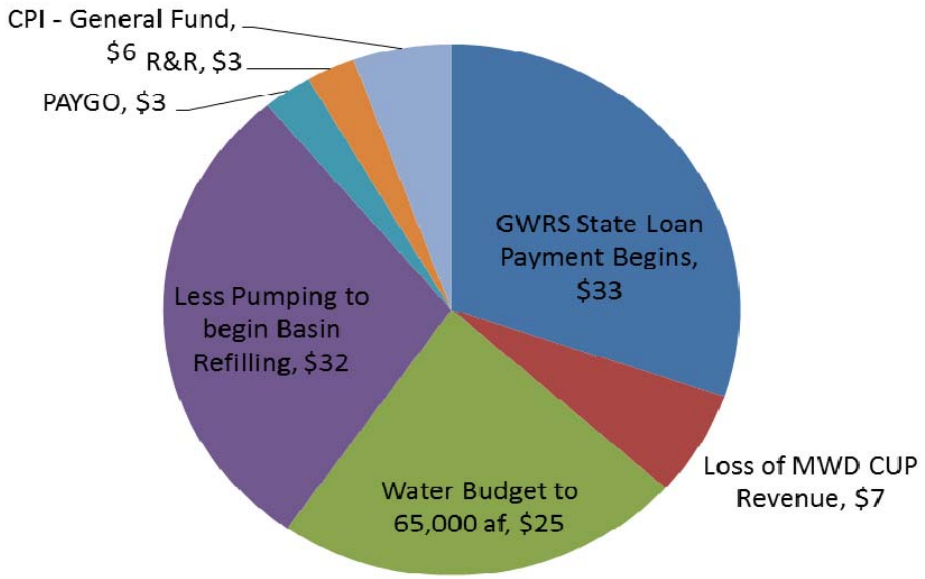
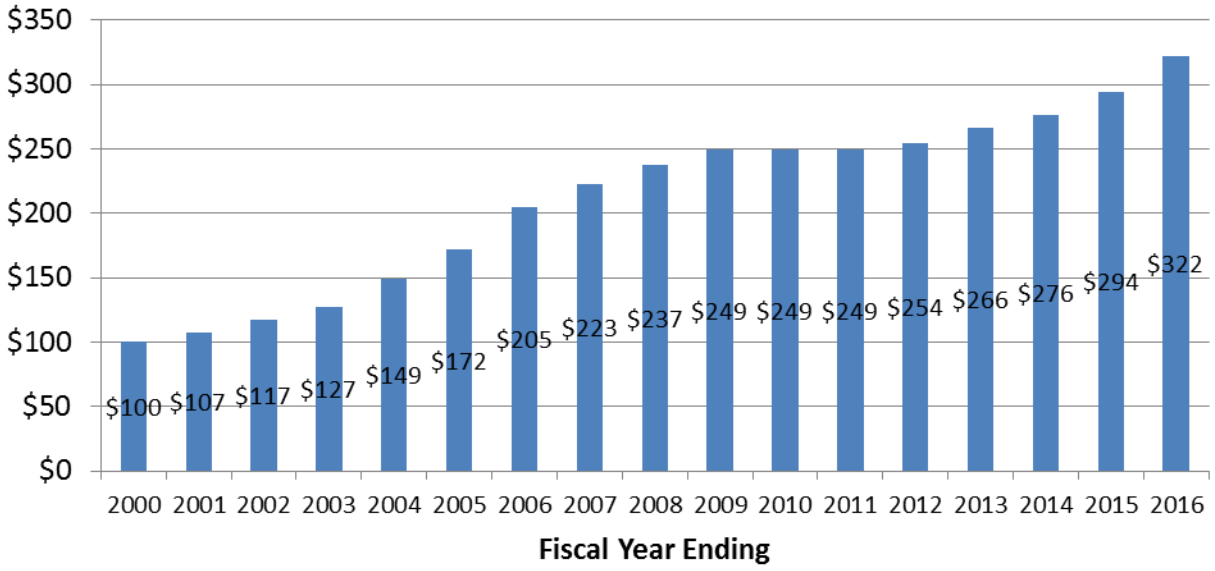
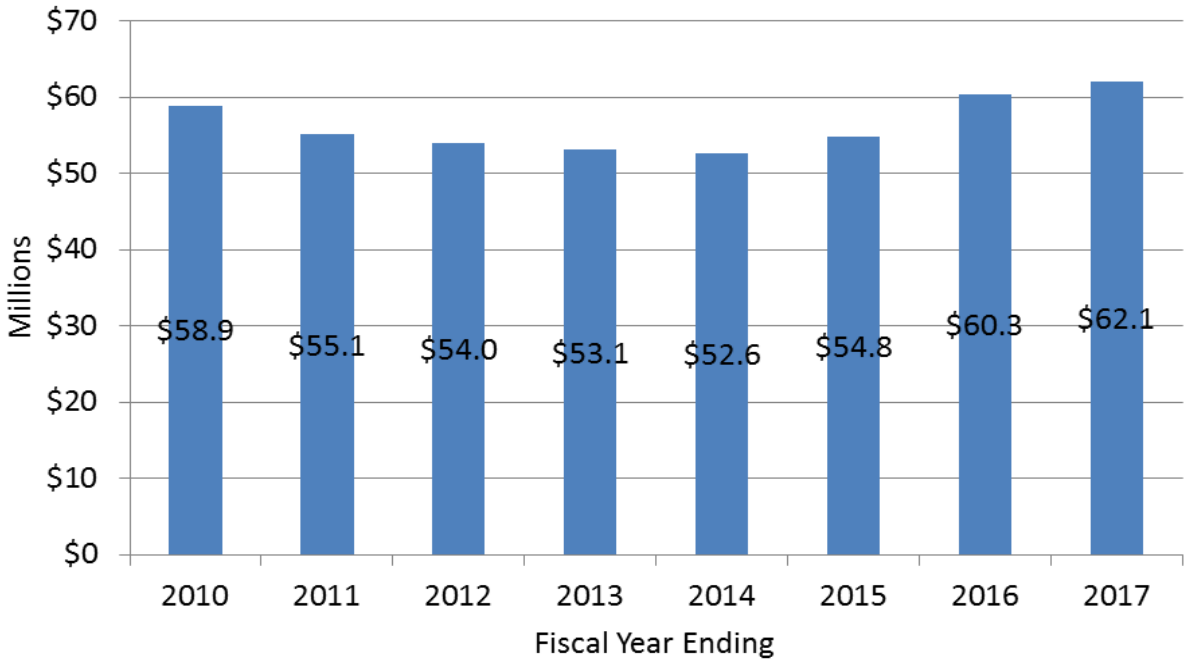


Figure 5
Historical Replenishment Assessment ($/af)



Staff has been and will continue to work to reduce District expenses to minimize rate increases. These efforts led to the District's general fund budget being reduced four consecutive years from 2011 to 2014 as shown in Figure 6. The recent expansion of the GWRS from 70 mgd to 100 mgd and the corresponding large increase in chemical and electrical expenses is the primary reason why the General Fund budget has increased the past three years.

Figure 6
Recent General Fund Budget



FY 2016-17 Basin Production Percentage and Replenishment Assessment Estimates

Administration/Finance Issues Cte.
January 14, 2016

Background

- FY 2016-17 Basin Production Percentage (BPP) and Replenishment Assessment (RA) must be established in April 2016 per the District Act
- Public Hearing will be scheduled for April 20, 2016
- Groundwater Producers annually ask OCWD to provide preliminary RA and BPP estimates in January to assist with their budget preparation

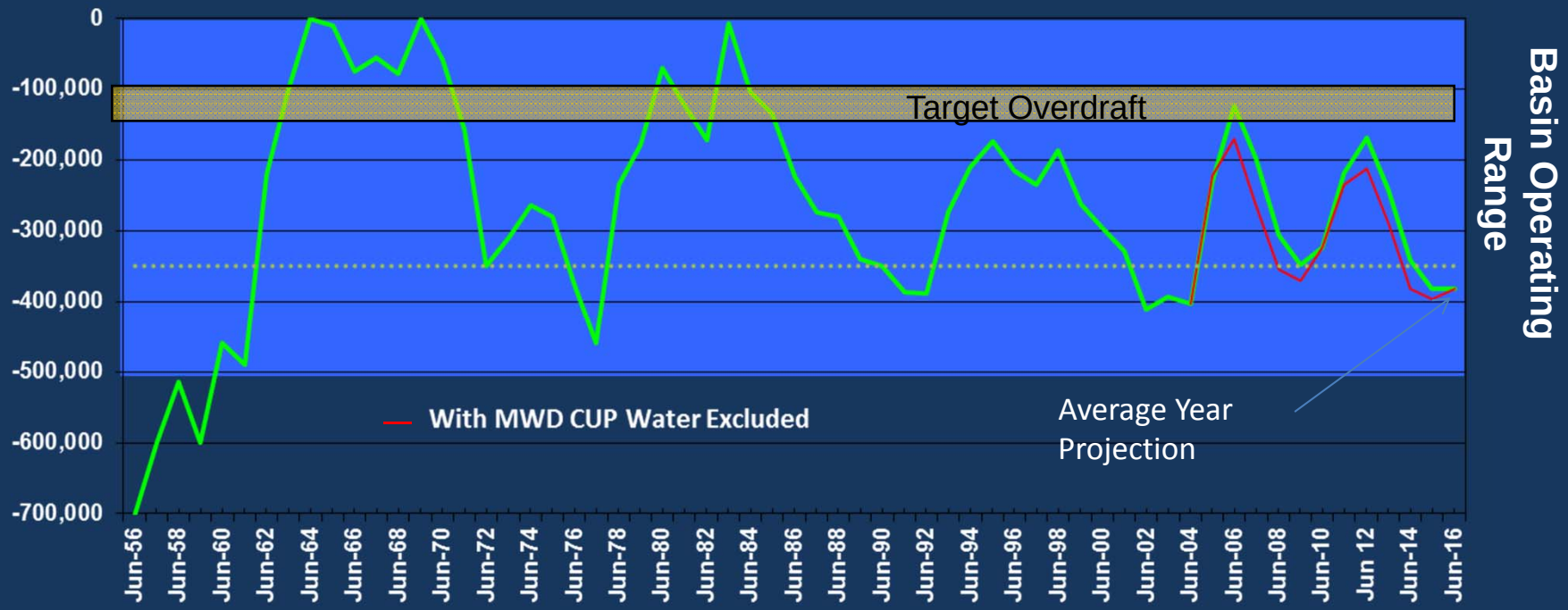
Past Three Years

- Have over drafted the groundwater basin
- Spent down reserves $27 million in FY2015-16 to reduce debt and lower the Replenishment Assessment

OCWD Basin Management Policies/Issues

- Groundwater basin accumulated overdraft: District policy – reduce BPP/Pumping if overdraft > 350,000 afy
- Minimize Replenishment Assessment Increases
- District Policy - AAA credit rating
  - Reserve levels
  - Debt coverage ratio
- District Policy - 75% BPP
- Maximize MWD untreated full service water purchases

OCWD Groundwater Basin Accumulated Overdraft



FY2016-17 Budget Uncertainties

- **Wet or Dry winter?**
  - Will the State lift the emergency 25% demand restrictions
    - Total Water Demands are currently at historic lows
  - How much MWD untreated full service water can be purchased and recharged into the groundwater basin
    - Current budget 55,000 af - Need to eventually increase to 65,000 af
  - Dry winter will increase the basin accumulated overdraft well over 400,000 af forcing OCWD to become more conservative in setting the BPP
- Initially assume another dry winter, make changes in April if otherwise

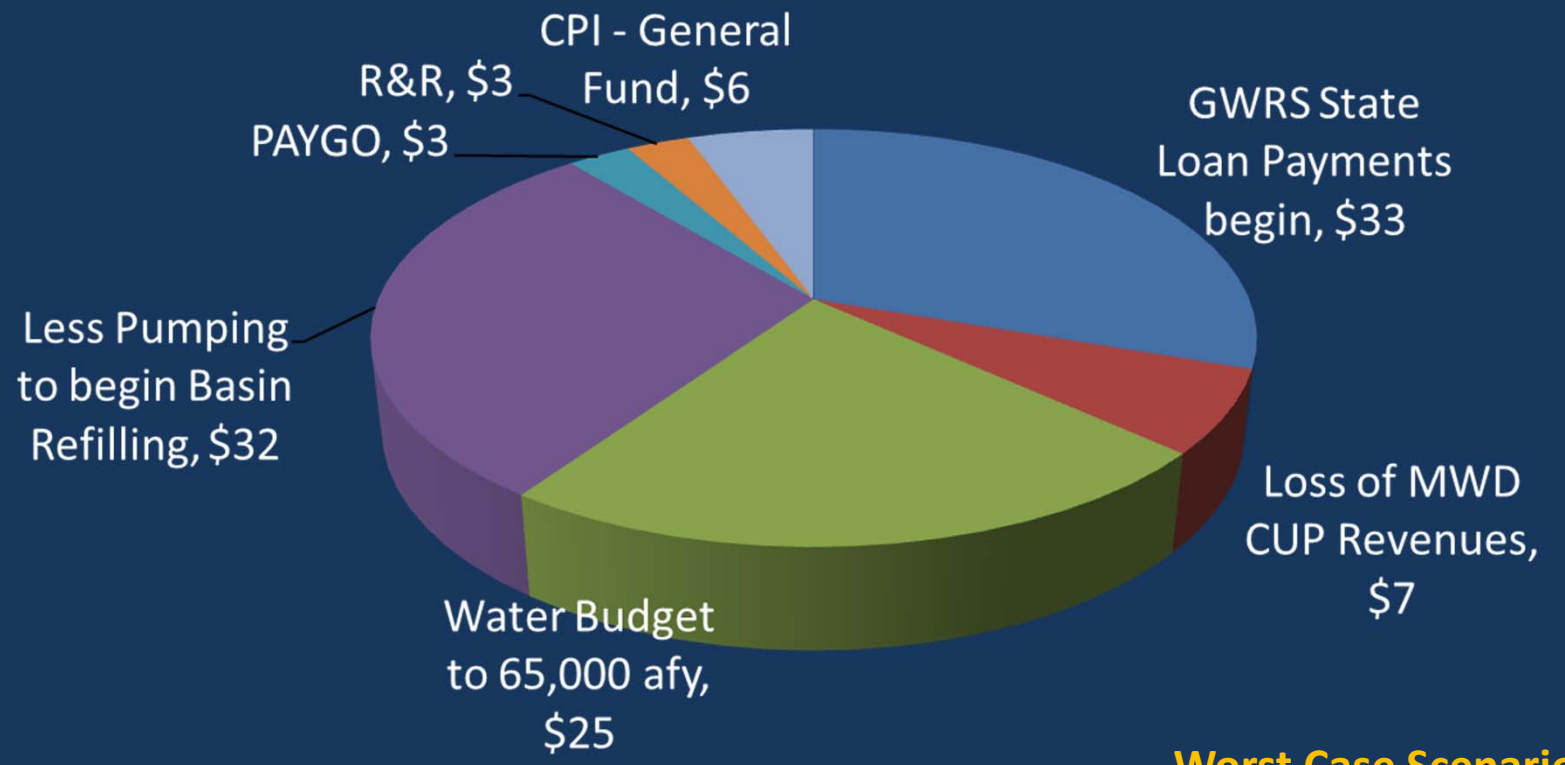
Replenishment Assessment (RA) Issues

- Staff is preparing FY2016-17 Draft Budget
- RA currently at $322/af
- GWRS initial expansion state loan repayment
- Increase MWD purchases from 55,000 to 65,000 af
  - Increases RA and BPP
  - Net savings to Producers
- Loss of MWD CUP Revenue

Replenishment Assessment (RA) Issues

- Reduce basin pumping to begin refilling the basin
  - Basin accumulated overdraft is above 350,000 af
  - loss of sales creates need to increase RA
  - A wet winter could provide some relief
- Minor factors increasing RA
  - MWD imported water rate increase
  - Inflation
  - Refurbishment & Replacement Program Transfer - 7%
  - PAYGO $1M increase
- Total RA increase $73 to $109/af

Approximate Reasons for $109/af RA Increase



Worst Case Scenario

Basin Production Percentage (BPP)

- Currently at 75%
- Basin Accumulated Overdraft will be around 381,000 af with an average winter
  - Could increase by ~ 50,000 af with another dry winter
  - Could decrease by ~ 50,000 af with a wet winter
- District policy calls for lowering BPP/Basin Pumping
- How much MWD untreated full service water will be available?
- Total water demands have significantly decreased

FY 2016-17 Groundwater Basin Water Balance

Water Source	Average Hydrology (afy)
SAR Baseflow	63,000
SAR Stormflows	41,000
Incidental Recharge	52,000
GWR System	103,000
MWD Supplies	65,000
Other	2,000
Total Water Into Basin	326,000
Expected Pumping @ 75%	294,000
Subtotal Basin Gain/Loss	32,000

Recommendation

Provide the FY2016-17 RA and BPP estimates to the Groundwater Producers along with any additional Board comments

BPP	**72% to 80%**
RA	**$395/af to $431/af**

End of Presentation

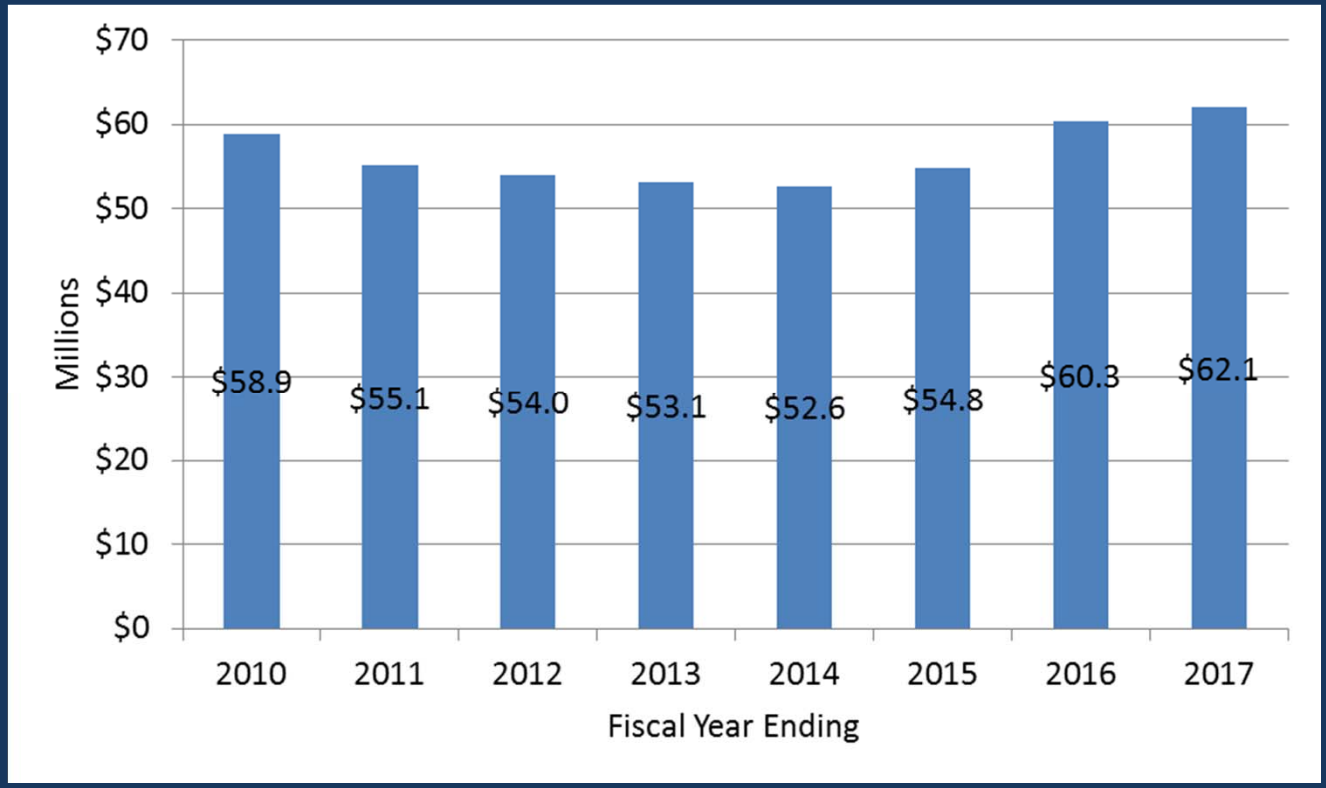
Preliminary “Worst Case” RA Estimate

Items (Operating Expenses)	FY15-16 (Millions)	FY16-17 (Millions)	Change in RA
General Fund	$61.1	$62.9	$6
Water Purchases	$35.6	$43.1	$25
Debt Service	$26.9	$36.6	$33
PAYGO for Capital Projects	$6.0	$7.0	$3
Retiree Health Insurance	$1.3	$1.3	$0
Small Equipment	$0.9	$1.0	$0
R&R Fund Transfer	$13.7	$14.6	$3
Total Expenses	$145.6	$166.6	$70
Non-RA Revenues	42.4	$40.4	$7
Net Expenses	$103.1	$126.2	$77
Expected Pumping	321,600 af	294,000	$32
Replenishment Assessment	$322/af	$431/af	$109

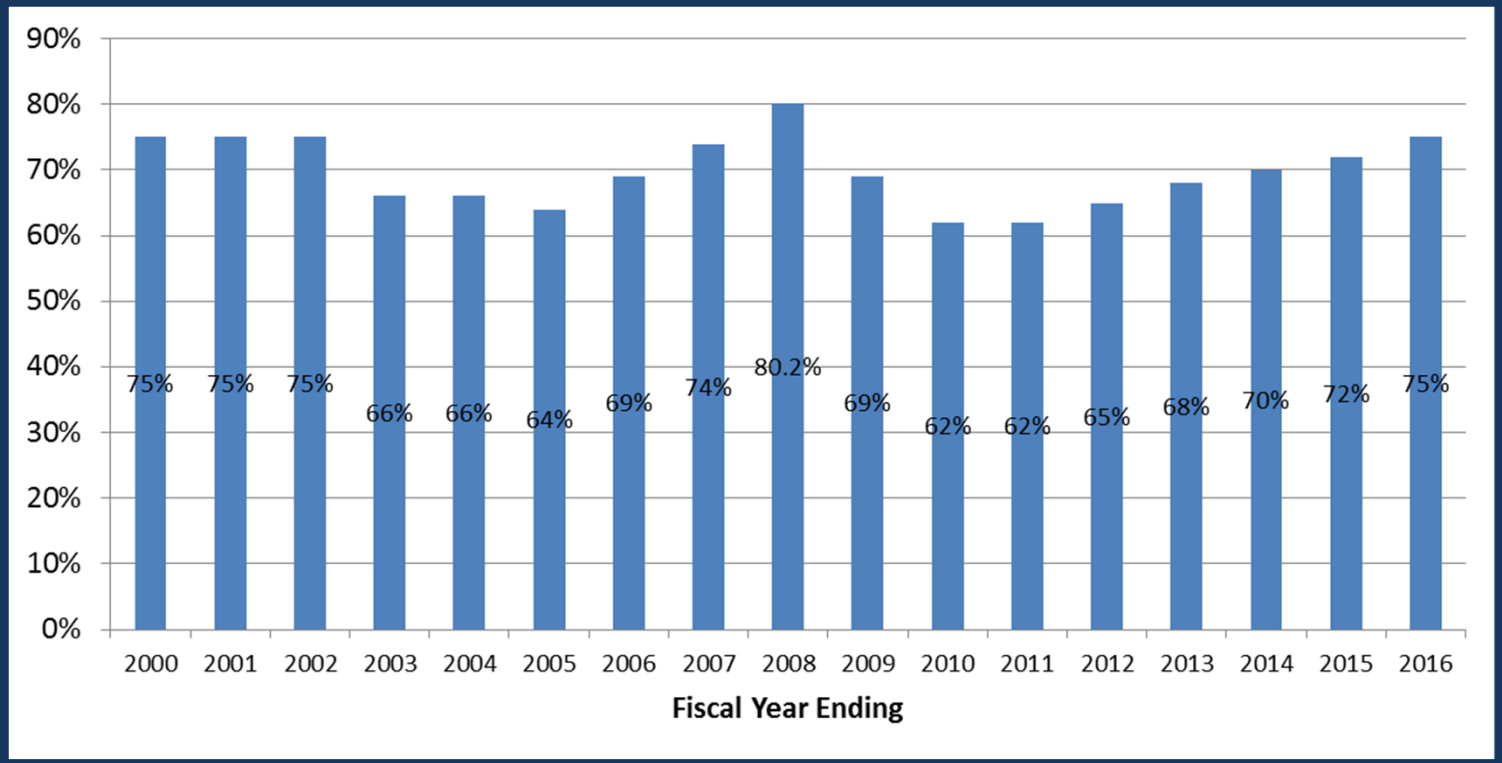
FY 16-17 Groundwater Basin Production Estimate (afy)

Total Water Demands	**380,000**
Reclamation (Title 22)	**17,000**
Net Total Water Demands	**363,000**
75% x 363,000	**272,000**
WQ projects pumping above BPP	**22,000**
Total Estimated Pumping (rounded)	**294,000**

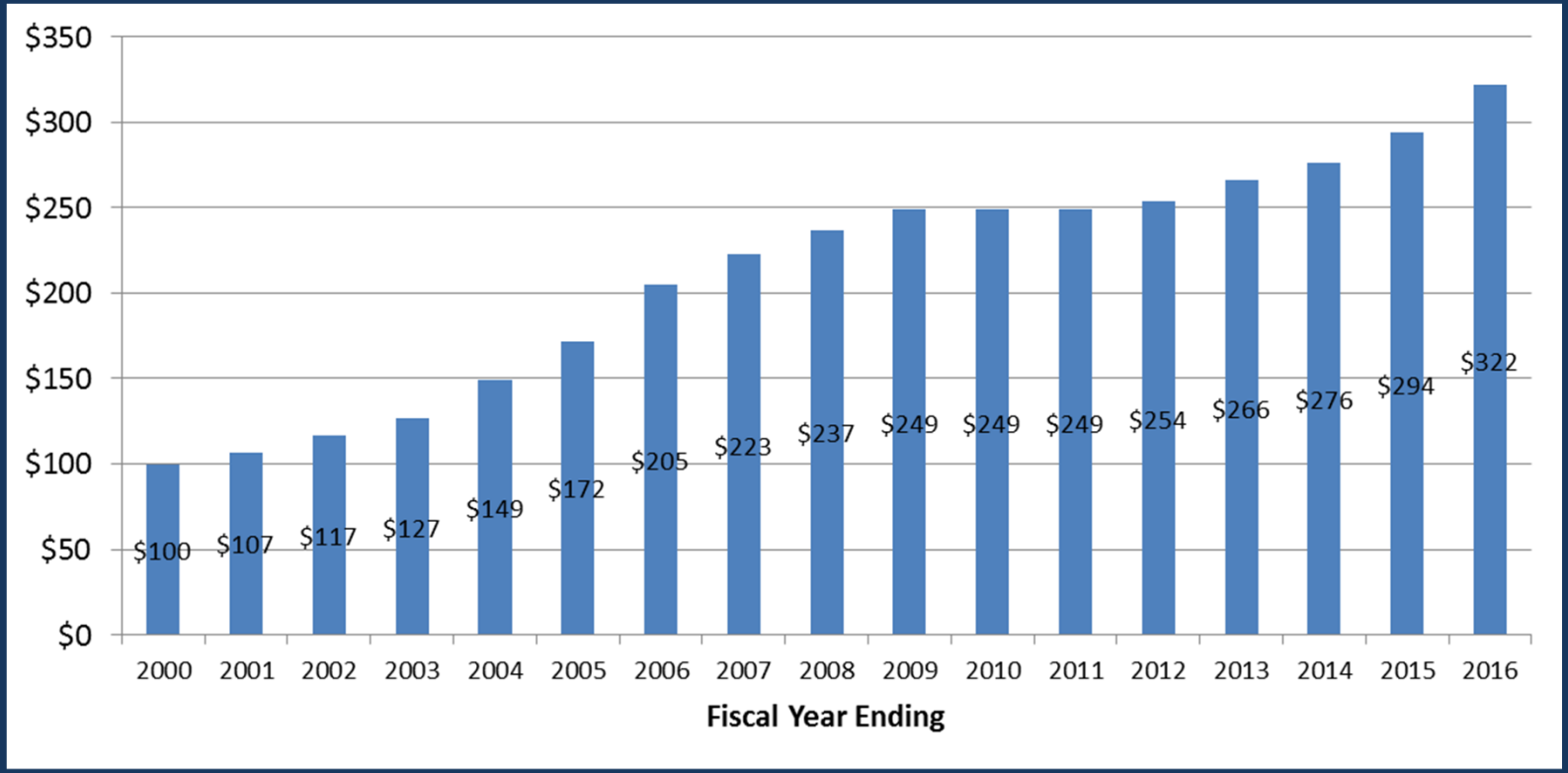
Historical General Fund Budget



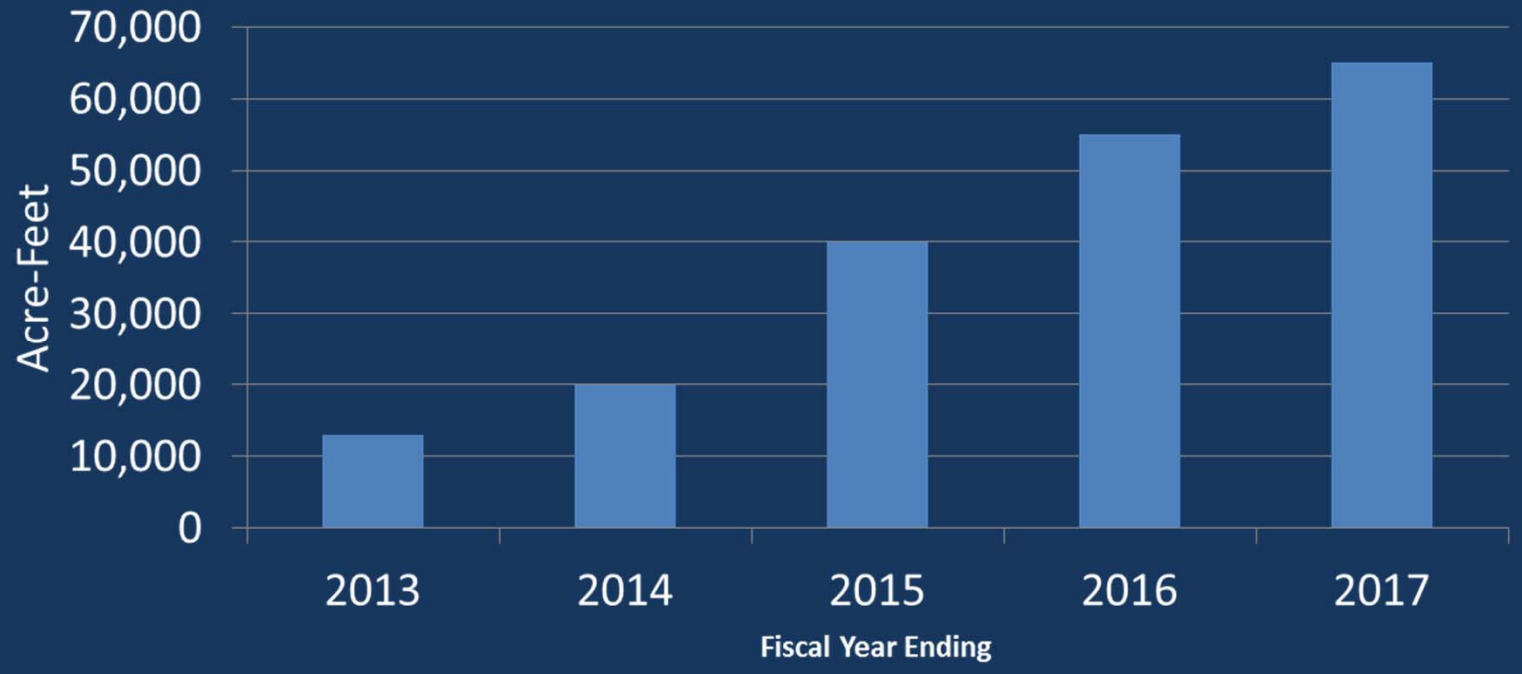
Historical Basin Production Percentage



Historical Replenishment Assessment



Budgeting MWD Untreated Full Service Water



Debt Service Coverage Ratio Calculation

$$\frac{\text{Revenues less O\&M}}{\text{Debt Service}} = \text{Debt Service Coverage Ratio}$$

Issue
Include Water Purchases as Additional O&M Expense ???

AAA Credit Rating Considerations

- Reserves/Liquidity
- Coverage Ratio
- Management stability/capability
- Board Actions/Rate Increase History
- Capital Project Successes
- Service Area Wealth
- Stable Revenues
- Cost of alternative supplies

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: G. Woodside/C. Olsen
R. Bouley

Budgeted: Yes
Budgeted Amount: $10.4 Million
Cost Estimate: $3.9 Million
Funding Source: CIP
Program/Line Item No. C09005
General Counsel Approval: Yes
Engineers/Feasibility Report: Yes
CEQA Compliance: This submittal

Subject: PRADO BASIN SEDIMENT MANAGEMENT DEMONSTRATION PROJECT: CERTIFICATION OF ENVIRONMENTAL IMPACT REPORT AND APPROVAL OF PROJECT

SUMMARY

Staff is proposing a reduced-scale Prado Basin Sediment Management Demonstration Project (SMDP) for the Board's consideration. The project would provide key data to determine the sediment removal production rate that can be achieved by dredging in Prado Basin. With this data the District could determine the economic feasibility of removing large quantities of sediment from Prado Basin.

Attachment(s):
a. Presentation
b. Resolution of the Board of Directors of the Orange County Water District
c. Findings of Fact and Statement of Overriding Considerations
d. Final Environmental Impact Report *(also posted on www.ocwd.com)*

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting: Adopt Resolution approving the Prado Basin Sediment Management Demonstration Project which includes the following items:

- Certifying the Final Environmental Impact Report for the Project;
- Adopting the Findings of Fact and Statement of Overriding Consideration and the Mitigation Monitoring Reporting Program;
- Approve the Demonstration Project and establish the Project budget of $3,900,000;
- Authorizing staff to complete the permitting process with the Army Corps of Engineers and the resource agencies, execute the permits received for the Project from the Army Corps of Engineers and the resource agencies, and prepare and implement the Habitat Management Program for the Project;
- Authorizing issuance of Notice Inviting Bids for sediment removal; and
- Authorizing filing of Notice of Determination.

BACKGROUND/ANALYSIS

The Corps periodically conducts topographic surveys to measure the amount of sedimentation in Prado Basin. The most recent survey was in 2008. These topographic data

indicate that 25,000 acre-feet of storage space below elevation 505 feet has been lost due to sediment accumulation behind the dam from 1941 when the dam was built to 2008. This rate of sedimentation corresponds to approximately 370 acre-feet per year of loss of storage space below elevation 505 feet. The District's water conservation storage space will be filled in and no longer available in approximately 50 years if this sedimentation rate continues unabated. The loss of the Prado Dam storage space below elevation 505 feet is a significant, negative impact on the District's groundwater management program and reduces the supplies of water available to replenish the groundwater basin.

If the storage space at elevation 505 feet was filled with sediment, our supplies of stormwater that can be recharged would be reduced by more than 50 percent. The District's recharge facilities model was used to estimate the loss of stormwater recharge assuming the storage space was completely filled in with sediment in the future. In this case, the model estimated the lost stormwater recharge to range from 29,000 to 38,000 acre-feet per year, depending upon the amount of stormwater available. The cost of replacement water, if available, using the 2016 MWD firm untreated water rate of $674 per acre-foot would range from $19.5 million to $25.6 million dollars per year.

The impetus for this effort is to provide information to answer one key question: what is the production rate, in cubic yards per month, that can be achieved by dredging sediments in Prado Basin. There are various environmental factors, such as the occurrence of buried trees in Prado Basin and root structures that will affect the production rate. Conducting real-world dredging will provide information to answer this question. This information is critical to develop a long-term sediment management program.

The project will be staged in three increments:

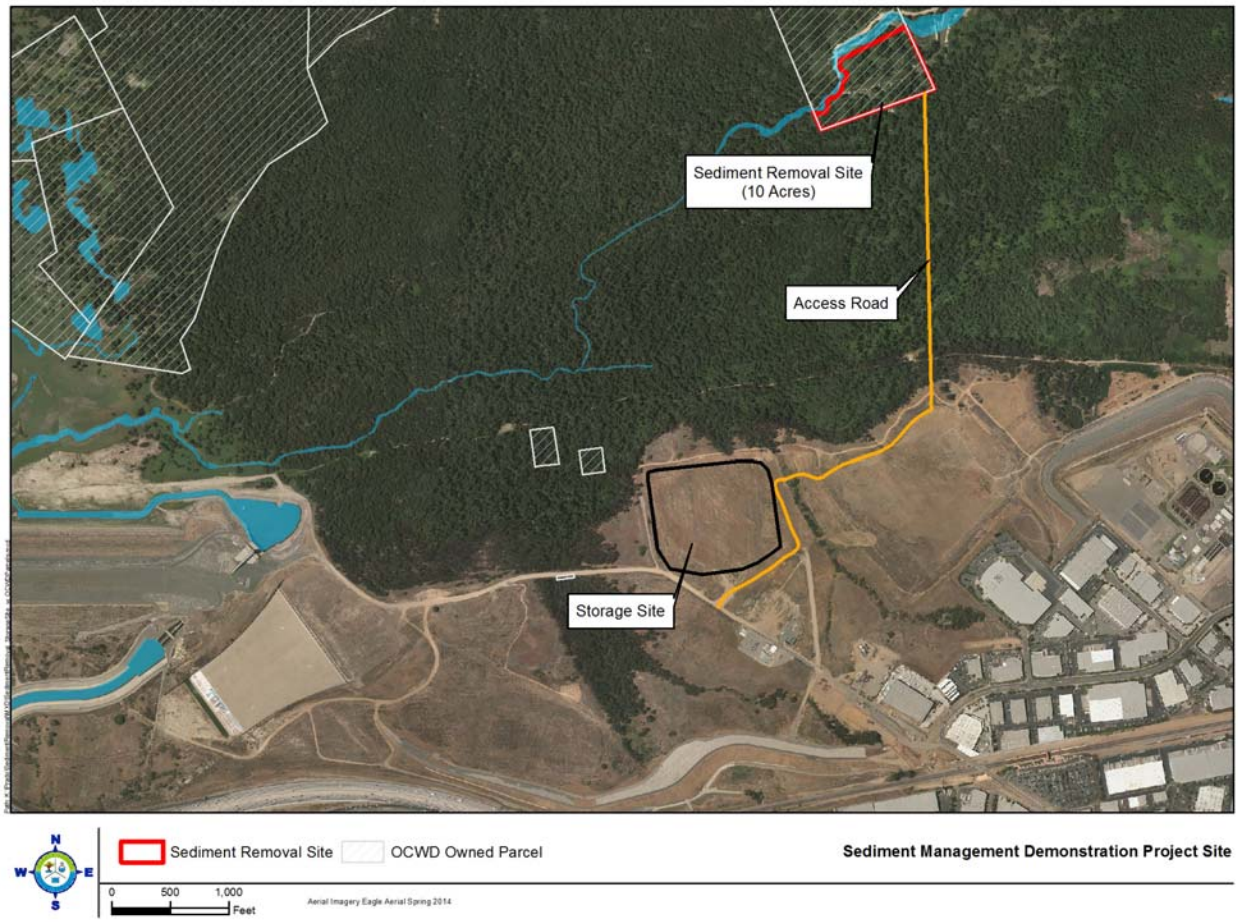
1. Vegetation would be cleared in an approximately 8 acre area on District land in Prado Basin. The site, shown in Figure 1, is primarily non-native Arundo donax. An access road would also be constructed on Army Corps property.

2. Sediment would be dry excavated using heavy equipment to a depth of approximately 4 feet over the 8 acre site, removing approximately 40,000 cubic yards of sediment and storing the sediment at the storage site shown on Figure 1.

3. Sediment would then be removed by dredging and transported in a slurry through an 8-inch diameter HDPE temporary above ground pipeline to the storage site. The temporary pipeline would be approximately 5,000 feet long, with one booster pump. Dredging would occur over a 4 month period. It is estimated that 20,000 cubic yards can be dredged per month, for a total of approximately 80,000 cubic yards over the 4-month period. The dredge will be approximately 60 feet by 10 feet in size with a typical production capacity of 100 to 200 cubic yards per hour.

The sediment removal site is located on District land, which provides an opportunity to market the sediment. The sediment will be stored at the sediment storage site and be made available for purchase. If a buyer can be obtained for the sediment, some additional permitting would be needed.

Figure 1
Project Overview



Since the access road and storage site are on Corps land, we would acquire a permit for the project through the Corps Los Angeles District.

While the immediate benefits of the proposed project are relatively small when compared to the overall costs, the main benefit of the project is collection of data and proving concepts essential to implementing a successful long-term sediment management solution for the Basin and the lower Santa Ana River.

A long-term sediment management project is being evaluated in the Prado Basin Feasibility Study, which the Army Corps is preparing with the District as the local sponsor and funding agency. The Feasibility Study is evaluating large-scale sediment management activities (on the scale of 1,000,000 cubic yards per year). If the Corps were to approve a project based on the Feasibility Study, the federal government could fund 65 percent of the project, with local sponsors providing the remaining 35 percent.

The following section describes the environmental review of the proposed project.

California Environmental Quality Act

The Prado Basin contains the largest riparian forest in southern California and is home for several special status species and migratory birds. The biological resources within the basin are regulated by California Department of Fish and Wildlife, U.S. Army Corps of Engineers and U.S Fish and Wildlife Service.

To meet the requirements of the California Environmental Quality Act, staff prepared an Environmental Impact Report (EIR) for the Prado Basin Sediment Management Demonstration Project. The EIR evaluates potential short-term construction impacts and long-term operational impacts associated with the implementation of the Project. To minimize impacts to special status species and to compensate for temporary impacts to sensitive vegetation communities, the project includes a biological monitoring program and a habitat restoration program.

Since the proposed project has been reduced in scale, the project and the alternatives evaluated in the EIR are larger in terms of acres impacted and other features than the currently proposed project. Some features evaluated in the EIR, such as sediment re-entrainment, would not be implemented at this time. This provides some flexibility for potential future actions should the District pursue additional sediment management activities in the future. The resource agency permits would be acquired for the reduced scale project only.

The Draft EIR was circulated for public review from March 12, 2014 to April 25, 2014. Subsequent to the conclusion of the public review period, a change to the quantity of the sediment removed was proposed and the amount of sediment to re-entrain was reduced to 200,000 cubic yards. Pursuant to the CEQA Guidelines the Draft EIR was re-circulated for public review from September 22, 2014 to November 5, 2014.

The Re-Circulated Draft EIR and Draft EIR identified that the implementation of the project would result in four unavoidable significant adverse impacts. These four unavoidable significant adverse impacts include;

- The Project would have the potential to generate temporary construction noise impacts that could disrupt the breeding patterns of the Federal and State Listed Least Bell's Vireo, if nesting occurs within construction activity noise impact area.
- The Project would have the potential for native fish to occur within the project area and be mortally wounded or be injured and require physical relocation.
- The Project would have the potential to generate temporary construction noise impacts that could disrupt breeding patterns of nesting migratory birds.
- The Project during sediment re-entrainment activities could temporary exceeds the Regional Water Quality Control Board Basin Plan threshold for turbidity.

All other potential impacts associated with the Project have been determined to be less than significant or less than significant with the implementation of mitigation measures. A total of eight comment letters were received on the Draft EIR. No additional comments were received on the Re-Circulated Draft EIR. Table 1 below identifies the commenting agency and a summary of their key comments and OCWD responses.

Table 1 Summary of Comments Received on Draft EIR			
Letter	**Sender/Commenter**	**Key Issues**	**District Response**
A	State Clearinghouse	Project has complied with State Clearinghouse environmental review comments.	No response required.
B	Riverside County Flood Control and Water Conservation District	Potential erosion impacts to flood control facilities and onsite flood hazards.	A sediment transport model developed for the Project demonstrates that the project activities would not cause any significant erosion or deposition impacts along the lower Santa Ana River that would adversely impact existing flood control facilities. The Draft EIR includes mitigation that requires coordination with the Corps on future weather events and requirements to demobilize construction equipment in the event significant storm event is forecasted.
C	California Department of Fish and Wildlife	Potential impacts to sensitive vegetation communities and special status wildlife species, including the Least Bell's Vireo and Santa Ana Sucker.	To compensate for impacts to sensitive vegetation communities, the Project includes a habitat restoration program that would restore and management sensitive vegetation communities impacted by the project. To minimize impacts to special status wildlife species, the Project includes an onsite biological monitoring program to help direct Project activities to avoid and/or minimize impacts to special status species.
D	County of Orange Public Works	Monitor erosion and deposition changes along the river. Coordinating the potential removal of sediment deposited at the tidal prism.	The Project includes a sediment movement monitoring program that would monitor and measure erosion and deposition changes along the river resulting from the Project. The Draft EIR includes mitigation requiring OCWD to coordinate with the County of Orange on fair share costs to remove sediment, in the event significant deposits occur at the

Table 1 Summary of Comments Received on Draft EIR			
Letter	**Sender/Commenter**	**Key Issues**	**District Response**
			tidal prism.
E	City of Corona	Requests OCWD to coordinate with the City of Corona to avoid conflicts with the proposed Santa Ana River Trail.	The Draft EIR includes mitigation requiring OCWD to coordinate with the City of Corona, Riverside County Parks, Orange County Parks and Orange County Public Works on the construction and operation of the Project.
F	Irvine Ranch Water District	Letter of Support for Project	No response required.
G	California Department of Transportation	April 23, 2014	No response required.
H	San Bernardino County Public Works	April 18, 2014	No response required.

Staff has reviewed the comment letters and has determined that the comments do not raise any new significant impacts that were not evaluated in the Re-Circulated Draft EIR and Draft EIR. Staff has prepared the Final EIR for the Prado Basin Sediment Management Demonstration Project, which includes the Re-Circulated EIR, Draft EIR, Comments received on the Re-Circulated Draft EIR, OCWD responses to comments on the Draft EIR and the Project Mitigation Monitoring Program. In accordance with Section 15093 of the CEQA Guidelines, staff has prepared a Statement of Overriding Consideration that identifies that the Project is critical to OCWD in that the Project would provide valuable data and conclusions to assess whether to implement a long-term sediment management program at Prado Basin that would prevent further loss of water conservation storage capacity to help reduce reliability on imported water supplies for Orange County residents. The benefits of the project outweigh the avoidable significant adverse temporary biological resource impacts and avoidable significant adverse temporary water quality impacts resulting from the implementation of the project.

Biological Monitoring Program

The purpose of the biological monitoring program would be to monitor for the presence of special status species and their habitat and to minimize potential impacts to biological resources that could result from the project. The program includes pre-project biological monitoring, project biological monitoring and post-project biological monitoring.

The pre-project biological monitoring would establish the baseline condition of biological resources within the project area to help measure potential impacts that could result from the implementation of the sediment management demonstration project. During the operation of the sediment management demonstration project, the focus of the biological monitoring program would be to direct project activities to avoid and/or minimize impacts to sensitive biological resources.

Habitat Management Plan

The implementation of the project would temporarily impact 10 acres of primarily arundo, 1.3 acres of native riparian habitat, 2.3 acres of upland native upland habitat, and 0.06 acres of open water habitat. To compensate for temporary impacts, staff would prepare a Habitat Management Plan to implement a combination of habitat restoration programs that would focus on removal of non-native vegetation from the project area and the creation, restoration and re-establishment of native riparian habitat and native upland habitat. The Habitat Management Plan includes restoration measures to compensate for temporary impacts associated with the project, including an Arundo Donax removal program, riparian habitat restoration program, and coastal sage scrub habitat restoration program. As part of the mitigation requirements for the Project, OCWD would be required to manage the restored areas for five years to ensure that native vegetation plantings are successful and that non-native vegetation does not re-establish within the restored areas. The Habitat Management Plan would describe the site preparation, plant types, quantity and planning densities. Additionally, the Habitat Management Plan would establish maintenance requirements, monitoring procedures and performance standards to measure the success of each restoration program.

CEQA Recommendation

At this time the OCWD has complied with all CEQA requirements and staff recommends the Board approve the following actions:

- Certify the Final Environmental Impact Report for the project
- Adopt the Findings of Fact and Statement of Overriding Consideration
- Authorize Staff to file the Notice of Determination for Final Environmental Impact Report for the project.

BUDGET

The overall project cost is estimated to be $3,898,000, as summarized in Table 2. The estimated cost includes pre-design analysis, engineering, sediment removal, Corps fee, performance monitoring, mitigation, and related costs. The project costs to date have been $1,441,000.

The duration of the dredging will be limited to 4 months. This will provide a cap on total costs and limit the District's risk of the cost exceeding the project budget.

Table 2
Prado Basin SMDP Project Budget

Description	Projected Expenses
Design	
Preliminary Design	$1,362,000
Corps Fees	$128,000
Final Design	$30,000
Mitigation/Environmental Documentation	$120,000
Subtotal	**$1,640,000**
Construction	
Pre-Construction Studies and Monitoring	$40,000
Sediment Removal Contract	$1,983,000
Operations Management/Monitoring/CM	$20,000
Project Evaluation/Reporting	$10,000
Subtotal	**$2,053,000**
Project Contingency (10%)	$205,000
Total Project Budget	**$3,898,000**

Table 3 provides a breakdown of the estimated costs for the sediment removal contract.

Table 3
Sediment Removal Contract Cost Estimate

Description	Cost
Vegetation Clearing	$107,000
Mobilization and Demobilization for Dry Excavation	$110,000
Load, Haul, Place Dry Excavated Material	$595,000
Mobilization and Demobilization for Dredge	$163,000
Operation of Dredge (4 months)	$749,000
Dredged material decanting/settling	$253,000
Reporting, other miscellaneous	$6,000
Total	**$1,983,000**

SCHEDULE

Staff proposes that clearing of vegetation would begin in August 2016, followed by dry sediment removal by earth moving equipment in September to October 2016. This will prepare the site for dredging.

Staff proposes to begin dredging in August 2017, with a total of four months of dredging through mid-December 2017. The overall schedule is summarized in Table 4.

Table 4
Prado Basin SMDP Project Schedule

Activity	Date	
	Start	Stop
Preparation of Bid Documents	February 2016	April 2016
Bid Period	May 2016	June 2016
Award Sediment Removal Contract	July 2016	July 2016
Vegetation clearing and dry excavation	August 2016	November 2016
Dredging	August 2017	November 2017
Analysis/Reporting	August 2017	March 2018

Given the loss of storage in Prado Basin due to sedimentation, staff recommends that the District proceed with the Prado Basin Sediment Management Demonstration Project.

PRIOR RELEVANT BOARD ACTION(S)

3/19/2014, M14-45 - Authorize payment to the US Army Corps of Engineers in the amount of $6,000 for administrative fees associated with the Prado Basin Sediment Management Demonstration Project

7/24/2013, R13-7-93 - Authorize issuance of Amendment No. 2 to Agreement No. 0625 with HDR Engineering, Inc. for $232,936 for the Prado Basin Sediment Management Demonstration Project and extend the term of the Agreement to December 31, 2017; and Authorize payment to the US Army Corps of Engineers in the amount of $25,000 for administrative costs associated with the Prado Basin Sediment Management Demonstration Project Outgrant review process

3/16/2011, M11- 46 – Authorize Payment to US Army Corps of Engineers for Prado Basin Sediment Management Demonstration Project administrative fee.

7/21/2010, R10-7-110 – Authorize execution of no cost Right of Entry Agreement with the State of California, Department of Parks and Recreation for the Prado Basin Sediment Management Demonstration Project Pre-Design and Design Phase Activities.

5/19/2010, R10-5-73 - Authorize execution of no cost Right of Entry Agreement with the County of Riverside for Prado Basin Sediment Management Demonstration Project Pre-Design and Design Phase Activities.

1/20/2010, R10-1 -11 - Authorize issuance of PSA to HDR Engineering Inc. for amount not to exceed $1,006,549 to perform the pre-design studies and preparation of an EA/EIR for the Prado Basin Sediment Management Demonstration Project.

1/20/2010, R10-1-11 - Establish project budget of $1,006,549 for pre-design studies and preparation of an EA/EIR.

1/20/2010, R10-1-10 - Authorize payment to the USACE in the amount of $11,218 for administrative costs associated with the Prado Basin Sediment Management Demonstration Project Non-Recreational Outgrant review process.

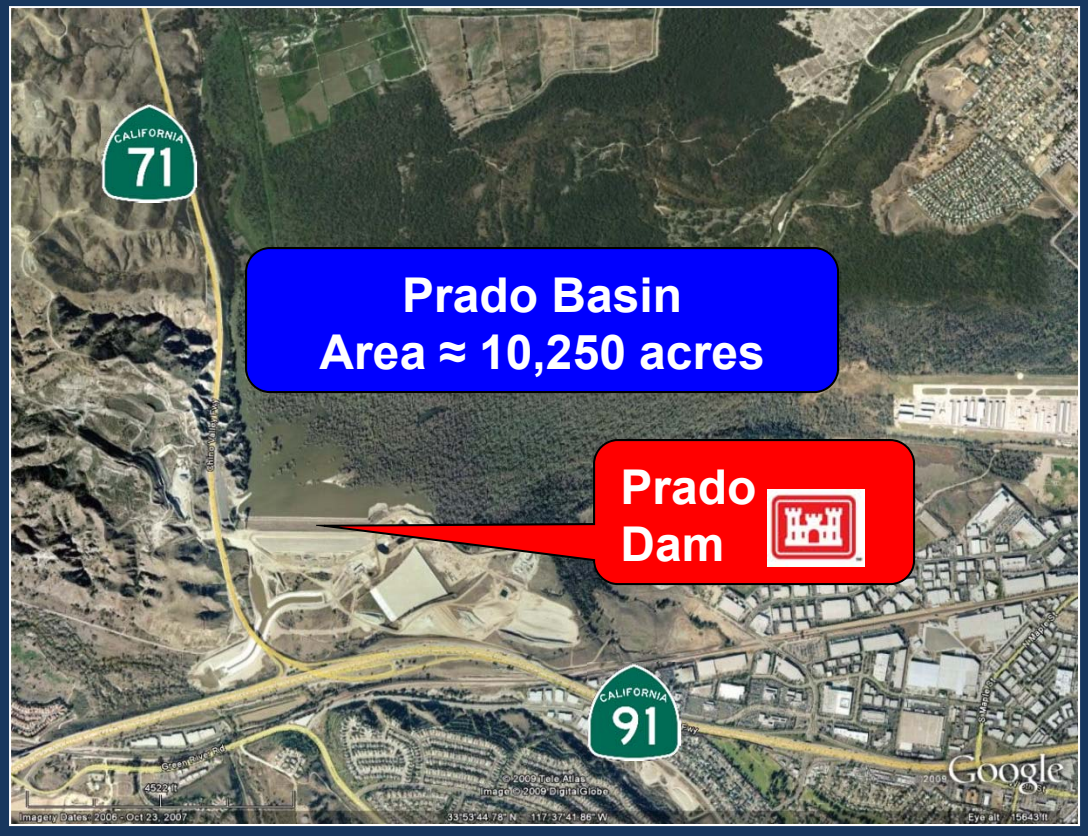
10/21/09, M09-130 - Authorize issuance of RFP for Pre-Design Studies for the Prado Basin Sediment Management Demonstration Project.

Prado Basin Sediment Management Demonstration Project

Board of Directors

January 20, 2016

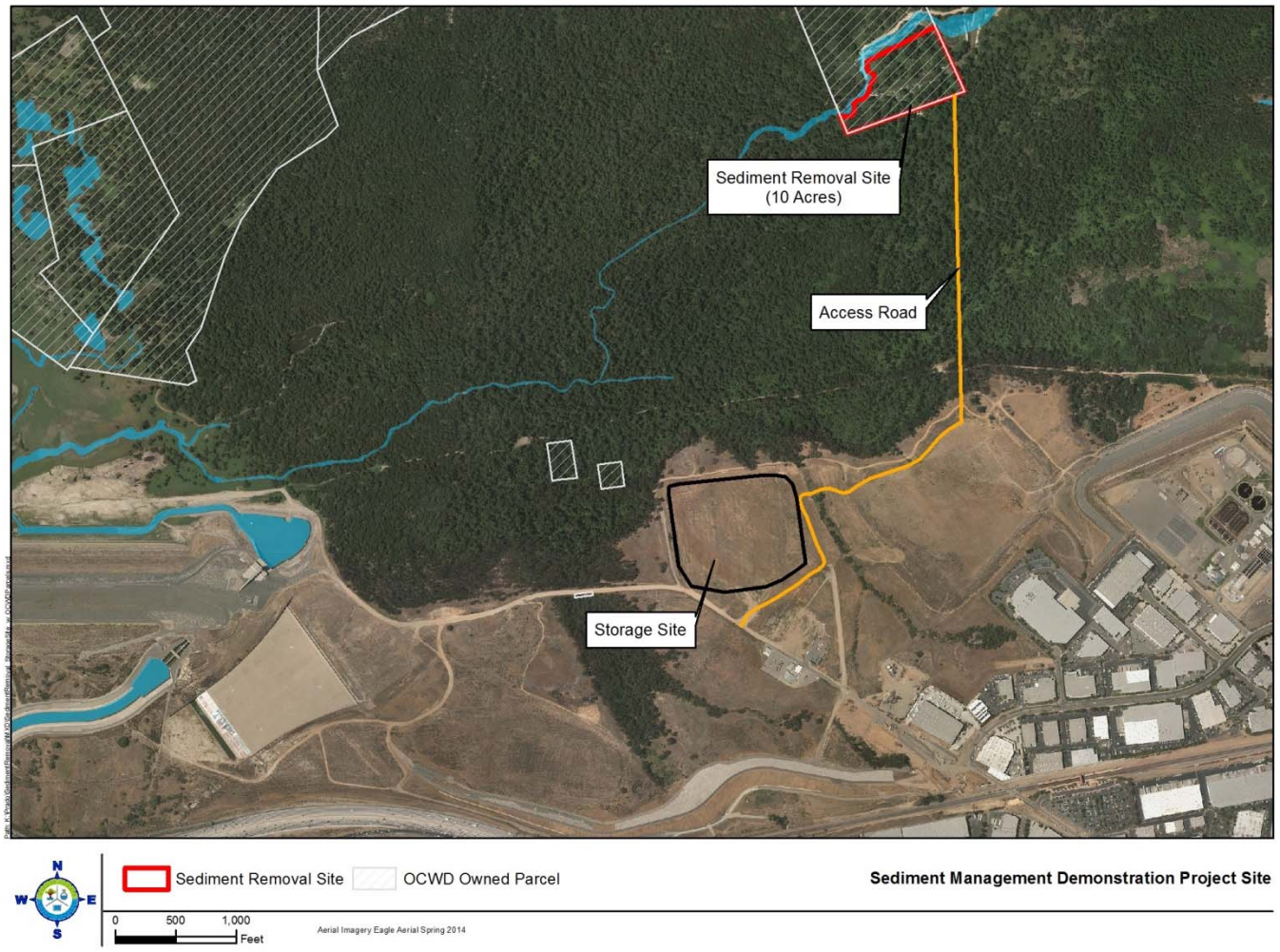
Prado Dam



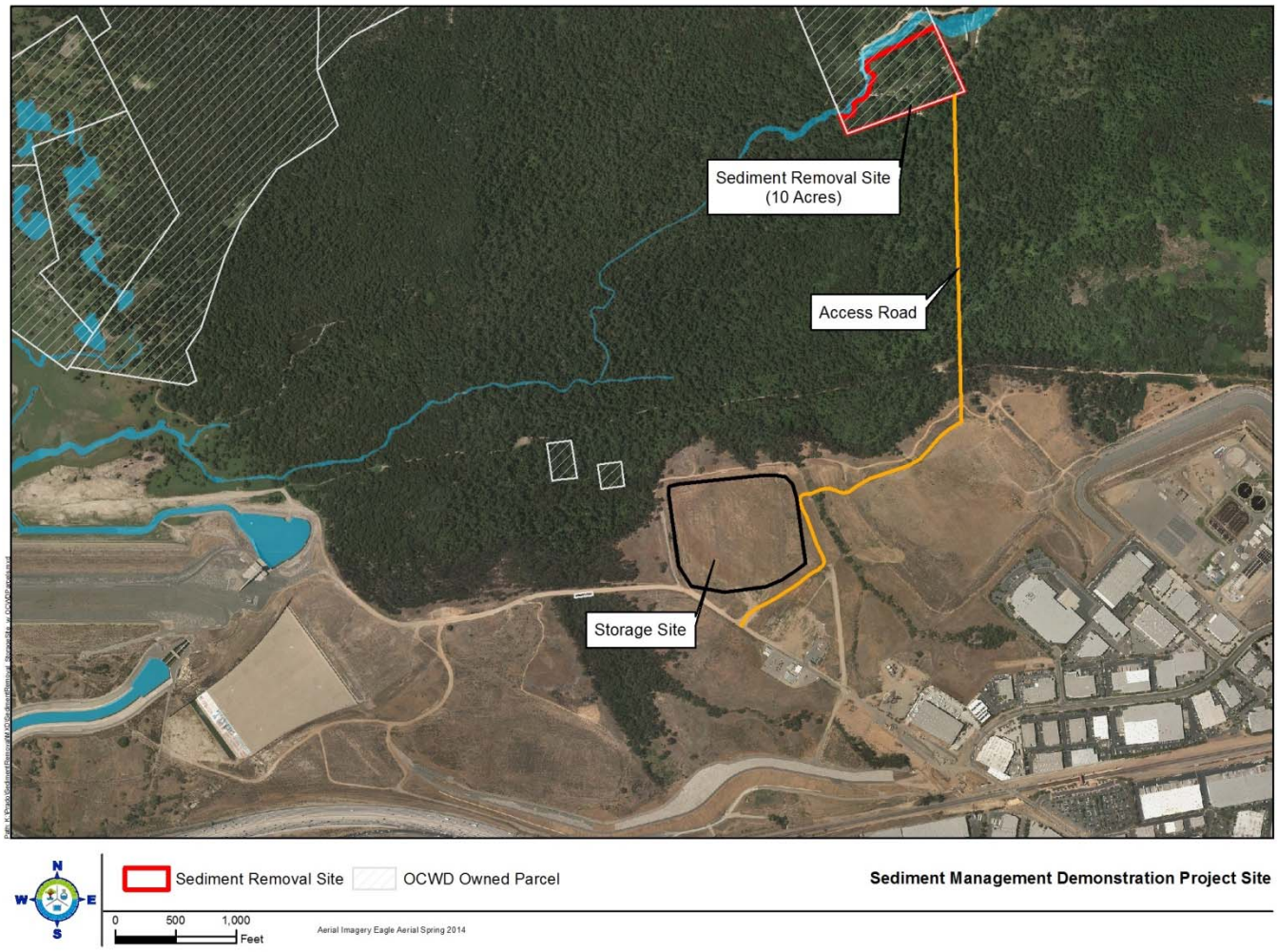
- Storage capacity below elevation 505 ft
  - 1941: 45,000 af
  - 2008: 20,000 af
  - Loss of 25,000 af
- Deposition of 600,000 cubic yards per year below 505 ft
- Total sediment inflow to Prado ~1M cubic yards per year

Proposed Research Project

- Perform a research project to determine the feasibility of removing sediment from Prado Basin
  - Determine production rate that can be achieved by dredging
  - Collect information to further evaluate a long-term sediment management plan for Prado Basin



- Clear vegetation
- Dry excavate to prepare for dredging
- Dredge
- Sediment stored on Corps land
- Make sediment available for purchase (some additional permitting may be needed if find buyer)



- Dry excavate ~40,000 yd^3
- Dredge for 4 months
- Estimated dredge amount ~80,000 yd^3 could be up to 140,000 yd^3)

CA Environmental Quality Act

- Staff prepared Draft EIR and released for public comment
- Comments were received from Riverside County Flood Control District, California Department Fish and Wildlife, Orange County Public Works, Irvine Ranch Water District, San Bernardino County Public Works and the City of Corona
- Recirculated Draft EIR with reduced scale project
- Staff has responded to all comments

Project Impacts

EIR identified four unavoidable adverse impacts:

- Potential to generate temporary construction noise impacts that could disrupt breeding patterns of Least Bells Vireo if it occurs within construction activity noise impact area
- Potential for native fish to occur within the project area and require physical relocation
- Potential to generate temporary construction noise impacts that could disrupt breeding patterns of nesting migratory birds
- Sediment re-entrainment activities could temporary exceed the Regional Water Quality Control Board Basin Plan's threshold for turbidity.

All other impacts have been reduced to a less than significant level.

Proposed Budget

Description	Projected Expenses
Design	
Preliminary Design	$1,362,000
Corps Fees	$128,000
Final Design	$30,000
Mitigation/Environmental Documentation	$120,000
Subtotal	$1,640,000
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Project Evaluation/Reporting	$10,000
Subtotal	$2,053,000
Project Contingency (10%)	$205,000
Total Project Budget	$3,898,000

Cost / Benefit Summary

	Large-Scale Project ($10/yd^3)	Large-Scale Project with 25% outside funding
Capital Cost	$10.0M	$7.5M
Sediment Removed	1,000,000 yd^3 (620 af)	1,000,000 yd^3 (620 af)
Annual Project Cost	$548,000	$411,000
Project Unit Cost	$884/af	$663/af

- Capital cost financed at 5% over 50 years
- Benefit continues in perpetuity
- Removed sediment assumed to be used by others
- Assumes one additional af of stormwater capture per year for each af of sediment removed
- Comparable MWD firm untreated water for recharge: $674/af

Recommendation

- Adopt Resolution approving the Prado Basin Sediment Management Demonstration Project which includes the following items:
- Certify Final EIR
- Adopt the Findings of Fact and Statement of Overriding Consideration and Mitigation Monitoring Reporting Program
- Approve Project and establish Project budget of $3,900,000
- Authorize staff to complete the permitting process
- Authorize issuance of Notice Inviting Bids for sediment removal contract
- Authorize filing of Notice of Determination.

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: J. Kennedy

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No. N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: Yes

Subject: LAGUNA BEACH COUNTY WATER DISTRICT AGREEMENT

SUMMARY

The District and Laguna Beach County Water District (LBCWD) entered into a Memorandum of Understanding (MOU) in 1993 regarding an issue over groundwater pumping along the coastal portion of the basin in the City of Huntington Beach. LBCWD is requesting the District to consider amending the MOU. In September 2015, the Board authorized staff to discuss this issue with LBCWD. Based upon those discussions a new agreement has been developed for the Board's consideration.

Attachment(s):

- Presentation
- 1993 Memorandum of Understanding
- Agreement with Laguna Beach County Water District

RECOMMENDATION

RECOMMENDED BY COMMITTEE

Agendize for January 20 Board meeting:

1. Approve and authorize execution of Agreement with the Laguna Beach County Water District to allow the extraction of 2,025 acre-feet of water from the OCWD basin; and

2. Authorize staff to file a California Environmental Quality Act - Notice of Exemption.

BACKGROUND/ANALYSIS

History

Laguna Beach County Water District (LBCWD) originally owned wells in the City of Huntington Beach near Atlanta and Magnolia Avenues along with a pipeline that transported the groundwater back to their service territory. Groundwater from this wellfield was also being served to several other parties. LBCWD's rights to this groundwater was legally challenged in the early 1930's but eventually upheld by the court in a 1933 stipulated judgment prior to the formation of the District. The judgment allocated 2,025 acre-feet per year of groundwater to LBCWD to be extracted from this area of the basin. Additionally, a total of 5,200 acre-feet per year of groundwater was allocated to two additional parties. At that time, the court determined that pumping from this area of the

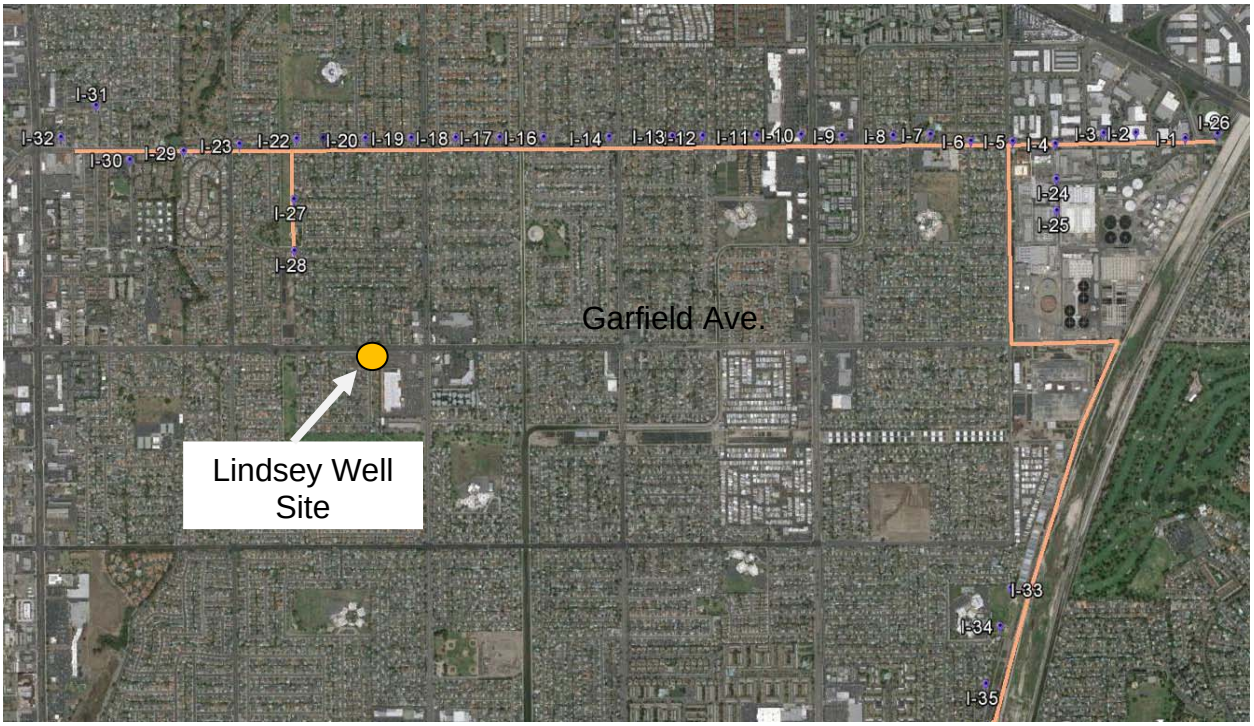
groundwater basin near the coastline would not be problematic. However, this portion of the groundwater basin was later contaminated with ocean water and abandoned in the mid 1940's.

Due to the seawater intrusion, LBCWD eventually abandoned their wellfield, annexed out of Orange County Water District, and took actions to begin receiving imported water from the Metropolitan Water District by 1948.

In the mid 1980's LBCWD desired to reestablish their ability to pump groundwater from the OCWD basin. A disagreement arose to the legality of allowing LBCWD to begin groundwater pumping. To resolve this issue the District and LBCWD entered into the attached Memorandum of Understanding (MOU) in 1993. The MOU provides that LBCWD can pump and transport up to 2,025 acre-feet of water annually from the seaward side of the Talbert Seawater Barrier in the City of Huntington Beach.

Current Status

LBCWD owns property (Lindsey Well Site) near Magnolia and Garfield Avenue and has indicated it is prepared to process documents necessary to construct a new well at this site. This area of the groundwater basin has pockets of high salinity groundwater due to seawater intrusion and areas with high color concentration; thus the proposed well will require a treatment system. As shown on the following figure the wellsite is located near existing Talbert Barrier injection wells.



It's generally not desirable to locate an extraction well near seawater barrier injection wells as the effectiveness of the barrier will be diminished. Additionally LBCWD will have to incur the expense of treating the groundwater which could be avoided if it was allowed to

extract water in other locations within OCWD. For these reasons, LBCWD requested the District to modify the 1993 MOU to allow the 2,025 acre-feet of water to be extracted from any area within OCWD. In September 2015 the Board authorized staff to meet with LBCWD to see if a new arrangement could be negotiated.

Staff and LBCWD have developed a new agreement for the Board's consideration. Highlights of the attached agreement are summarized below:

1. The 1993 MOU is rescinded by both parties.
2. LBCWD can pump 2,025 acre-feet per year of water from any location within OCWD.
3. LBCWD would pay the District a total of $3.1 million over five years in equal payments. Although LBCWD is not requesting to annex into OCWD, the annexation formula was used to estimate annual payments LBCWD would pay to OCWD over a 25 year period. The present worth of these payments was then estimated at $3.1 million. LBCWD would begin making these payments once their groundwater pumping begins.
4. The agreement can only be terminated by concurrence of both parties.
5. LBCWD would pay the Replenishment Assessment for all water pumped and would be subject to the Basin Production Percentage and Basin Equity Assessment.
6. LBCWD would prepare any necessary CEQA documents and defend and protect OCWD from any lawsuits originating from this arrangement and agreement.
7. For so long as the agreement remains in effect, any and all rights that LBCWD may have to produce groundwater from the groundwater basin, shall be limited to those rights set forth in the agreement.
8. LBCWD would either work with an existing OCWD Groundwater Producer to assist it in producing the 2,025 acre-feet per year of groundwater or develop their own well within OCWD.

PRIOR RELEVANT BOARD ACTION(S)

09/16/15; M15-141- Direct staff to meet with Laguna Beach County Water District representatives and prepare options for Board review to potentially amend the 1993 Memorandum of Understanding.

11/04/1992, R92-11-194: MOU that provides for LBCWD to produce and transport up to 2,025 acre-feet of groundwater per year from the Santa Ana Basin from a production well to be developed and constructed in the City of Huntington Beach seaward of the Talbert Barrier.

AGREEMENT BETWEEN ORANGE COUNTY WATER DISTRICT AND LAGUNA BEACH COUNTY WATER DISTRICT REGARDING LAGUNA BEACH COUNTY WATER DISTRICT GROUNDWATER PRODUCTION WITHIN ORANGE COUNTY WATER DISTRICT GROUNDWATER BASIN

This Agreement is entered into as of _____, 2015, by and between the ORANGE COUNTY WATER DISTRICT, a special district of the State of California created and formed under the Orange County Water District Act, Chapter 924, California Statutes of 1933, as amended ("OCWD") and the LAGUNA BEACH COUNTY WATER DISTRICT, a County water district formed and operated pursuant to Water Code sections 30200, *et seq.* ("LBCWD") (OCWD and LBCWD are each hereinafter referred to as a "Party," and collectively as the "Parties").

RECITALS

A. Pursuant to the Orange County Water District Act, Chapter 924 of the California Statutes of 1933, as amended (the "OCWD Act"), the Legislature of the State of California has vested in OCWD the statutory responsibility to manage, regulate, replenish and protect the quality and quantity of the subterranean groundwater supplies within the boundaries of OCWD, and the large subterranean groundwater basin underlying the OCWD boundaries (the "OCWD Basin").

B. Prior to the creation of OCWD, LBCWD owned and operated groundwater production wells near the coast of the Pacific Ocean in the City of Huntington Beach, California. LBCWD produced groundwater from the OCWD Basin and transported the produced groundwater through a pipeline to the LBCWD service area in the City of Laguna Beach, California.

C. Prior to the creation of OCWD, litigation entitled *Campbell, et al. v. The Irvine Co., et al.,* Orange County Superior Court Case No. 29524 (the "1933 Adjudication Lawsuit") was filed against LBCWD and other producers of groundwater within the OCWD Basin to define the water rights of the litigant parties. On June 13, 1933, judgment was entered in the 1933 Adjudication Lawsuit (the "1933 Adjudication Judgment"). Paragraph X of the 1933 Adjudication Judgment adjudicated to LBCWD, as against all other land owners overlying the OCWD Basin, the right to produce up to 2,025 acre feet per year from a specified area near the coast of the Pacific Ocean in the vicinity of Huntington Beach, California, and overlying the OCWD Basin.

D. By the enactment of the OCWD Act, OCWD was created in 1934. OCWD's original boundaries included the service area of LBCWD. However, due to increased groundwater production within the Basin, seawater intrusion became more pronounced and diminished water quality at LBCWD's wells in Huntington Beach. As a result of this water quality impact, LBCWD abandoned its Huntington Beach wells and thereafter detached its territory from OCWD in 1949.

E. Beginning in the mid-1980's, LBCWD commenced discussions with OCWD regarding the resumption of LBCWD groundwater production from within the OCWD Basin, based upon LBCWD's assertion of pre-existing rights under the 1933 Adjudication Judgment.

F. On June 1, 1993, OCWD and LBCWD entered into a "Memorandum of Understanding between Orange County Water District and Laguna Beach County Water District Relating to Groundwater Development in the Santa Ana Basin" (the "1993 MOU"), under which OCWD implicitly acknowledged LBCWD's right to produce and transport up to 2,025 acre feet of groundwater per year from the OCWD Basin from a production well to be developed and constructed in Huntington Beach seaward of the "Talbert Barrier," subject to LBCWD complying with all of the provisions of OCWD Act applicable to all groundwater producers within OCWD's boundaries.

G. After investigation, LBCWD has determined that its proposed production of groundwater from the location identified in the 1993 MOU would not be productive because of the degradation of groundwater quality in that location due to sea water intrusion and the presence of colored water.

H. LBCWD and OCWD mutually desire to enter into this Agreement to set forth the manner in which LBCWD may exercise its groundwater production rights under the 1933 Adjudication Judgment.

NOW, THEREFORE, in consideration of the facts recited above and the covenants, conditions and promises set forth below, OCWD and LBCWD agree as follows:

SECTION 1: LBCWD RIGHTS UNDER THE 1933 ADJUDICATION JUDGMENT.

1.1 LBCWD shall have the right, under the 1933 Adjudication Judgment, to produce up to 2,025 acre feet per year of groundwater from any location within the OCWD Basin.

1.2 Except as set forth in Paragraph 1.1 above, LBCWD shall have no right to produce any groundwater from within the OCWD Basin, or to export or receive any groundwater from the OCWD Basin. LBCWD acknowledges that its groundwater production and importation right under the 1933 Adjudication Judgment and this Agreement is limited to no more than 2,025 acre feet per year.

1.3 LBCWD shall comply with all of the provisions of the OCWD Act that are applicable to all groundwater producers within the boundaries of OCWD, including but not limited to the registration of groundwater production facilities; groundwater production reporting requirements; the payment of replenishment assessments and additional replenishment assessments on produced groundwater; groundwater production requirements and limitations, if applicable; and the payment of basin equity assessments and surcharges, if applicable, on produced groundwater.

1.4 For purposes of LBCWD's annual basin equity assessment report of groundwater production relative to total water supplies and the imposition of basin equity assessments and surcharges, pursuant to Section 31.5 of the OCWD Act, the basin production percentage ("BPP") annually established by OCWD pursuant to Section 31.5(g)(2)(B) of the OCWD Act shall be

applied to the total annual water supplies of LBCWD. The following two examples shall guide the Parties in calculating any basin equity assessments ("BEA") and surcharges due from LBCWD to OCWD by reason of LBCWD's production of groundwater of the OCWD Basin under different BPP scenarios:

1.4.1 Assumed BPP of 70%.

- Total LBCWD Water Supplies = 3,100AFY
- Maximum LBCWD Groundwater Production Within BPP (i.e., without payment of BEA) = 2,170AFY (70% x 3,100AFY)
- LBCWD Pumping Within BPP = 2,025AFY (LBCWD pays RA and ARA on 2,025AFY, but pays no BEA or surcharge)

1.4.2 Assumed BPP of 65%.

- Total LBCWD Water Supplies = 3,100AFY
- Maximum LBCWD Groundwater Production Within BPP (i.e., without payment of BEA = 2,015AFY (65% x 3,100AFY)
- LBCWD Pumping Within BPP = 2,015AFY and 10AFY above BPP (LBCWD pays RA and ARA, but not BEA or surcharge, on 2,015AFY, and pays RA, ARA BEA and any surcharge on 10AFY)

SECTION 2: LBCWD GROUNDWATER PRODUCTION.

2.1 LBCWD may exercise its groundwater production rights under the 1933 Adjudication Judgment and this Agreement either by constructing and operating its own groundwater production facility in accordance with Paragraph 2.2 herein, or by accepting delivery of groundwater produced by a producer within the OCWD boundaries, in accordance with Paragraph 2.3 herein.

2.2 In the event that LBCWD determines to exercise its groundwater production rights by constructing and operating its own groundwater production facility:

2.2.1 LBCWD shall register such groundwater production facility in accordance with Section 24 of the OCWD Act, and shall install on such groundwater production facility and operate a water flow measuring device as required by Section 35 of the OCWD Act; and

2.2.2 LBCWD shall be responsible for all property acquisition and well construction costs, as well as all pipeline right-of-way and construction costs (or the lease of capacity in existing or future pipeline facilities) in order to transport the produced groundwater to the LBCWD service area.

2.3 In the event that LBCWD determines to exercise its groundwater production rights by receiving delivery of up to 2,025 acre-feet per year of groundwater produced by a groundwater producer within the OCWD boundaries (hereinafter, a "Participating Producer"), the following terms and conditions shall apply:

2.3.1 Upon LBCWD identifying the Participating Producer and entering into a contract or other instrument by which the Participating Producer will produce groundwater on behalf of LBCWD, LBCWD and the Participating Producer shall jointly execute and deliver to OCWD a notice containing all of the following information:

(i) Identification of the Participating Producer's groundwater production facility(ies) from which groundwater will be produced on behalf of LBCWD.

(ii) Description of the existing or proposed transmission and/or distribution pipelines and appurtenant facilities through which such groundwater will be transported to LBCWD.

(iii) Identification of any intervening local agencies or water purveyors by or through which such groundwater will be transported before entering the LBCWD service area.

(iv) The projected annual schedule for the Participating Producer's production of groundwater on behalf of LBCWD in accordance with this Agreement.

2.3.2 In addition to the biannual water production statement filed by the Participating Producer regarding groundwater produced by the Participating Producer for the benefit of its customers and water users pursuant to Section 29 of the OCWD Act, the Participating Producer and LBCWD shall biannually jointly file with OCWD a separate water production statement reflecting the groundwater produced by the Participating Producer on behalf of LBCWD under this Agreement (the "Joint Water Production Statement"). Each such Joint Water Production Statement shall conform in all respects to the requirements of Section 29 of the OCWD Act, except as set forth in this Paragraph 2.3.

2.3.3 In addition to the annual basin equity assessment report filed by the Participating Producer regarding groundwater produced by the Participating Producer for the benefit of its customers and water users pursuant to Section 31.5(j) of the OCWD Act, the Participating Producer and LBCWD shall annually jointly file with OCWD a separate basin equity assessment report reflecting the groundwater produced by the Participating Producer on behalf of LBCWD under this Agreement (the "Joint BEA Report"). Each such Joint BEA Report shall conform in all respects to the requirements of Section 31.5(j) of the OCWD Act, except as set forth in this Paragraph 2.3.

2.3.4 LBCWD shall pay to OCWD the replenishment assessment and additional replenishment assessment established by OCWD pursuant to Sections 27 and 27.1 of the OCWD Act on all groundwater produced by the Participating Producer on behalf of LBCWD, as reflected in each Joint Water Production Statement filed with OCWD.

2.3.5 LBCWD shall pay to OCWD the BEA and surcharge, if applicable, on all groundwater produced by the Participating Producer on behalf of LBCWD in excess of the BPP, based upon the groundwater production reported in each Joint BEA Report filed with OCWD

and in accordance with Section 31.5(j) of the OCWD Act and the calculation methodology in Paragraph 1.4 above.

2.3.6 LBCWD shall be responsible for all pipeline right-of-way and construction costs (or the lease of capacity in existing or future pipeline facilities) in order to transport to the LBCWD service area the groundwater produced by the Participating Producer on behalf of LBCWD.

2.4 LBCWD shall be responsible for preparing, processing and approving, as the lead agency, all documentation required by the California Environmental Quality Act, Public Resources Code section 21000, *et seq.* ("CEQA"), as may be required for LBCWD's construction of groundwater production facilities and pipeline facilities, or the use of groundwater production facilities and pipeline facilities owned by the Participating Producer and/or other parties, and the production and use of groundwater under this Agreement. LBCWD shall indemnify, defend and hold harmless OCWD and its officers, directors, employees, agents and representatives (collectively, "OCWD Parties") from and against any and all lawsuits, actions, causes of actions, claims and demands, and any and all court costs and attorneys' fees related thereto (collectively, "Claims") in any way relating to the approval of this Agreement, the approval of any CEQA document by LBCWD as lead agency or by OCWD as responsible agency, if applicable, or to any groundwater production by or behalf of LBCWD from within the OCWD Basin.

SECTION 3: CONSIDERATION FOR LBCWD GROUNDWATER PRODUCTION RIGHTS.

3.1 In addition to (and not in lieu of) LBCWD's payment of all applicable replenishment assessments, additional replenishment assessments and basin equity assessments under the OCWD Act for all groundwater produced by or on behalf of LBCWD from within the OCWD Basin under this Agreement, LBCWD shall pay to OCWD the sum of $3,100,000 (the "OCWD Consideration"). The OCWD Consideration shall be paid in five equal annual installments of $620,000 per year, as follows:

3.1.1 The first $620,000 installment payment on the OCWD Consideration shall be paid by LBCWD to OCWD within 10 calendar days of LBCWD or the Participating Producer commencing the extraction of groundwater for LBCWD's benefit.

3.1.2 The second $620,000 installment payment on the OCWD Consideration shall be due and payable by LBCWD to OCWD within 12 months following the payment of the first installment as set forth in Paragraph 3.1.1, above.

3.1.3 Each succeeding $620,000 installment payment shall be made by LBCWD to OCWD on or before the annual anniversary of the first such installment payment as set forth in Paragraph 3.1.1, until such time as LBCWD has paid the full amount of the OCWD Consideration in the amount of $3,100,000.

3.1.4 Notwithstanding the foregoing, LBCWD may pay to OCWD the OCWD Consideration, or any installment, prior to the deadlines set forth in Paragraphs 3.1.1, 3.1.2 and 3.1.3.

3.2 As partial consideration to OCWD under this Agreement, LBCWD shall, to the maximum extent permitted by law, indemnify, defend and hold harmless OCWD and the OCWD Parties from and against any and all Claims in any way arising out of or connected with the performance or non-performance of LBCWD or the Participating Producer under this Agreement, or LBCWD's discharge or failure to discharge its obligations hereunder, or in any way relating to LBCWD's negligent acts or omissions or willful misconduct under this Agreement.

3.3 OCWD and LBCWD each release, forever discharge and covenant not to sue the other Party, and its respective directors, officers, employees, representatives and agents, from any and all Claims which the releasing Party could otherwise bring or have brought against the other Party with respect to LBCWD's asserted right to produce groundwater under the 1933 Adjudication Judgment, OCWD's construction and operation of GWRS injection wells within LBCWD's groundwater production area as defined by Paragraph X of the 1933 Adjudication Judgment, or any other issue or matter relating to LBCWD's asserted groundwater rights or OCWD's groundwater management rights and activities prior to the date of this Agreement. Each of the Parties acknowledges that it is familiar with the provisions of California Civil Code section 1542, which provides as follows:

> "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

OCWD and LBCWD, being aware of Civil Code section 1542, each hereby expressly waives any rights it may have thereunder, as well as under any other statutes or common law principles of similar effect.

3.4 By the execution of this Agreement, the Parties hereby rescind the 1993 MOU. From and after the date execution of this Agreement, the 1993 MOU shall have no further force or effect.

3.5 The parties acknowledge that, for so long as this Agreement remains in effect, any and all rights that LBCWD may have to produce groundwater from the Basin, including but not limited to any rights under the 1933 Adjudication Judgment, shall be limited to those rights set forth in this Agreement. For so long as this Agreement remains in effect, LBCWD shall have no rights to produce groundwater within the OCWD Basin, or to receive or import groundwater produced within the OCWD Basin, other than as set forth in this Agreement.

SECTION 4: MISCELLANEOUS.

4.1 Notices. All payments, notices or other communications provided for or permitted under this Agreement shall be made by hand delivery, pre-paid first class mail, or email, or reputable overnight courier (e.g., FedEx, UPS) as follows:

To OCWD:

Orange County Water District

18700 Ward Street
P.O. Box 8300
Fountain Valley, CA 92728-8300
Attention: General Manager
Email: _____

To LBCWD:

Laguna Beach County Water District
306 Third Street
P.O. Box 987
Laguna Beach, CA 92652
Attention: _____
Email: _____

All such payments, notices and communication shall be deemed to have been duly given when delivered, if personally delivered or if delivered by email, where an email provides a date and time stamp of date of transmission; on date of delivery when delivered by a reputable overnight courier that provides written documentation of delivery; and two business days after being deposited in the mail, postage pre-paid, if mailed as described above. Each Party may, by written notice to the other as set forth herein, change the name, address or contact person for that Party.

4.2 Assignment Prohibited. No Party shall assign this Agreement, in whole or in part, or any of its interests hereunder, to any other person or entity, without the prior written consent of the other Party, which may be withheld in its sole and absolute discretion. Any attempt to transfer or assign this Agreement, or any privilege hereunder, without such written consent shall be void and confer no right on any person or entity that is not a Party to this Agreement.

4.3 No Third Party Beneficiaries. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, other than the Parties hereto and their respective authorized successors and assigns, any legal or equitable right, remedy or claim under or in respect to this Agreement or any provisions contained in this Agreement. This Agreement and all of the conditions and provisions hereof are intended to be, and are, for the sole and exclusive benefit of the Parties hereto and their respective authorized successors and assigns, and for the benefit of no other person or entity.

4.4 Further Assurances. Each Party, upon the request of the other, agrees to perform such further acts and to execute and deliver such further documents as are reasonably necessary to carry out the provisions of this Agreement.

4.5 Interpretation. The Parties hereto have jointly participated in the drafting of this Agreement and this Agreement shall not be construed for or against any Party. The language and all parts of this Agreement shall be in all cases construed simply accordingly to its fair meaning and not strictly for or against any Party hereto, and section 1654 of the California Civil Code has no applicability to the interpretation of this Agreement.

4.6 Governing Laws; Disputes and Attorneys' Fees. The laws of the State of California shall govern the interpretation and enforcement of this Agreement. The non-prevailing Party in any claim, suit or other action relating to the interpretation or enforcement of this Agreement shall pay to the prevailing Party the costs of such prevailing Party's attorneys' fees and expenses and all other costs and expenses incurred by the prevailing Party in such action, whether such action proceeds to judgment or is resolved prior to judgment.

4.7 Venue. Any legal action initiated pursuant to this Agreement or otherwise with respect to its subject matter shall be instituted in the Superior Court of the County of Orange, California.

4.8 Waiver; Remedies. No delay on the part of either Party hereto in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any waiver on the part of either Party hereto of any right, power or privilege hereunder operate as a waiver of any other right, power or privilege hereunder. Any single or partial exercise of any right, power or privilege hereunder shall not preclude any other or further exercise thereof, or the exercise of any other right, power or privilege under this Agreement.

4.9 Status of Parties. Nothing in this Agreement shall be construed to make the Parties joint venturers or partners, or to create any relationship of principal and agent, and the Parties specifically disavow any such relationship.

4.10 Severability. Should any provision of this Agreement prove to be invalid or illegal, such invalidity or illegality shall in no way affect, impair or invalidate any other provisions of this Agreement, and such remaining provisions shall remain in full force and effect; provided, however, if the illegality or invalidity of any provision undermines the intent of the Parties, then the Parties shall attempt in good faith to amend this Agreement in order to fulfill the intent of the Parties. If the Parties are unable to so amend this Agreement, then this Agreement shall terminate and be of no further force or effect.

4.11 Successors. Subject to Paragraph 4.2 above, this Agreement shall be binding upon and inure to the benefit of the Parties, and their respective successors and assigns.

4.12 Entire Agreement. This Agreement constitutes the entire agreement between the Parties pertaining to the matters provided for herein and, except as herein provided, supersedes all prior and/or contemporaneous agreements and understandings, whether written or oral, between the Parties relating to the matters provided for herein.

4.13 Amendments. This Agreement may be amended only by a writing duly executed by authorized representatives of both of the Parties hereto.

4.14 Counterparts. This Agreement may be execute in any number of counterparts and by the Parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same Agreement.

4.15 Term. This Agreement shall remain in full force and effect until such time as both OCWD and LBCWD mutually agree to terminate this Agreement.

IN WITNESS THEREOF, the Parties have caused this Agreement to be executed as of the date first set forth above.

ORANGE COUNTY WATER DISTRICT

By: _____
Name: _____
Title: President

By: _____
Name: _____
Title: General Manager

APPROVED AS TO FORM:

By: _____
Joel Kuperberg, General Counsel

LAGUNA BEACH COUNTY WATER DISTRICT

By: _____
Name: _____
Title: President

By: _____
Name: _____
Title: Secretary

APPROVED AS TO FORM:

By: _____
Name: _____
Title: General Counsel

MEMORANDUM OF UNDERSTANDING BETWEEN ORANGE COUNTY WATER DISTRICT AND LAGUNA BEACH COUNTY WATER DISTRICT RELATING TO GROUNDWATER DEVELOPMENT IN THE SANTA ANA BASIN

THIS MEMORANDUM OF UNDERSTANDING (MOU) is entered into this 1st day of ~~November~~ June, 1992 by and between the Orange County Water District (OCWD), an agency created by special act, and the Laguna Beach County Water District (LBCWD), a County Water District formed and existing pursuant to Sections 30200 and following of the California Water Code.

RECITALS

A. LBCWD has indicated its desire to construct and operate a domestic water production well at the corner of Garfield and Lindsay Avenues in the City of Huntington Beach for the purpose of developing an additional source of water for conveyance via the City of Newport Beach's existing transmission main, or through the exchange of water with other districts.

B. OCWD has previously agreed to allow LBCWD to produce a maximum of 2,025 acre-feet of water per year from a location in Huntington Beach seaward of the Talbert Barrier, with all production to be subject to the Replenishment Assessment and Basin Equity Assessment.

C. LBCWD has requested that consideration be given to exemption of the Basin Equity Assessment in the event the water produced from the proposed production well requires wellhead treatment.

D. OCWD has adopted a guideline policy covering adjustment of the BEA for exemption on a case-by-case basis based on the quality of water produced to offset additional costs of treatment, including blending and distribution, necessary to beneficially utilize the water produced.

NOW, THEREFORE, in consideration of the mutual promises set for herein, the parties agree as follows:

1. LBCWD may produce and transport up to 2,025 acre feet of groundwater per year from the Santa Ana Basin from a production well to be developed and constructed in the City of Huntington Beach seaward of the Talbert Barrier.

2. LBCWD will comply with the provisions of the Orange County Water District Act, Chapter 924, Statutes of 1933, as amended, that are applicable to all groundwater producers within the boundaries of the OCWD, including registration of said facility, payment of the replenishment assessment, any applicable basin equity assessment, and reporting requirements.

3. OCWD will consider exemption from payment of the BEA of water produced from said production well to the extent of offsetting any additional costs incurred by LBCWD for wellhead treatment, in accordance with the OCWD's adopted policy.

ORANGE COUNTY WATER DISTRICT

By _____
President

By _____
~~General Manager~~ District Secretary

LAGUNA BEACH COUNTY WATER DISTRICT

By _____

By _____

APPROVED AS TO FORM

_____
District General Counsel

ORANGE COUNTY WATER DISTRICT

Laguna Beach County Water District 1993 Memorandum of Understanding

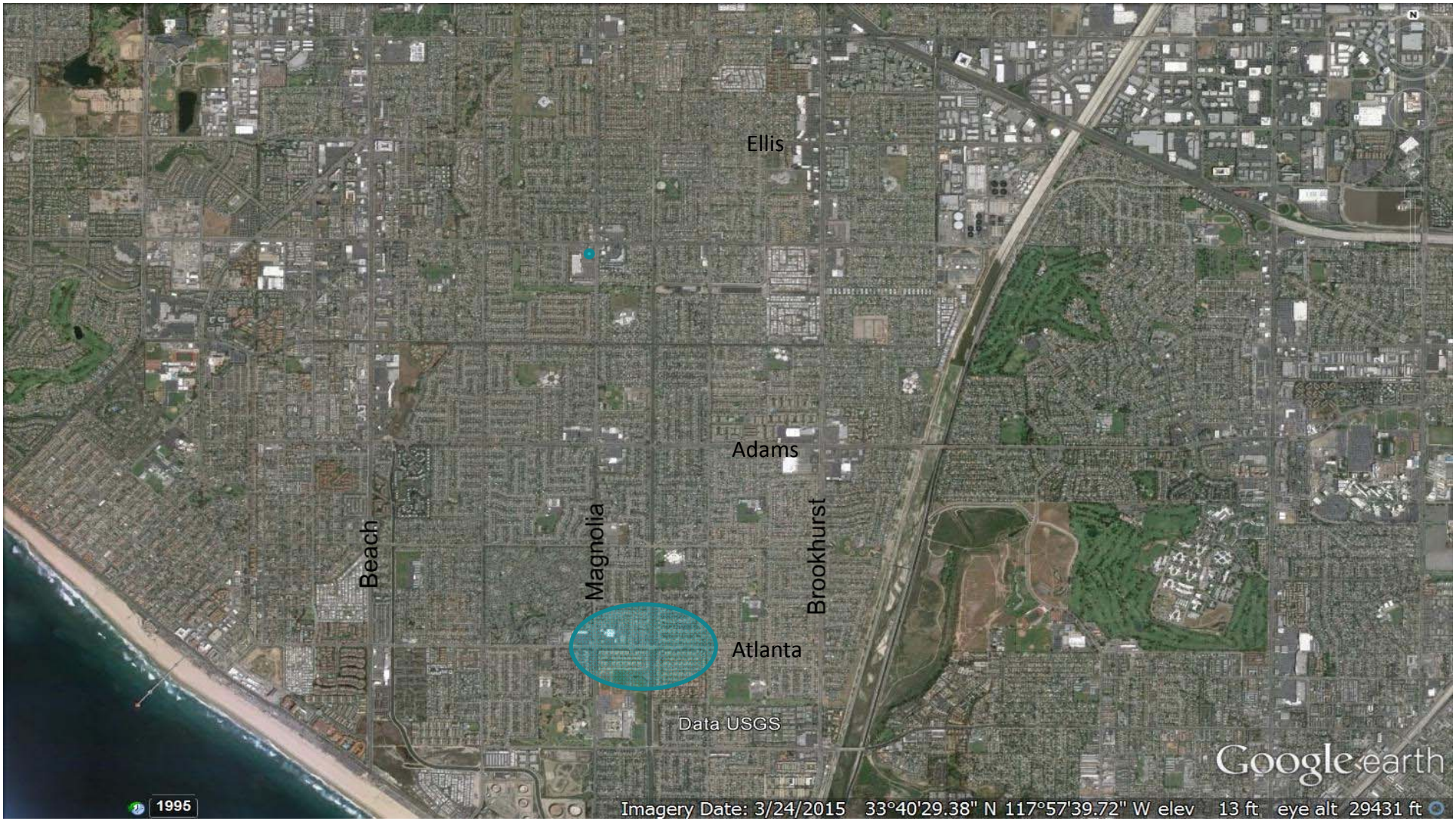
Water Issues Committee

January 13, 2016

ORANGE COUNTY WATER DISTRICT

LBCWD History

- Developed a well field in the South East Area of the City of Huntington Beach in the 1920s – Magnolia and Atlanta area
- Received 1933 judgment to pump 2,025 afy of groundwater from area along the coast in Huntington Beach
  - Other parties included in the judgment for additional 5,200 afy
- OCWD formed in 1933 after LB judgment
- Discontinued using wells in the 1940s due to seawater intrusion
- Obtained MWD imported water in 1948
- Withdrew as OCWD member in 1949


Ellis
Adams
Beach
Magnolia
Brookhurst
Atlanta
Data USGS
Google earth
1995
Imagery Date: 3/24/2015 33°40'29.38" N 117°57'39.72" W elev 13 ft eye alt 29431 ft

ORANGE COUNTY WATER DISTRICT

LBCWD History (cont'd)

- Mid 1980s requested OCWD to allow groundwater pumping
- Several years of meetings/negotiations
- Secured Lindsay Well site in 1990 (Magnolia and Garfield area) – wellhead treatment required
- Entered into 1993 MOU with OCWD to settle issue – LBCWD could pump up to 2,025 afy of groundwater seaward of the Talbert Barrier in the City of Huntington Beach
- Later subsequent attempts to modify MOU

ORANGE COUNTY WATER DISTRICT

Location Map

ORANGE COUNTY WATER DISTRICT

Issues

- Constructing a new well adjacent to seawater barrier is not desirable
- Why spend additional $3 to $5 million on a treatment system
  - High salinity & color units
- Modifying the MOU and allowing LBCWD to construct a well anywhere within OCWD would alleviate these issues

ORANGE COUNTY WATER DISTRICT

Draft Agreement

- The 1993 MOU is rescinded by both parties
- LBCWD can pump 2,025 acre-feet per year of water from any location within OCWD
- LBCWD will pay the District a total of $3.1 million over five years.
  - Used annexation formula to calculate amount
  - LB paying money to OCWD it would have to spend for a treatment system for the Lindsey well sight
- Both parties needed to terminate Agreement

ORANGE COUNTY WATER DISTRICT

Draft Agreement

- Any rights that LBCWD may have to produce groundwater from the Basin, would be limited to those rights set forth in the Agreement.
- Groundwater pumping pays the RA and is subject to the BPP and BEA
- LBCWD will prepare any necessary CEQA and defend and protect OCWD from any lawsuits originating from this arrangement and agreement
- LBCWD will work with an existing OCWD Groundwater Producer to assist it in producing the 2,025 afy or develop their own well.

ORANGE COUNTY WATER DISTRICT

Recommendation

Agendize for the January 20 Board meeting:

1. Approve and authorize execution of Agreement with the Laguna Beach County Water District to allow the extraction of 2,025 acre-feet of water from the OCWD basin; and
2. Authorize staff to file a California Environmental Quality Act - Notice of Exemption

Existing LBCWD Well Site - City of Huntington Beach

ORANGE COUNTY WATER DISTRICT

Distance from Injection Wells

ORANGE COUNTY WATER DISTRICT

Lindsey Well Sight Project Implementation (per MOU)

- OCWD creates waiver process for the well which is within the GWRS injection buffer area
- Agreement with producer or producers to deliver water
- LBCWD secures additional property
- Complete CEQA process and Engineering Design
- Construction of well and treatment system
- Project will take 3-5 years ($8-10 million)

AGENDA ITEM SUBMITTAL

MEETING DATE: January 20, 2016

TO: Board of Directors

FROM: Mike Markus

Staff Contact: R. Herndon/J. Kennedy

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

SUBJECT: MID-YEAR GROUNDWATER BASIN CONDITIONS UPDATE

SUMMARY

Staff has compiled basin recharge and groundwater production totals for the current water year beginning July 1, 2015 and will update the Board on the year-to-date totals, current basin conditions, and projected accumulated overdraft for the end of June 2016 assuming average rainfall for the second half of the water year (January through June).

Attachment: Presentation slides

RECOMMENDATION

Informational

DISCUSSION

Through December, rainfall at the District's field headquarters in Anaheim was about 2 inches below average. As of mid-December, the National Weather Service was predicting above-median precipitation through March for the Southwest; however, an updated forecast from NWS may be available by the time of the Board meeting. Rains in January provided about 12,000 acre-feet in the water conservation pool behind Prado Dam. Staff estimates that it could take up to a month to drain the pool by recharging the water, assuming no intervening storms.

In response to the state-wide water conservation mandate, total water demands are tracking about 18% below last year through December. Groundwater production is about 15% below last year.

Basin Production and Recharge

The Basin Production Percentage (BPP) was originally established at 70% for the fiscal year. In September 2015 the District increased the BPP up to 76% for the remainder of the 10 months of the fiscal year. This effectively established the BPP at 75% for the year (2 months at 70% and 10 months at 76%). The change acknowledged that total water demands were going to be less than originally budgeted due to the State Water Resources Control Board 25% emergency demand reduction requirements. Even with the higher BPP, total basin pumping will be in the area of 40,000 acre-feet less than originally budgeted.

Along with the BPP change in September, the District declined to purchase full service untreated Metropolitan Water District water under the Water Supply Allocation Plan rules. The District has budgeted to purchase 55,000 acre-feet of water. The Municipal Water District of Orange County (MWDOC) indicated that OCWD could purchase water under its allocation. MWDOC estimated that a minimum of 20,000 acre-feet could be purchased. Assuming the District only purchases and recharges 20,000 acre-feet of MWD water, total recharge for the year will be about 35,000 acre-feet less assuming all other factors remain unchanged. This decline in basin recharge approximates and offsets the reduction in basin production by the Groundwater Producers.

Accumulated Overdraft

The accumulated overdraft began the year at 381,000 acre-feet. Given that it is still early in the storm season, projecting the basin's accumulated overdraft at the end of June is difficult. Assuming captured storm flow and incidental recharge are equal to the most recent 5-year averages, staff estimates the basin accumulated overdraft will be relatively unchanged from the prior year and end up at approximately 392,000 acre-feet by June 30. A general rule-of-thumb based on previous experience is that a dry year can increase the overdraft in the area of 50,000 acre-feet. A wet year can decrease the overdraft by about the same amount. These amounts obviously vary depending upon the degree of the wet or dry winter experienced.

In June/July 2016 staff will take actual water measurements of numerous groundwater wells throughout the District and calculate the official basin overdraft effective June 30, 2016.

PRIOR RELEVANT ACTIONS – none

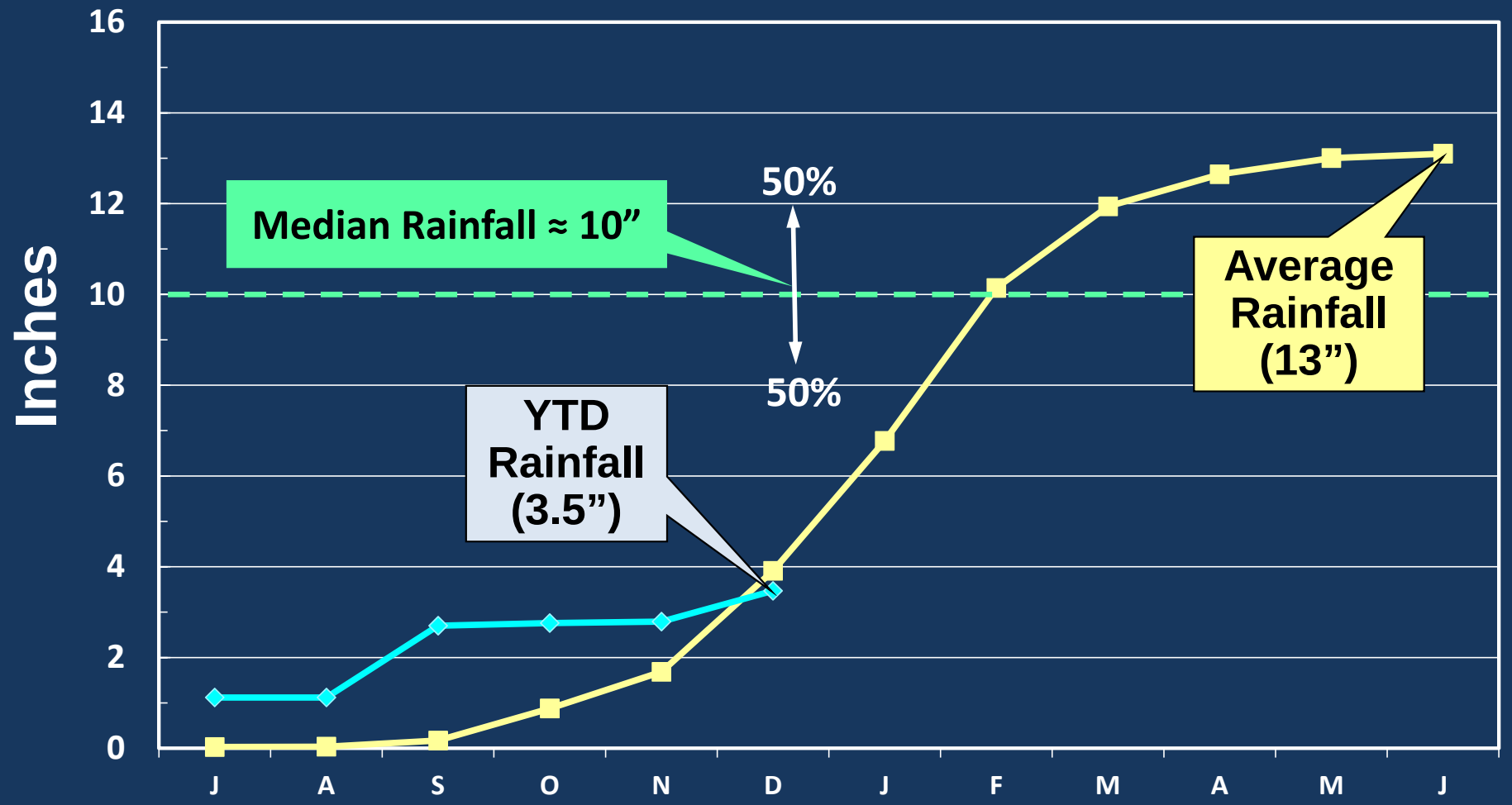
Agenda Item XX

Mid-Year Basin Status

Board Meeting

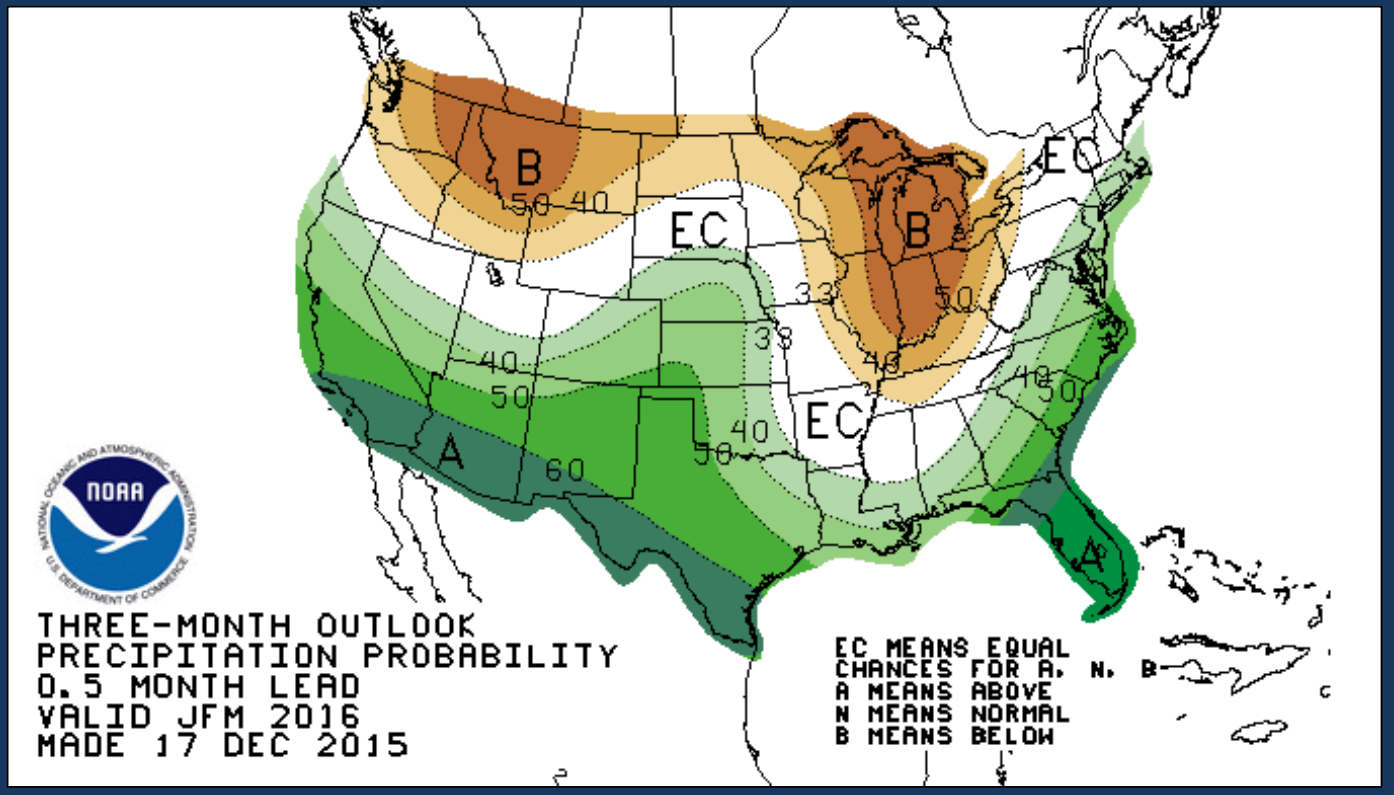
January 20, 2016

Annual Rainfall at Field HQ



Above-median precipitation is predicted for January-March in southern California.

January – March Forecast

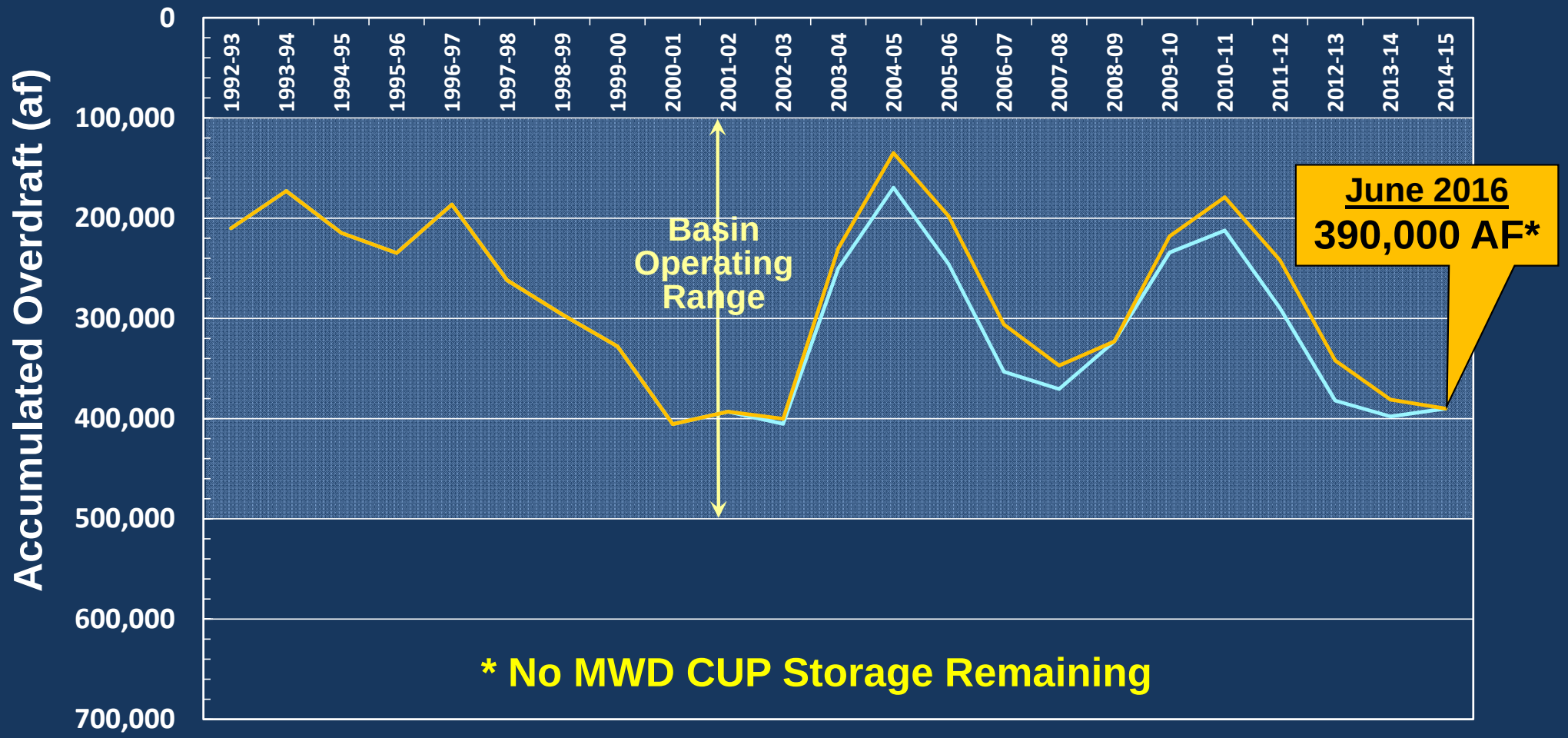


Year to date recharge through December exceeded the 5-year average due to GWRS expansion.

Basin projections for June 30, 2016

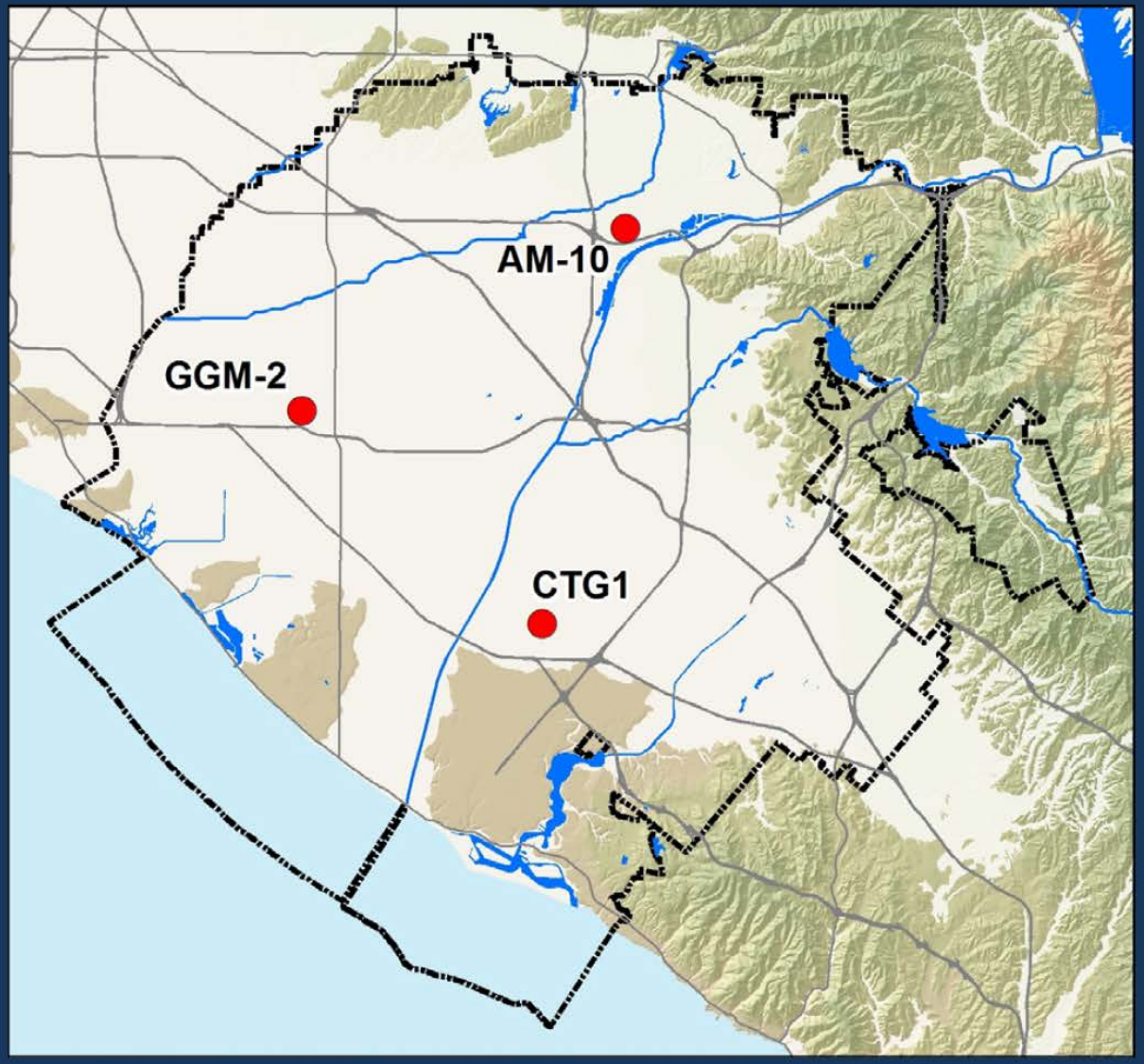
Inflows & Outflows (AF)	Budget	Projection (Avg Precip)
SAR Base Flow Recharge	64,000	64,000
SAR Storm Flow Recharge (5-yr avg)	41,000	41,000
Incidental Recharge (5-yr avg)	52,000	52,000
GWR System	98,000	103,000
MWD Supplies	55,000	20,000
Alamitos Barrier	2,000	2,000
Total Water Into Basin (rounded)	312,000	282,000
Basin Pumping	-322,000	-291,000
Storage Change	-10,000	-9,000
Accumulated Overdraft	391,000	390,000

Projected June 2016 Accumulated Overdraft



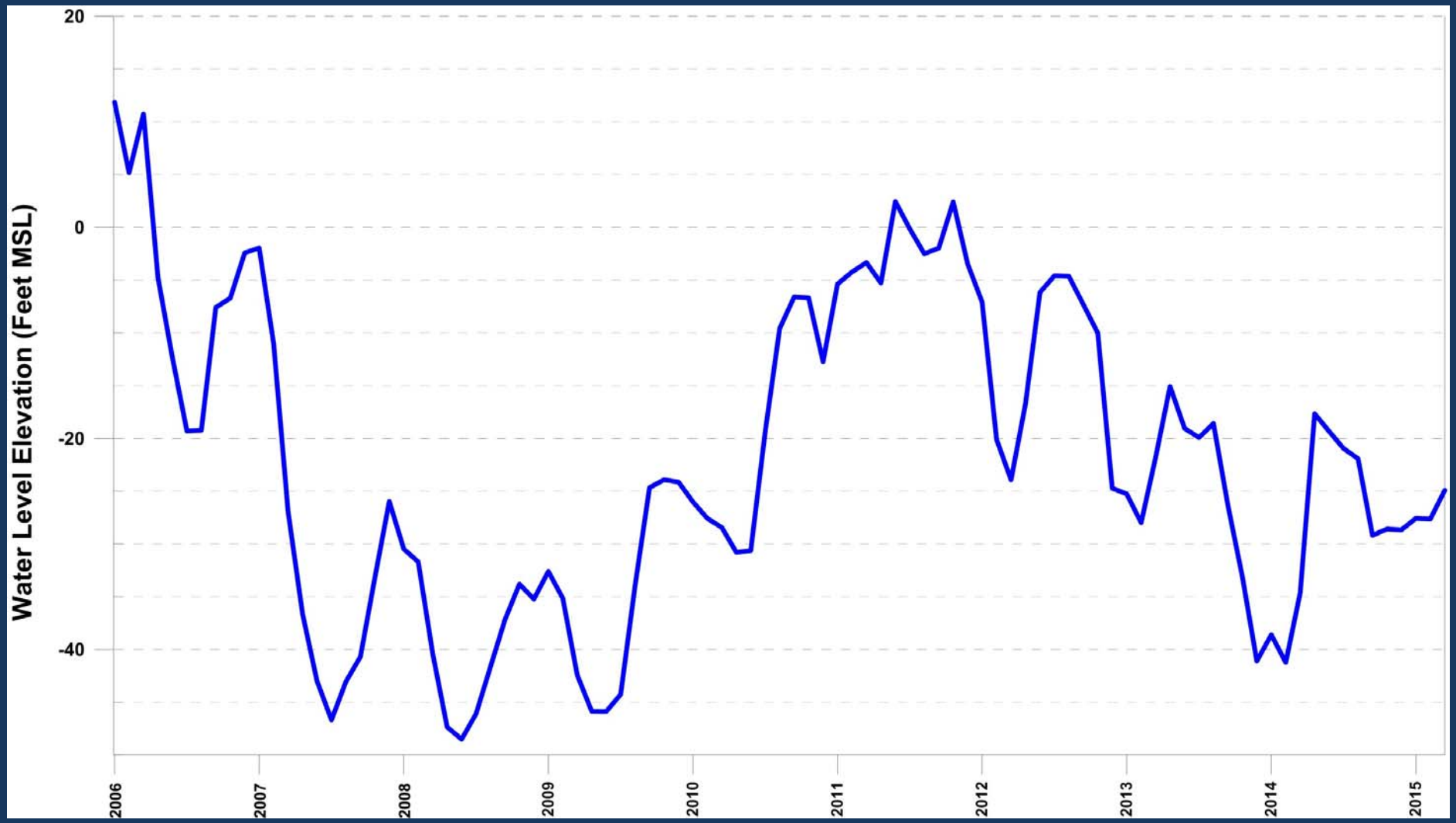
End of Presentation

Backup Slides of Selected Groundwater Level Charts


AM-10
GGM-2
CTG1

AM-10 (near recharge area)

GGM-2 Zone 4 (west-central basin)



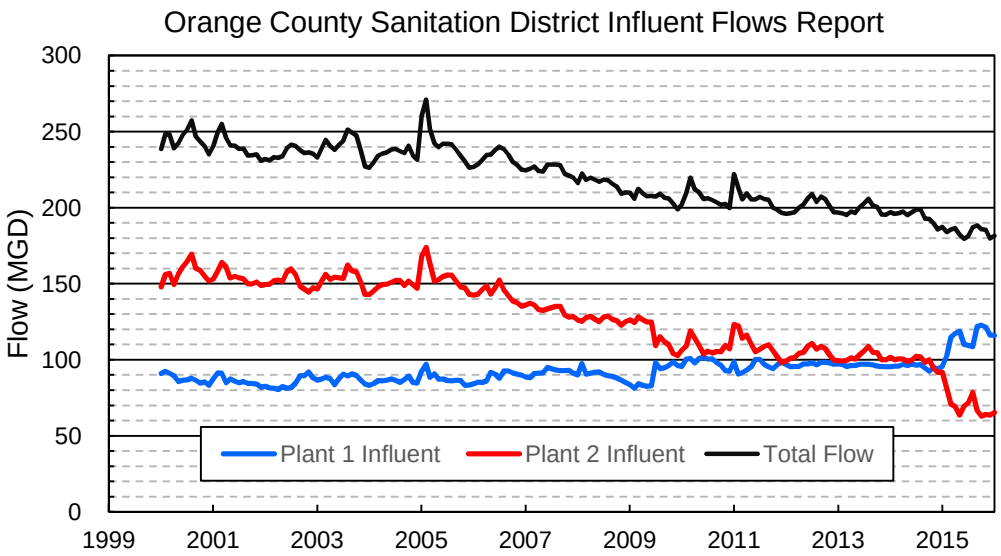
CTG1 Zone 2 (Dyer Road area)

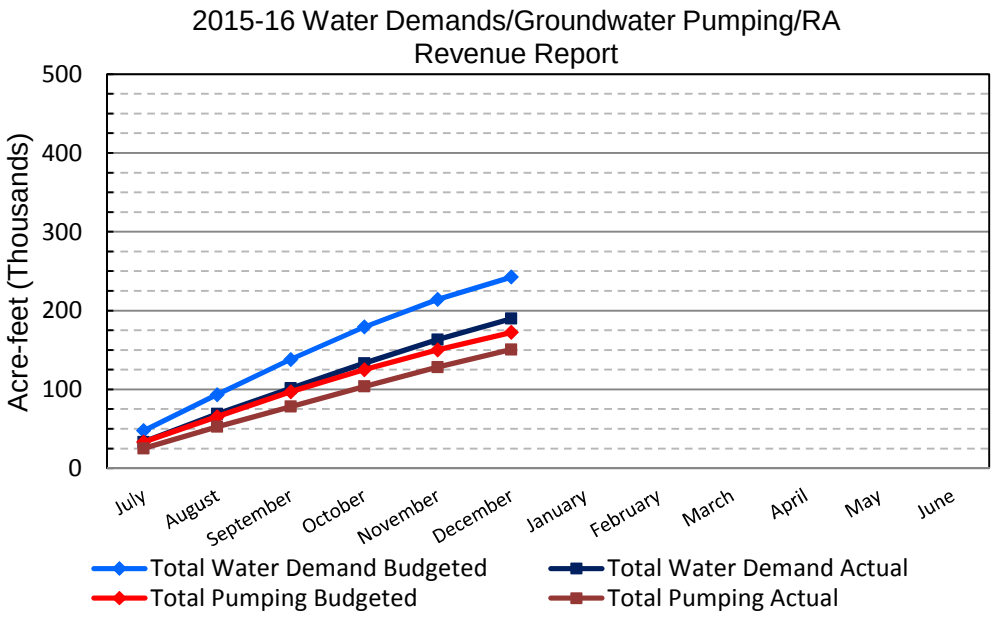
WATER RESOURCES SUMMARY

December 2015

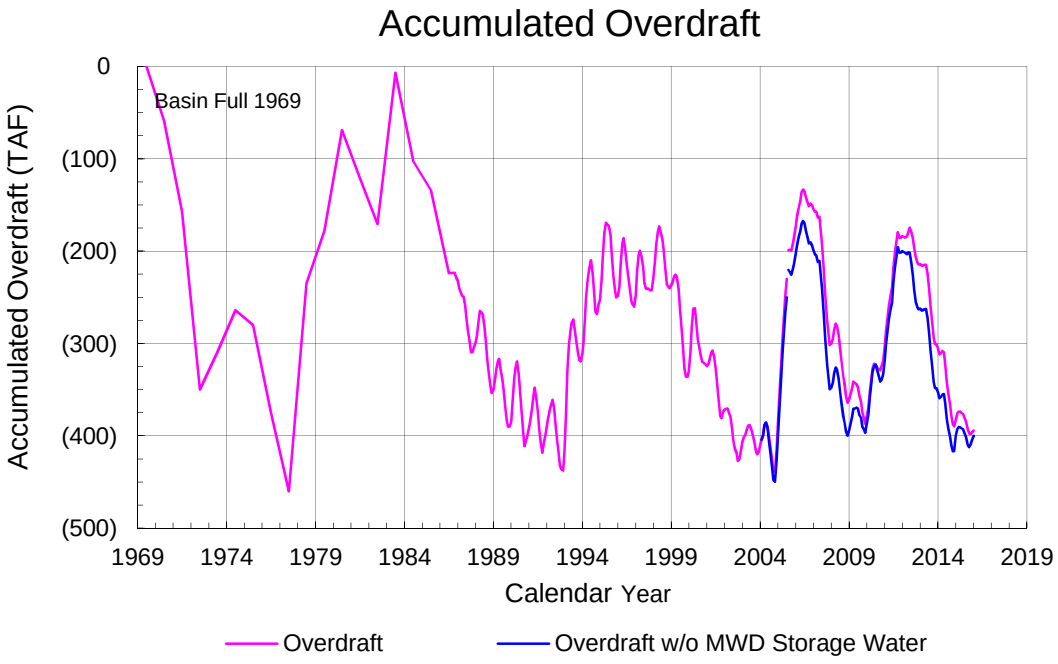
INFLOWS & OUTFLOWS (acre-feet)	Total for Month	Year to Date - This Year	Year to Date - Last Year
BASIN SUPPLIES			
Water Purchases from MWD (excludes In Lieu)	3,727	19,982	31,672
Water into MWD Storage Account (excludes In Lieu)	0	0	0
SAR & Santiago Creek Flows	8,116	45,829	45,117
(accounts for storage to/from recharge facilities)			
GWRS Water to Forebay	5,745	32,699	16,903
GWRS Water to Mid-Basin Injection Wells	96	846	0
GWRS Water to Talbert Barrier	2,891	18,533	18,828
OC-44 Water to Talbert Barrier	0	4	5
Alamitos Barrier Water	238	1,250	1,452
Incidental Recharge (estimated)	3,500	21,000	25,107
Evaporation from Recharge Basins	0	(1,658)	(1,263)
River Flow Lost to Ocean	0	(110)	(3,000)
Total Groundwater Recharge	24,314	138,376	134,822
WATER PRODUCTION			
Groundwater Production	19,887	139,801	162,697
MWD Storage Program Withdrawals	2,638	10,905	12,917
Total Groundwater Production	22,525	150,706	175,614
BASIN BALANCE			
Change in Groundwater Storage	1,788	(12,330)	(40,792)
Change in Groundwater Storage excluding MWD Stored Water	4,426	(1,425)	(40,792)
Accumulated Overdraft	------	394,176	382,794
Accumulated Overdraft excluding MWD Storage	------	400,033	399,707
IN LIEU WATER			
OCWD In Lieu Purchases	0	0	0
MWD In Lieu Storage	0	0	0
Total In Lieu	0	0	0
OTHER KEY INFORMATION			
1. MWD Water Deliveries to Producers	2,951	30,540	44,772
2. Basin Production Percentage	78.1%	77.1%	73.8%
3. Total Water Demand	26,701	189,842	228,881
4. Total GWRS Production	8,636	51,233	35,731
5. Green Acres Project Water	165	2,284	2,212
6. SAR Water Quality			
- Total Dissolved Solids (TDS) of SAR below Prado Dam (ppm)	710	------	354
- Total Nitrogen of SAR below Prado Dam (ppm)	5.6	------	4.0
7. Month-End Water Storage Behind Prado Dam	206	------	5,245
8. Month-End Water Storage in Recharge Facilities	9,147	------	15,455
9. Water Storage Change in Recharge Facilities	1,655	(586)	5,304
10. Total Artificial Recharge	20,716	116,529	109,713
11. Monthly Mean Temperature at Santa Ana Fire Station (°F)	57.5	------	60.9
12. Rainfall at FHQ (inches)	0.68	3.47	5.42

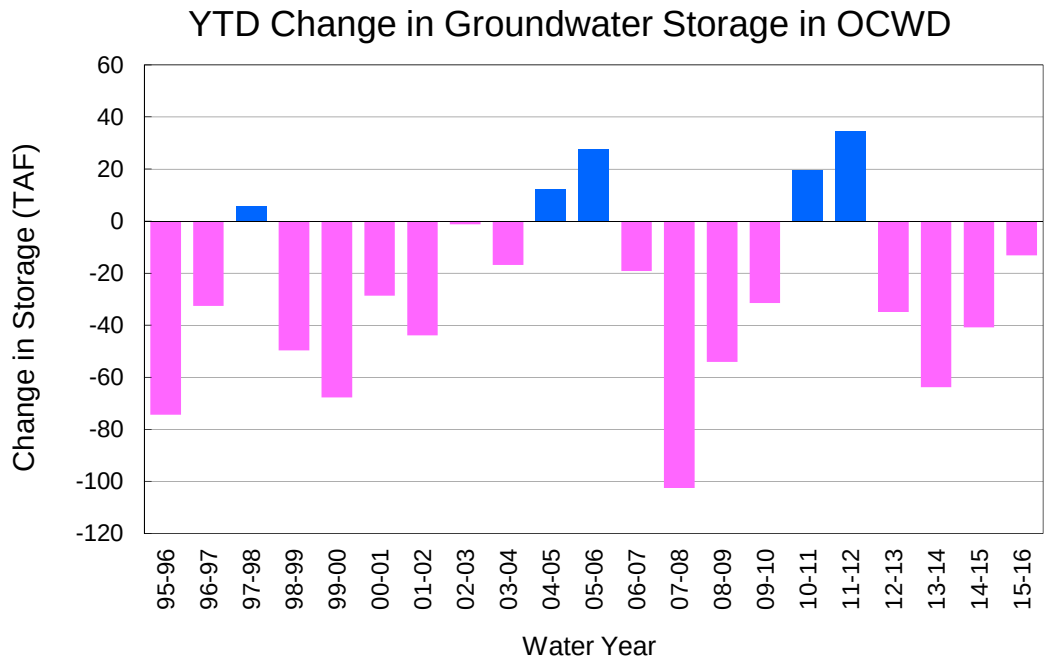
1/14/2016





	Monthly		Accumulated Total for the Year			
	Budget	Actual	Budget	Actual	Difference	Percent
Total Water Demand	**28,500**	**26,701**	**242,600**	**189,842**	**-52,758**	**78.25%**
Total Pumping	**22,100**	**19,887**	**172,400**	**150,706**	**-21,694**	**87.42%**
RA Revenue	**$7,116,200**	**$6,403,696**	**$55,512,800**	**$48,527,278**	**-$6,985,522**	**87.42%**


Accumulated Overdraft
Basin Full 1969
Accumulated Overdraft (TAF)
0
(100)
(200)
(300)
(400)
(500)
1969
1974
1979
1984
1989
1994
1999
2004
2009
2014
2019
Calendar Year
Overdraft
Overdraft w/o MWD Storage Water


YTD Change in Groundwater Storage in OCWD
Change in Storage (TAF)
60
40
20
0
-20
-40
-60
-80
-100
-120
95-96
96-97
97-98
98-99
99-00
00-01
01-02
02-03
03-04
04-05
05-06
06-07
07-08
08-09
09-10
10-11
11-12
12-13
13-14
14-15
15-16
Water Year

PRODUCERS WATER USAGE SUMMARY
December 2015

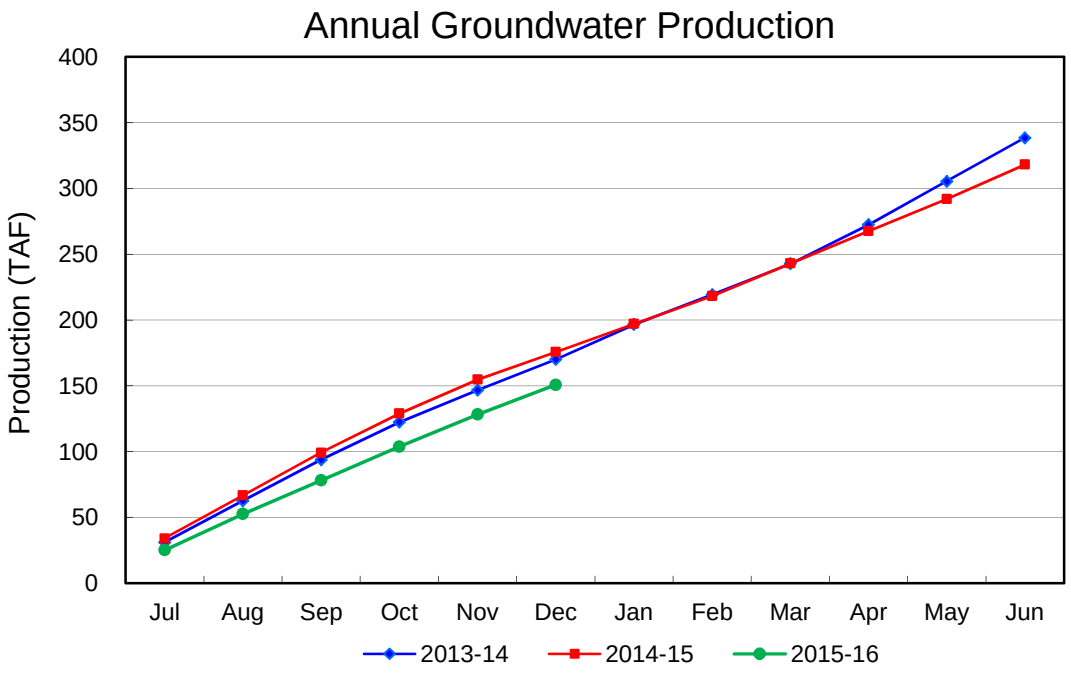
(AF except BPP)

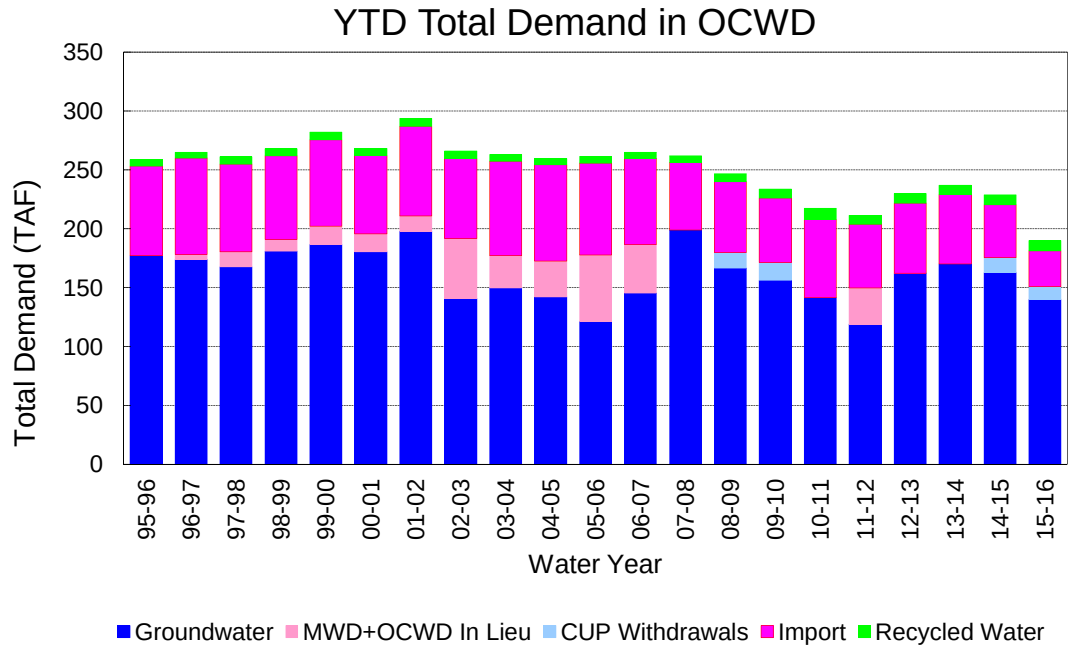
WATER AGENCY	Ground-water (1)	MWD CUP Withdrawals	Reclaimed Water	Total Import (2)	Total Demand	2015-16 YTD Demand	2014-15 YTD Demand	YTD % Diff Demand	DEC 2015 BPP	2015-16 YTD BPP	2014-15 YTD BPP
Anaheim	3,272	107	0	500	3,771	26,902	34,408	78%	86.8%	77.1%	73.6%
Buena Park	656	210	0	210	865	6,237	7,345	85%	75.8%	76.4%	72.5%
East Orange County	17	0	0	28	45	335	514	65%	37.6%	73.6%	98.6%
Fountain Valley	376	0	29	217	621	4,955	5,936	83%	63.4%	74.1%	100.0%
Fullerton	1,095	0	0	614	1,709	12,507	14,932	84%	64.1%	74.6%	69.3%
Garden Grove	1,009	350	0	598	1,607	11,137	13,064	85%	62.8%	71.2%	63.1%
Golden State	1,150	250	0	465	1,615	10,974	13,718	80%	71.2%	75.8%	67.1%
West OC System	1,002	0	0	5	1,006	6,757	8,141	83%	99.6%	99.8%	98.5%
East OC System	398	0	0	211	609	4,218	5,577	76%	65.4%	56.2%	38.1%
Huntington Beach	1,744	0	0	124	1,868	12,692	15,122	84%	93.3%	75.3%	58.6%
Irvine Ranch	3,455	0	1,124	30	4,609	32,257	34,876	92%	99.1%	99.5%	99.1%
DRWF Clear	1,911	0	0	-	1,911	15,617	15,831	99%	0.0%	na	na
DRWF Color	642	0	0	-	642	4,189	4,311	97%	0.0%	na	na
La Palma	131	0	0	1	132	896	1,056	85%	99.5%	68.4%	100.0%
Mesa Water (MW)	1,100	0	48	0	1,148	8,432	10,157	83%	100.0%	99.7%	85.6%
MW Clear	1,075	0	0	-	1,075	5,566	5,047	110%	0.0%	na	na
MW Color	25	0	0	-	25	2,245	3,125	72%	0.0%	na	na
Newport Beach	426	0	13	454	893	7,092	8,777	81%	48.4%	72.6%	70.3%
Orange	1,464	0	0	189	1,654	12,156	15,909	76%	88.5%	64.8%	71.5%
OCWD (GAP)	0	0	0	0	0	41	102	40%	100.0%	100.0%	100.0%
Santa Ana	1,336	1,192	11	1,192	2,539	17,186	19,992	86%	52.8%	59.3%	62.8%
Seal Beach	240	0	0	0	240	1,720	1,936	89%	100.0%	48.8%	58.5%
Serrano	19	0	0	121	140	1,109	1,677	66%	13.7%	42.5%	63.0%
Tustin	592	0	0	44	636	4,730	6,181	77%	93.1%	82.0%	69.9%
Westminster	536	258	0	258	794	5,323	6,213	86%	67.5%	74.9%	74.3%
Yorba Linda	562	271	0	541	1,102	8,378	11,378	74%	51.0%	61.8%	52.4%
SUBTOTAL:	19,178	2,638	1,225	5,585	25,988	185,060	223,292	83%	78.1%	77.1%	73.8%
Other Producers (Est ~3% of Subtotal)	709	na	0	4	713	4,782	5,589	86%			
TOTAL:	**19,887**	**2,638**	**1,225**	**5,588**	**26,701**	**189,842**	**228,881**		**78.1%**	**77.1%**	**73.8%**
OCWD (Talbert Barrier)	0	na	2,891	0	2,891	18,537	18,833				
OCSD (GAP)	na	na	64	na	64	491	366				

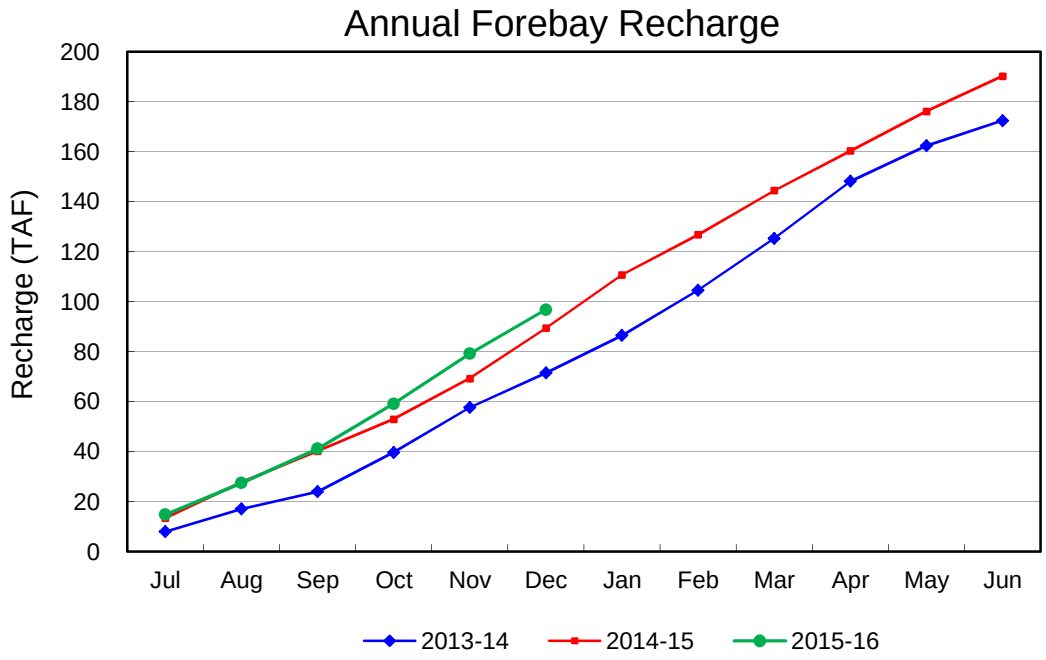
Estimated

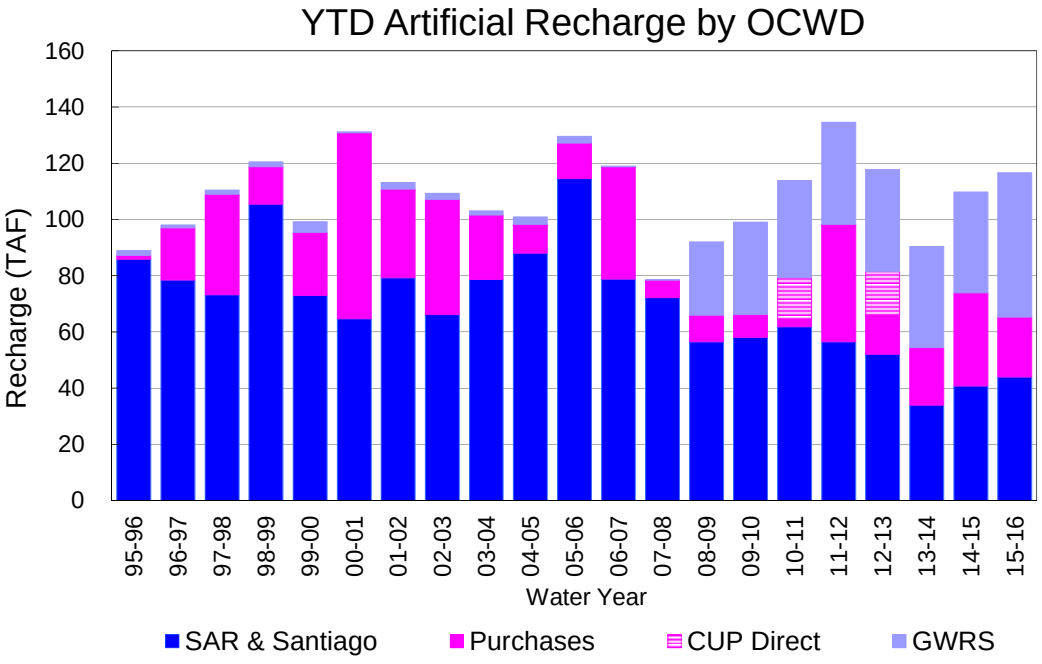
(1) Excludes MWD CUP Withdrawals

(2) Includes MWD CUP Withdrawals


Annual Groundwater Production
Production (TAF)
400
350
300
250
200
150
100
50
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
2013-14
2014-15
2015-16


YTD Total Demand in OCWD
Total Demand (TAF)
350
300
250
200
150
100
50
0
95-96
96-97
97-98
98-99
99-00
00-01
01-02
02-03
03-04
04-05
05-06
06-07
07-08
08-09
09-10
10-11
11-12
12-13
13-14
14-15
15-16
Water Year
Groundwater
MWD+OCWD In Lieu
CUP Withdrawals
Import
Recycled Water


Annual Forebay Recharge
Recharge (TAF)
200
180
160
140
120
100
80
60
40
20
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
2013-14
2014-15
2015-16


YTD Artificial Recharge by OCWD
Recharge (TAF)
160
140
120
100
80
60
40
20
0
95-96
96-97
97-98
98-99
99-00
00-01
01-02
02-03
03-04
04-05
05-06
06-07
07-08
08-09
09-10
10-11
11-12
12-13
13-14
14-15
15-16
Water Year
SAR & Santiago
Purchases
CUP Direct
GWRS

RECHARGE AREAS REPORT
December 2015

	Percolation (AF)	Remarks
RIVER SYSTEM	3,900	63 cfs avg perc
DESILTING SYSTEM	360	
OFF-RIVER SYSTEM	1,587	Includes Olive and 5Coves and Burris basins
WARNER SYSTEM	522	Includes Foster and Conrock basins
OLIVE BASIN	na	see off river system
ANAHEIM LAKE	1,777	OC-28 inflow
MINI-ANA LAKE	306	OC-28 inflow
MILLER BASIN	1,623	OC-28 inflow
KRAEMER BASIN	3,460	OC-28 inflow, GWR inflow
MIRA LOMA	2,482	GWR inflow
LA JOLLA BASIN	495	
PLACENTIA BASIN	0	
RAYMOND BASIN	160	
FIVE COVES BASIN	na	see off river system
BURRIS BASIN	517	
RIVER VIEW BASIN	0	
SANTIAGO BASINS	398	
SANTIAGO CREEK	0	
TOTALS	**17,587**	
5-YR AVERAGE	**15,288**	

FLOWS TO RECHARGE AREAS (AF)		
Imperial Headgates (estimated)		9,600
GWRS		5,745
OC-28 (MWD)		3,727
OC-28a (MWD)		0
CB-11		0
CB-18		0
Est'd local Forebay inflow below Imperial		70
Est'd local Santiago inflow (estimated)		61
Irvine lake releases (OC-13 MWD)		0
Villa Park Dam releases (estimated)		0
Precip at Warner Basin (inches)	0.68	
Precip direct to open water surfaces		40
TOTAL INFLOW		19,242

LOSSES FROM RECHARGE AREAS (AF)		
Est'd SAR flow past Chapman Ave.		0
Est'd Santiago Cr. flow to SAR		0
Est'd flows past Raymond Basin		0
Calc'd evap (inches) Estimated	0	
Est'd evaporative losses		0
TOTAL LOSSES		**0**

STORAGE CHANGES (AF)			
Facility	*Begin*	*End*	*Net*
Deep basins	5,601	5,331	-270
Santiago Pits	1,891	3,816	1,925
River			0
Off-river			0
Irvine Lake			
TOTAL	7,492	9,147	1,655

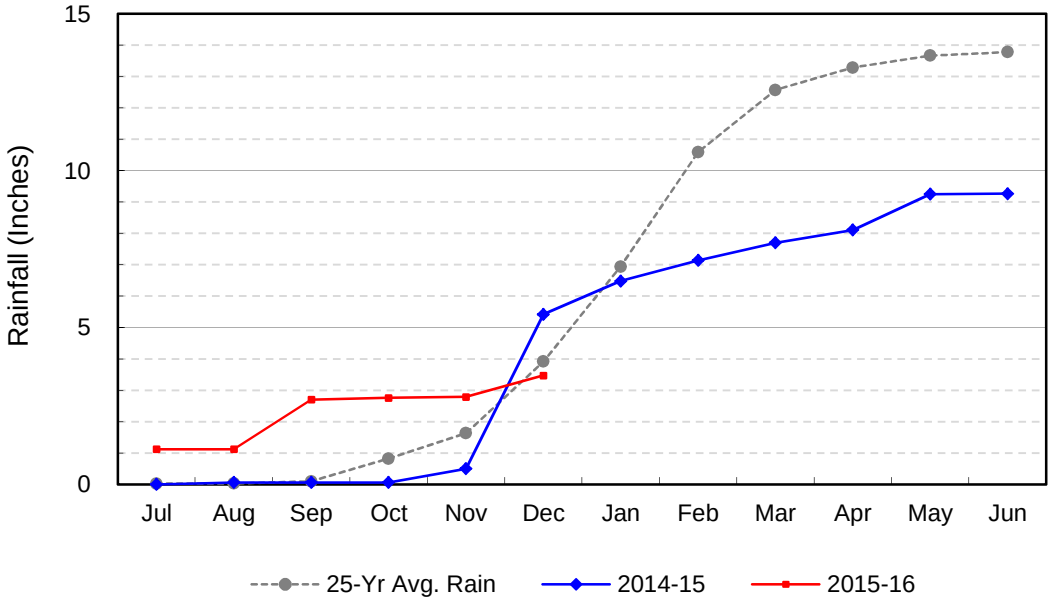
SUMMARY (AF)	
TOTAL INFLOW	19,242
TOTAL LOSSES	0
STORAGE CHANGE	1,655
CALC'D PERCOLATION	17,587

DEEP BASINS MONTHLY STATUS
December 2015

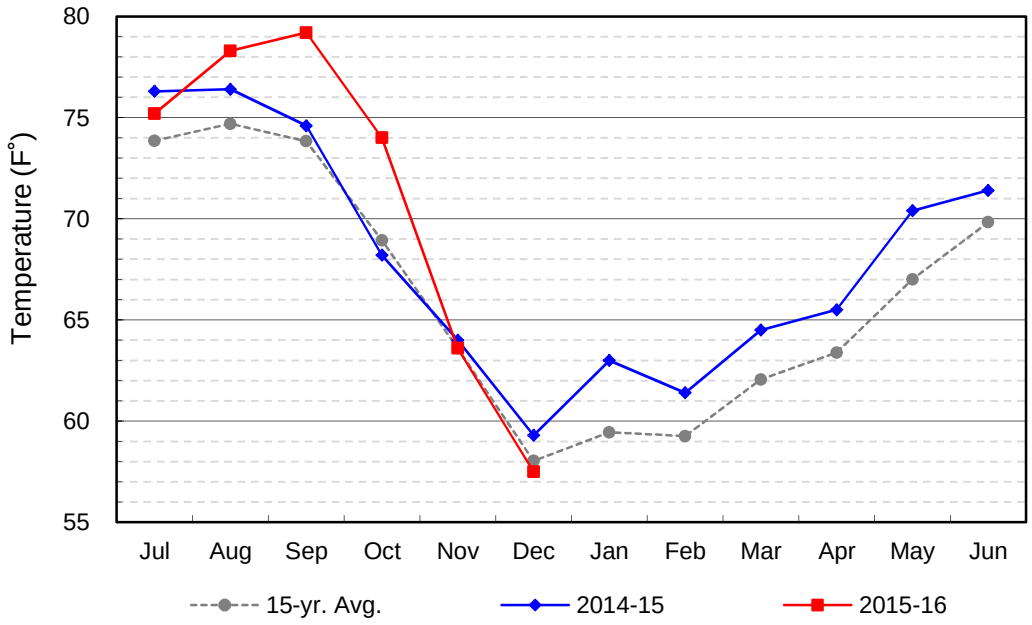
(values in acre-feet)

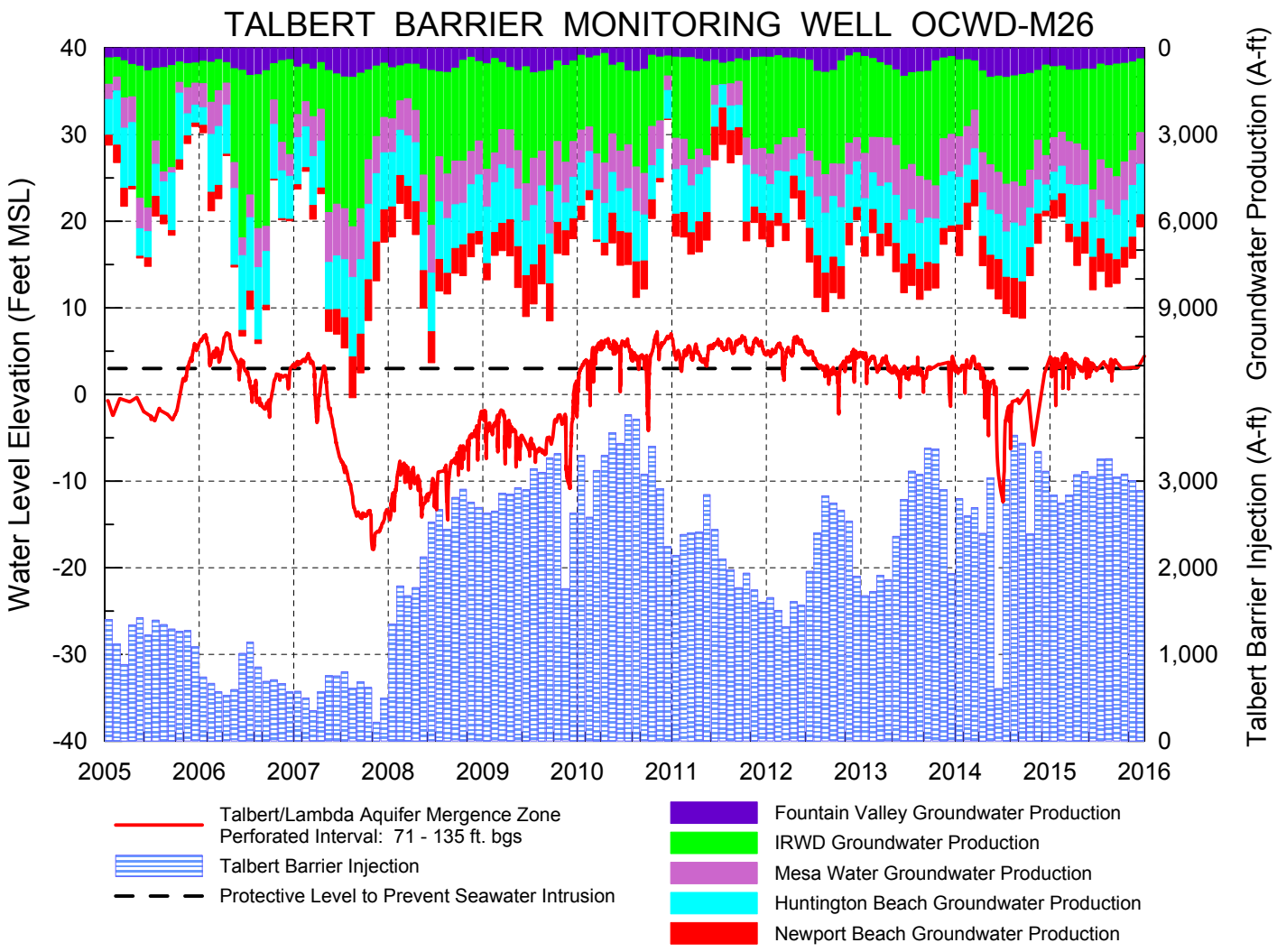
Facility	*Storage Start*	*Storage End*	*Maximum Storage*	*Total Perc*	*Max Perc*	*Avg Perc*	*Avg W.S. Elev*
Desilting Ponds	0	230	230	360	na	na	na
Fos-Huckleberry	526	529	630	na	na	na	na
Conrock Basin	553	557	660	na	na	na	na
Warner Basins	2,569	2,689	2,810	522	na	na	236
Olive Pit	0	0	183	na	na	na	na
Anaheim Lake	768	12	2,300	1,777	124	57	196
Mini-Anaheim Lk	7	3	21	306	na	na	222
Miller Basin	30	38	340	1,623	90	53	207
Kraemer Basin	286	178	1,050	3,460	177	112	185
Mira Loma	3	20	62	2,482	124	80	215
La Jolla Basin	12	7	36	495	36	16	202
Placentia Basin	0	0	350	0	na	na	na
Raymond Basin	0	0	370	160	na	na	na
Five Coves Basins	160	179	350	na	na	na	na
Burris Pit	688	890	2,670	517	40	17	153
River View Basin	0	0	12	0	na	na	na
Santiago (Bond)	861	2,783	8,690	398	na	na	214
Santiago (Blu Dia)	1,030	1,033	5,240	-	-	-	219
Totals	7,492	9,147	26,004	12,100			
Prado Dam	10	206	25,000				

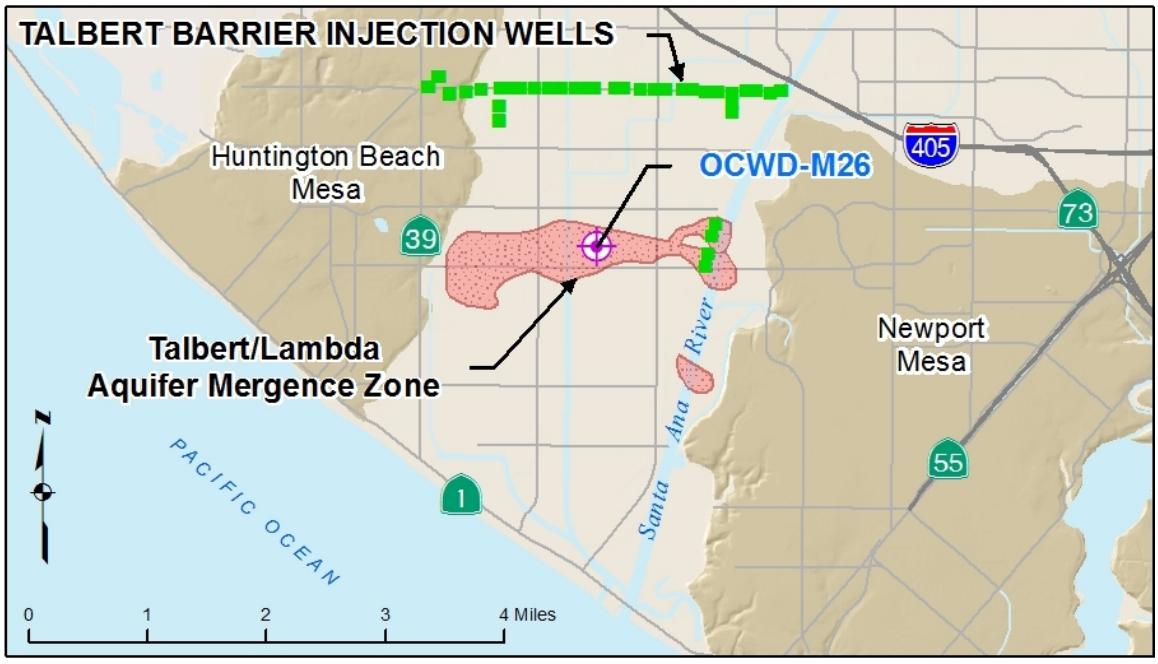
Cumulative Forebay Rainfall



Temperature at Santa Ana Fire Station




TALBERT BARRIER MONITORING WELL OCWD-M26
Water Level Elevation (Feet MSL)
Talbert Barrier Injection (A-ft) Groundwater Production (A-ft)
40
30
20
10
0
-10
-20
-30
-40
0
3,000
6,000
9,000
3,000
2,000
1,000
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Talbert/Lambda Aquifer Mergence Zone
Perforated Interval: 71 - 135 ft. bgs
Talbert Barrier Injection
Protective Level to Prevent Seawater Intrusion
Fountain Valley Groundwater Production
IRWD Groundwater Production
Mesa Water Groundwater Production
Huntington Beach Groundwater Production
Newport Beach Groundwater Production


TALBERT BARRIER INJECTION WELLS
Huntington Beach
Mesa
OCWD-M26
405
73
39
Talbert/Lambda
Aquifer Mergence Zone
Newport
Mesa
Santa Ana River
55
1
PACIFIC OCEAN
N
0
1
2
3
4 Miles

AGENDA ITEM SUBMITTAL

Meeting Date: January 13, 2016

To: Water Issues Committee
Board of Directors

From: Mike Markus

Staff Contact: M. Plumlee/J. Dadakis

Budgeted: To be included in FY16-17
Budgeted Amount: $80,000
Cost Estimate: $80,000
Funding Source: General Fund
Program/ Line Item No. TBD
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: POSTDOCTORAL RESEARCH ASSOCIATE FOR RESEARCH & DEVELOPMENT DEPARTMENT

SUMMARY

The Research & Development Department seeks to hire a Postdoctoral Research Associate in FY2016-17, pending budget approval, as a means to enrich and extend the District's applied research capabilities. The position would be a Limited-Term Contract position with benefits funded in part by the 2014 Lee Kwan Yew Water Prize (US $240,000 award). Staff has developed an initial list of potential applied research projects for the position that address District needs.

Attachment(s): Presentation

RECOMMENDATION

Informational

BACKGROUND/ANALYSIS

Introduction

The mission of the Research and Development (R&D) Department at OCWD is to conduct applied research that supports the District's operational, regulatory, and water quality objectives through innovation, technology evaluation, development of new or improved processes and methods, as well as collaboration with universities and topic experts.

A postdoctoral associateship or fellowship is a temporary research position held after a candidate has successfully completed their Doctoral (Ph.D.) degree, and is considered an extension of the associate's education. While not required, completion of a postdoctoral fellowship is common among those seeking an academic appointment (i.e., professorship) or a research career within private industry or the public sector. Such postdoctoral positions are customary at universities and national laboratories (e.g., Lawrence Livermore National Laboratory, Sandia National Laboratory), but other research-oriented institutions such as public agencies (e.g., Southern Nevada Water

Authority) also offer postdoctoral research positions. A Postdoctoral Research Associate would enrich and extend the District's capacity to conduct pertinent applied research, and at the same time provide real-world experience and training essential to a selected candidate's future career.

Timing

Recruitment for the position would begin in early 2016, such that the Postdoctoral Research Associate may begin their term in Summer 2016, coincident with the start of the OCWD 2016-17 Fiscal Year.

Term

The tenure of the Postdoctoral Research Associate position will be up to three years: an initial one-year appointment via a limited-term (at will) contract with the District, followed by up to two annual renewals contingent on satisfactory performance, availability of funds, and project life.

Funding

The position will be funded as a 50/50 cost share between the US$240,000 Lee Kuan Yew Water Prize, awarded to the District in 2014 by the Singapore government, and District funds. Additionally, OCWD seeks to identify external funding sources that could offset and/or extend both contributions (e.g., research grants such as the Water Research Foundation and WateReuse Research Foundation Tailored Collaboration programs).

The position is currently planned for inclusion within the District's FY16-17 Budget for the R&D Department at $80,000 to cover anticipated salary plus benefits. Subsequent Board approval for the hiring of a staff-recommended Postdoctoral Research Associate to a limited-term (at will) contract would be required.

Research Projects

The goals of any postdoctoral researcher are to publish innovative research in peer-reviewed scientific journals and to develop skills in key areas of interest. The OCWD Postdoctoral Research Associate will be directed to lead or support one or more key projects in the R&D Department, and may be involved with a number of projects.

The following initial list of potential research projects has been developed for the Postdoctoral Research Associate, with the final selection dependent on the background and interest of the candidate, as well as any supplemental funding and project-specific timing:

- Development of quantitative decision-making criteria regarding end-of-life for reverse osmosis (RO) membranes, including factors such as energy demand and water quality of the product permeate (e.g., breakthrough of contaminants).

- Evaluate the source and/or controlling factors for N-nitrosodimethylamine (NDMA) reformation in GWRS Advanced Water Purification Facility (AWPF) finished product water. NDMA is a disinfection byproduct and known carcinogen.

This project may include characterization of NDMA precursors that pass through RO membranes to an increasing degree as the membranes age, with the ultimate goal of minimizing NDMA occurrence in the final product water. [*Project recommended by GWRS Independent Advisory Panel]*

- Piloting/demonstration of Next Generation Sequencing (NGS) as a groundbreaking tool for advanced monitoring of microbial water quality through the GWRS AWPF. NGS involves rapid DNA sequencing coupled with metagenomics-based analysis of the genetic content of a water or biofilm sample for a more comprehensive look at microorganisms and genes present. Development of NGS techniques applied to recycled water may be able to help elucidate the mechanism(s) behind membrane biofouling, suggest mitigation and control measures, as well as further demonstrate the robustness of advanced treatment processes to control pathogen risk. *[Project recommended by GWRS Independent Advisory Panel]*

As a well-regarded institution that operates the world's largest potable reuse facility, supporting pilot test facilities, a world-class analytical laboratory, and associated chemical and microbial research laboratories, the District expects to attract strong postdoctoral candidates. The R&D department looks forward to this opportunity to collaborate on research with the selected candidate and pilot a program that, if successful, could be extended in the future.

PRIOR RELEVANT BOARD ACTION(S) N/A

R&D Department Postdoctoral Research Associate

Water Issues Committee

January 13, 2016

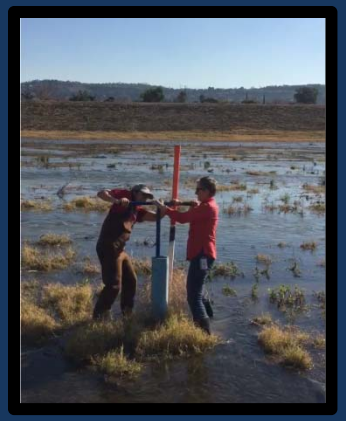
Outline

- R&D Department
  - Mission
  - Projects
  - Staff Resources
- Postdoctoral Research Associate
  - Purpose/goals
  - Potential projects
  - Timing and funding

Current R&D Mission and Partners

- **Conduct applied research that supports the District's objectives for water quality, operations, and compliance**
- **Develop new/improved processes/methods**
- **Evaluate technologies**
- **Collaborate with universities and topic experts**

Overview of Research Activities



- R&D Department formed in early 1980s
  - membrane biofouling, recharge enhancement, biological treatment
- Current focus includes
  - membrane studies, UV/AOP, recharge enhancement, metals mobilization, molecular microbial methods
  - Operational support for GWRS, recharge, and Main Lab

Example Projects

Technology piloting

- Used to select
  - Membranes (MF+RO)
  - Antiscalant & dose
- Research collaborations
  - MF fouling (CA Energy Comm./KJ)
  - Forward osmosis (CA Energy Comm. /Trevi)

AOP optimization

- UV/H_2O_2 (+ Cl_2)
- What operating conditions are most efficient for contaminant destruction?

Cartridge biofouling

- Operational support
- MF → Cartridge filter (CF) → RO
- Now flushing CFs after plant shutdowns

Example Projects

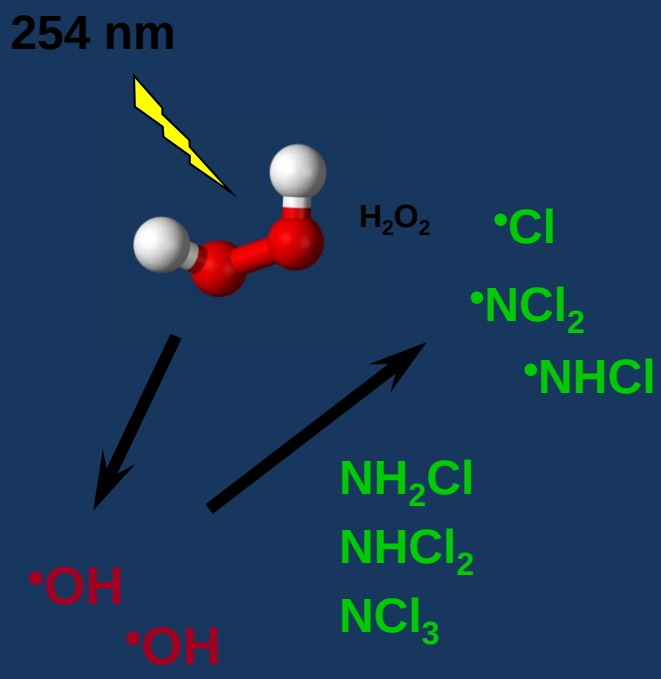
Technology piloting

- **Used to select**
  - **Membranes (MF+RO)**
  - **Antiscalant & dose**
- **Research collaborations**
  - **MF fouling (CA Energy Comm./KJ)**
  - **Forward osmosis (CA Energy Comm. /Trevi)**

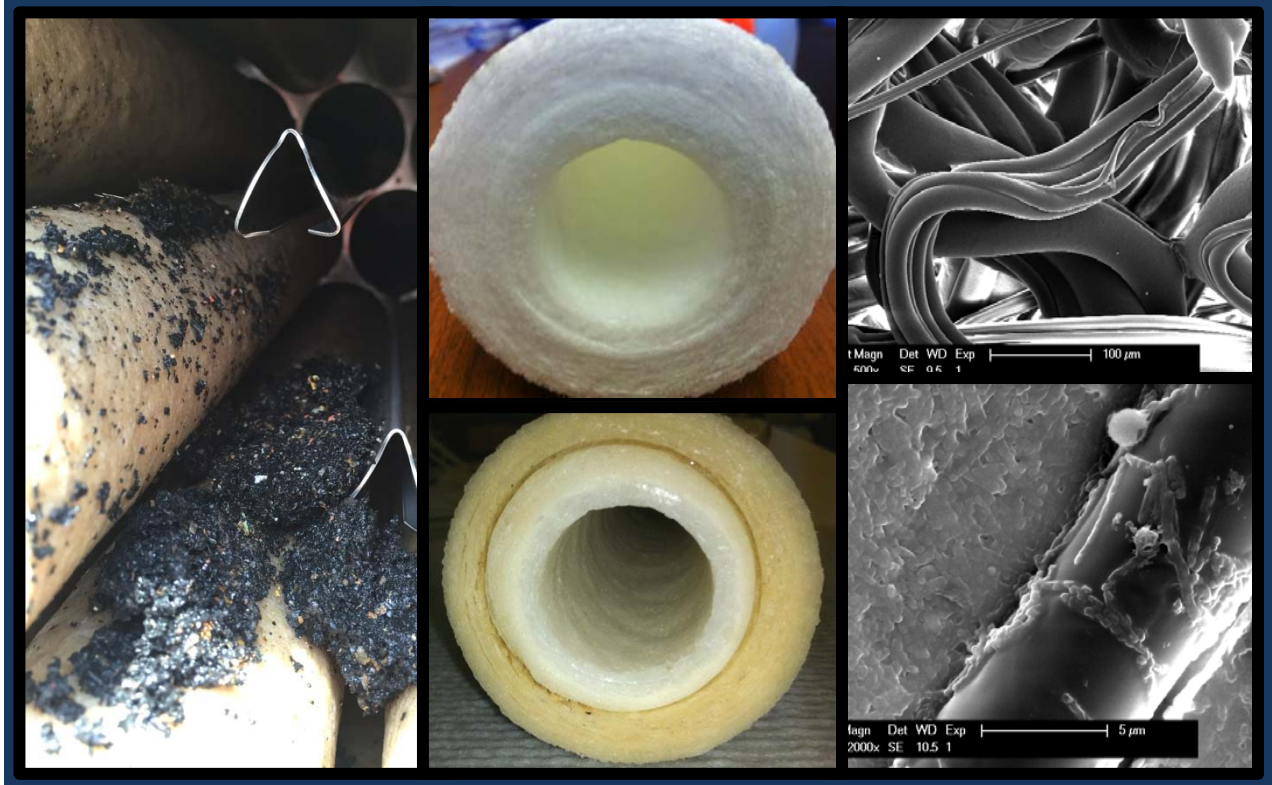
Example Projects

AOP optimization

- UV/H_2O_2 (+ Cl_2)
- What operating conditions are most efficient for contaminant destruction?



Example Projects



Cartridge biofouling

- Operational support
- MF → Cartridge filter (CF) → RO
- Now flushing CFs after plant shutdowns

Department Staff Resources

- 7 R&D Department full-time staff
  - FV R&D Building / Research Laboratory
  - Engineering Research Center (FV) for pilot testing
  - Field Research Laboratory (at FHQ in Anaheim)
- 3 to 4 interns
- Postdoctoral Research Associate, to be proposed in FY16-17 Budget

Postdoctoral Research

- Temporary research position after Doctoral (Ph.D.) degree obtained
- Common for those seeking academic or industry research career
- Customary at universities, also can be offered by public agencies

Why hire a postdoc?

- Enrich and extend the District's research capacity and expertise
- Complete meaningful research project relevant to the District
- Formally publish in peer-reviewed journal(s)

Potential Projects

- Projects under consideration include:
  - Decision-making framework for RO membrane end-of-life
  - Minimizing NDMA reformation in potable water reuse
  - Demonstrating advanced methods for microbial community profiling in potable water reuse
- Final project selection will depend on timing, funding, candidate expertise

Proposed Timing, Term, & Funding

- **Timing – Recruitment beginning ~ Feb ‘16; Start date in Summer 2016**
- **Term – Up to 3 years: an initial 1-year appt via limited term contract, with up to 2 annual renewals**
- **Cost – Estimate $80,000 (annual salary + benefits)**
- **Funding sources – 50/50 cost share between $240,000 Lee Kuan Yew Water Prize (Singapore, 2014) and District funds; pursuing other grants**
- **Requires subsequent Board approval for hiring agreement**

Questions

S A W P A

SANTA ANA WATERSHED PROJECT AUTHORITY
11615 Sterling Avenue, Riverside, California 92503 • (951) 354-4220

REGULAR COMMISSION MEETING
TUESDAY, JANUARY 19, 2016 – 9:30 A.M.

REVISED
AGENDA

1. CALL TO ORDER/PLEDGE OF ALLEGIANCE (Thomas P. Evans, Chair)

2. ROLL CALL

3. PUBLIC COMMENTS

Members of the public may address the Commission on items within the jurisdiction of the Commission; however, no action may be taken on an item not appearing on the agenda unless the action is otherwise authorized by Government Code §54954.2(b).

4. CONSENT CALENDAR

All matters listed on the Consent Calendar are considered routine and non-controversial and will be acted upon by the Commission by one motion as listed below.

A. APPROVAL OF MEETING MINUTES: JANUARY 5, 2016
Recommendation: Approve as posted.

5. NEW BUSINESS

A. ADDITIONAL SUPPLEMENTAL ENVIRONMENTAL PROJECT FUNDING FOR THE SAWPA SUCKER FISH HABITAT IMPROVEMENT PROJECT (CM#2016.3)
Presenter: Ian Achimore
Recommendation: Authorize staff to enter into an agreement to receive approximately $39,000 in Supplemental Environmental Project (SEP) funding from a Santa Ana Regional Water Board fine levied on the City of Norco.

B. INLAND EMPIRE BRINE LINE REACH 5 REHABILITATION AND IMPROVEMENT PROJECT (CM#2016.4)
Presenter: David Ruhl
Recommendation: Authorize the General Manager to approve:

1. Change Order 2 to Task Order VALI326-02 with Vali Cooper and Associates for additional Construction Management and Inspection services for the Inland Empire Brine Line Reach 5 Rehabilitation and Improvement Project for an amount not to exceed $562,344;
2. Change Order 1 to Task Order DUDK326-02 with Dudek for additional Engineering Services during Construction for the Inland Empire Brine Line Reach 5 Rehabilitation and Improvement Project for an amount not to exceed $64,420; and,
3. Change Order No. 2 to Work Order No. 2016-16 with Ramtech Laboratories for additional CIPP Laboratory testing for the Inland Empire Brine Line Reach 5 Rehabilitation and improvement Project for an amount not to exceed $53,428.

C. OCSD FACILITIES TOUR JOINT MEETING DISCUSSION
Presenter: Celeste Cantú
Recommendation: Discussion of February 2, 2016 OCSD Facilities Tour.

6. INFORMATIONAL REPORTS

Recommendation: Receive and file the following oral/written reports/updates.

A. CASH TRANSACTIONS REPORT – NOVEMBER 2015
Presenter: Karen Williams

B. INTER-FUND BORROWING – NOVEMBER 2015 (CM#2016.1)
Presenter: Karen Williams

C. PERFORMANCE INDICATORS/FINANCIAL REPORTING – NOVEMBER 2015 (CM#2016.2)
Presenter: Karen Williams

D. GENERAL MANAGER'S REPORT

E. SAWPA GENERAL MANAGERS MEETING NOTES
- January 12, 2016

F. CHAIR'S COMMENTS/REPORT

G. COMMISSIONERS' COMMENTS

H. COMMISSIONERS' REQUEST FOR FUTURE AGENDA ITEMS

7. CLOSED SESSION

A. CONFERENCE WITH LABOR NEGOTIATORS – PURSUANT TO GOVERNMENT CODE SECTION 54957.6

Agency Designated Representatives:	Thomas P. Evans, Commission Chair
	Ed Killgore, Commission Vice Chair
Unrepresented Employee:	General Manager

B. CONFERENCE WITH LEGAL COUNSEL – EXPOSURE TO LITIGATION – PURSUANT TO GOVERNMENT CODE SECTION 54956.9(d)(2)
Number of Potential Cases: Two

8. ADJOURNMENT

PLEASE NOTE:
Americans with Disabilities Act: Meeting rooms are wheelchair accessible. If you require any special disability related accommodations to participate in this meeting, please contact (951) 354-4220 or kberry@sawpa.org. 48-hour notification prior to the meeting will enable staff to make reasonable arrangements to ensure accessibility for this meeting. Requests should specify the nature of the disability and the type of accommodation requested.

Materials related to an item on this agenda submitted to the Commission after distribution of the agenda packet are available for public inspection during normal business hours at the SAWPA office, 11615 Sterling Avenue, Riverside, and available at www.sawpa.org, subject to staff's ability to post documents prior to the meeting.

Declaration of Posting

I, Kelly Berry, Clerk of the Board of the Santa Ana Watershed Project Authority declare that on Thursday, January 14, 2016, a copy of this agenda has been uploaded to the SAWPA website at www.sawpa.org and posted in SAWPA's office at 11615 Sterling Avenue, Riverside, California.

/s/

Kelly Berry, CMC

2016 - SAWPA Commission Meetings/Events

First and Third Tuesday of the Month

(NOTE: Unless otherwise noted, all Commission Workshops/Meetings begin at **9:30 a.m.**, and are held at SAWPA.)

January 1/5/16 Commission Workshop 1/19/16 Regular Commission Meeting	**February** 2/2/16 Commission Workshop–**OCSD Facilities Tour** 2/16/16 Regular Commission Meeting
March 3/1/16 Commission Workshop 3/15/16 Regular Commission Meeting	**April** 4/5/16 Commission Workshop 4/19/16 Regular Commission Meeting
May 5/3/16 Commission Workshop 5/3 – 5/6/16 ACWA Spring Conference, Monterey 5/17/16 Regular Commission Meeting	**June** 6/7/16 Commission Workshop 6/21/16 Regular Commission Meeting
July 7/5/16 Commission Workshop 7/19/16 Regular Commission Meeting	**August** 8/2/16 Commission Workshop 8/16/16 Regular Commission Meeting
September 9/6/16 Commission Workshop 9/20/16 Regular Commission Meeting	**October** 10/4/16 Commission Workshop 10/18/16 Regular Commission Meeting
November 11/1/16 Commission Workshop 11/29 – 12/2/16 ACWA Fall Conference, Anaheim 11/15/16 Regular Commission Meeting	**December** 12/6/16 Commission Workshop 12/20/16 Regular Commission Meeting

Draft Minutes
GROUNDWATER PRODUCERS MEETING
Sponsored by the
ORANGE COUNTY WATER DISTRICT
(714) 378-3200
Wednesday, January 13, 2016, 9:30 a.m.

Meeting held at the 18700 Ward Street Fountain Valley CA

1. Orange County well discharge encroachment permit fees

   The Orange County Flood Control representative could not attend so this item was deferred to February

2. State Board emergency drought regulations status

   Mike Markus gave a quick summary regarding the 4% conservation credit the Producers will receive with the GWRS based upon the SWRCB staff recommendation.

3. FY15-16 basin status; Consideration to raise BPP

   Significant discussion occurred regarding the status of the OCWD basin and if the BPP could be raised at this time. Ultimately it was decided to wait to determine what type of winter is experienced (wet or dry). An increase to the BPP could be contemplated this spring.

4. Future direction for GAP

   After reviewing all of the GAP issues there was general consensus to: (1) continue operating GAP; (2) charge GAP users the actual cost of making GAP water; (3) hiring a consultant to study and determine the best treatment option on supplying the GAP system; and (4) formally documenting the actual cost of GAP to be billed to the end users.

5. FY16-17 RA and BPP Projections

   OCWD provided and discussed preliminary RA and BPP numbers for FY2016-17. The RA and BPP projections provided for next year are "worst case". It was suggested that OCWD and the Producers should wait to determine what type of winter is experienced (wet or dry) before finalizing the budget numbers

6. Amend LBCWD 1993 MOU

   The proposed LBCWD agreement was reviewed. There were some questions but it appeared most of the Producers supported the agreement

7. Prado Dam Sediment demonstration project

Greg Woodside described the proposed demonstration project. There were some questions but it appeared most of the Producers supported the project.

8. Alternative Approaches for Integrated Regional Water Management

   Greg Woodside described the possible option of Orange County forming its own IRWM plan versus participating in the SAWPA plan.

9. Attendance at Producers Meetings

   Discussion occurred on the general desire to limit the meeting to only Producers. Paul Cook, David Schickling, Nabil Saba and Michael Moore were volunteered to develop a purpose statement for the Producers group which would be placed at the top of each Producers meeting agenda.

10. OCSD Monthly Flow report

    The report was distributed

11. Other

OCWD was requested to invite Jim Herberg to a future meeting regarding discharging contaminated water into the OCSD system.

12. Optional tour of GAP for those interested

A tour of the GAP treatment plant occurred.

The Producers' meetings are scheduled the second Wednesday of each month. The next regular monthly meeting is Wednesday, February 10, 2016 at 9:30 a.m.

ACTION AGENDA
COMMUNICATIONS AND LEGISLATIVE LIAISON COMMITTEE MEETING
Thursday, January 7, 2016

ROLL CALL	**ACTIONS**
Philip Anthony Jordan Brandman (not present) Dina Nguyen (not present) Roman Reyna Steve Sheldon (not present) **Alternates** Roger Yoh (not present) Shawn Dewane Jan Flory Denis Bilodeau Cathy Green	Quorum of Cte: Yes Quorum of Board: No
ITEMS RECEIVED TOO LATE TO BE AGENDIZED WATER REUSE TO ADD OCWD AS CO-SPONSOR LEGISLATION RECOMMENDATION: Change OCWD's position on WateReuse Association's proposed legislation to bottle advanced purified water for educational purposes from "support" to "co-sponsor" with WateReuse	Action taken Add item to Agenda Approved
CONSENT CALENDAR	
1. MINUTES OF COMMUNICATIONS AND LEGISLATIVE LIAISON COMMITTEE MEETING HELD NOVEMBER 5, 2015 RECOMMENDATION: Approve minutes as presented	Approved
MATTERS FOR CONSIDERATION	
2. FEDERAL LEGISLATIVE UPDATE RECOMMENDATION: Agendize for January 20 Board meeting: Take action as appropriate	Informational
3. STATE LEGISLATIVE UPDATE RECOMMENDATION: Agendize for January 20 Board meeting: Take action as appropriate	Informational
INFORMATIONAL ITEMS	
4. AWARDS UPDATE	Informational
5. PUBLIC AFFAIRS OUTREACH REPORT [NOV/DEC 2015]	Informational

ITEMS TO BE AGENDIZED ON THE CONSENT CALENDAR AT THE JANUARY 20 BOARD MEETING	Item Too Late to be Agendized
DIRECTOR'S ANNOUNCEMENTS/REPORTS	N/A
GENERAL MANAGER'S ANNOUNCEMENT/REPORT	N/A
ADJOURNMENT	8:50 am

ITEMS TO BE AGENDIZED ON THE CONSENT CALENDAR AT THE JANUARY 20 BOARD MEETING	Item Too Late to be Agendized
DIRECTOR'S ANNOUNCEMENTS/REPORTS	N/A
GENERAL MANAGER'S ANNOUNCEMENT/REPORT	N/A
ADJOURNMENT	8:50 am

ACTION AGENDA
GROUNDWATER REPLENISHMENT SYSTEM STEERING COMMITTEE
Monday, January 11, 2016

PLEDGE OF ALLEGIANCE	**ACTIONS**
ELECTION OF OFFICERS	Chair – Yoh (OCWD) Vice Chair – Nielsen (OCSD)
OCWD Committee Members Roger Yoh (Chair) Cathy Green Philip Anthony **OCWD Alternates** Denis Bilodeau Jordan Brandman Dina Nguyen **OCSD Committee Members** John Nielsen (Vice Chair) Tom Beamish Jim Ferryman **OCSD Alternates** Lucille Kring Greg Sebourn Steve Jones	Quorum of Cte: Yes Quorum of Board: Yes
1. MINUTES OF PREVIOUS MEETING RECOMMENDATION: Approve Minutes of the October 12, 2015 Board meeting	Approved
2. OCWD & OCSD JOINT RESOLUTION OF SUPPORT FOR THE MWD INDIRECT POTABLE REUSE PROJECT RECOMMENDATION: Agendize for the January 20 **OCWD** and January 27 **OCSD** Board meeting: Adopt resolution supporting the Metropolitan Water District efforts to implement an indirect potable reuse project with County Sanitation District No. 2 of Los Angeles County	Approved
3. JOINT SECURITY VULNERABILITY ASSESSMENT RECOMMENDATION: Agendize for the January 20 OCWD Board meeting: Authorize issuance of Agreement to Pinkerton for an amount not to exceed $15,000 for a joint security vulnerability assessment of the joint OCWD and OCSD Fountain Valley campus as a cost shared item between both agencies	Approved
INFORMATIONAL ITEMS	
4. GWRS OPERATIONS UPDATE	Informational
5. CHANGE POSITION TO CO-SPONSOR PROPOSED BILL TO BOTTLE ADVANCED PURIFIED WATER FOR EDUCATIONAL PURPOSES	Cte. Recommendation: Invite OCSD to co-sponsor proposed legislation to bottle GWRS water for ed. purposes

6. UPDATE ON SP-173 EFFLUENT REUSE STUDY	Informational
7. QUARTERLY OUTREACH REPORT [OCT – DEC 2015]	Informational
DIRECTORS' ANNOUNCEMENTS/REPORTS	
GENERAL MANAGERS' REPORT	
● Next GWRS meeting – April 11, 2016 @ 5:00 p.m.	
ADJOURNMENT	**5:35 p.m.**

ACTION AGENDA
WATER ISSUES COMMITTEE MEETING
Wednesday, January 13, 2016

ROLL CALL	**ACTIONS**
Denis Bilodeau (not present) Philip Anthony Dina Nguyen (not present) Shawn Dewane (not present) Roman Reyna (not present) <u>Alternates</u> Steve Sheldon Jan Flory (not present) Jordan Brandman (not present) Roger Yoh (not present) Cathy Green	Quorum of Cte: Yes Quorum of Board: No
ITEMS RECEIVED TOO LATE TO BE AGENDIZED	
VISITOR PARTICIPATION	
CONSENT CALENDAR (ITEMS NO. 1 – 6)	
1.MINUTES OF WATER ISSUES COMMITTEE MEETING HELD DECEMBER 9, 2015 RECOMMENDATION: Approve minutes as presented	Approved
2. ANNUAL SANTA ANA RIVER STREAM GAUGING JOINT FUNDING WITH THE UNITED STATES GEOLOGICAL SURVEY (USGS) RECOMMENDATION: Agendize for January 20 Board meeting: 1. Approve and authorize execution of Joint Funding Agreement with USGS to conduct stream gauging of the Santa Ana River below Prado Dam and Santiago Creek at Santa Ana for the period of November 1, 2015 to October 31, 2016; and 2. Authorize payment of $36,000 to the USGS for OCWD's share of costs for stream gauging services	Approved
3. OCWD PARTICIPATION IN COUNTY OF ORANGE ADOPT A CHANNEL PROGRAM RECOMMENDATION: Agendize for January 20 Board meeting: 1.Authorize participation in the OC Public Works Adopt A Channel program; 2. Approve and authorize execution of an Encroachment Permit application and a Certificate of Liability Insurance with OC Public Works, and 3. Approve and authorize issuance of Agreement with the Orange County Conservation Corps to conduct graffiti and trash removal for three years for a total expenditure of up to $55,800	Approved

4. AGREEMENTS FOR ON-CALL ENVIRONMENTAL SERVICES RECOMMENDATION: Agendize for January 20 Board meeting: 1.Authorize renewal of existing Agreements for on-call environmental analysis services with Bonterra Psomas Consulting and Environmental Advisors for an additional term of three years, extending the termination date to August 31, 2019; and 2. Approve and authorize execution of Agreement with Environmental Science Associates for on-call environmental analysis services with a termination date of August 31, 2019	Approved
5. REQUEST FOR PROPOSALS FOR CONROCK-WARNER TRANSFER TUBE DESIGN SERVICES RECOMMENDATION: Agendize for January 20 Board meeting: Authorize issuance of Request for Proposals for the Conrock-Warner Transfer Tube Project Design	Approved
6. REQUEST FOR PROPOSALS FOR CENTER LEVEE CORRUGATED METAL PIPE (CMP) TRANSFER PIPES REPAIR PROJECT DESIGN SERVICES RECOMMENDATION: Agendize for January 20 Board meeting: Authorize issuance of Request for Proposals for Center Levee CMP Transfer Pipes Repair Project Design Services	Approved
MATTERS FOR CONSIDERATION	
7. PRADO BASIN SEDIMENT MANAGEMENT DEMONSTRATION PROJECT: CERTIFICATION OF ENVIRONMENTAL IMPACT REPORT AND APPROVAL OF PROJECT RECOMMENDATION: Agendize for January 20 Board meeting: Adopt Resolution approving the Prado Basin Sediment Management Demonstration Project which includes the following items: • Certifying the Final Environmental Impact Report for the Project; • Adopting the Findings of Fact and Statement of Overriding Consideration and the Mitigation Monitoring Reporting Program; • Approve the Project and establish the Project budget of $3,898,000; • Authorizing staff to complete the permitting process with the Army Corps of Engineers and the resource agencies, execute the permits received for the Project from the Army Corps of Engineers and the resource agencies, and prepare and implement the Habitat Management Program for the Project; Authorizing issuance of Notice Inviting Bids for sediment removal; and • Authorizing filing of Notice of Determination	Approved Agendize as a Matter for Consideration

8. LAGUNA BEACH COUNTY WATER DISTRICT AGREEMENT RECOMMENDATION: Agendize for January 20 Board meeting: 1. Approve and authorize execution of Agreement with the Laguna Beach County Water District to allow the extraction of 2,025 acre-feet of water from the OCWD basin; and 2. Authorize staff to file a California Environmental Quality Act Notice of Exemption	Approved Agendize as a Matter for Consideration
9. NOTIFICATION TO DEPARTMENT OF WATER RESOURCES (DWR) TO EXPLORE BULLETIN 118 BASIN BOUNDARY MODIFICATIONS RECOMMENDATION: Agendize for January 20 Board meeting: Authorize staff to notify DWR and local agencies of its decision to explore scientific boundary modifications to Bulletin 118, Basin 8-1, Coastal Plain of Orange County Groundwater Basin	Approved
INFORMATIONAL ITEMS	
10. POSTDOCTORAL RESEARCH ASSOCIATE FOR RESEARCH & DEVELOPMENT DEPARTMENT	Informational
11. SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA): COMPLIANCE OPTIONS UPDATE #2	Informational
CHAIR DIRECTION AS TO WHICH ITEMS IF ANY TO BE AGENDIZED AS A MATTER FOR CONSIDERATION AT THE JANUARY 20 BOARD MEETING	Items No. 7 & 8
DIRECTORS' ANNOUNCEMENTS/REPORTS	
GENERAL MANAGER'S ANNOUNCEMENTS/REPORTS	
ADJOURNMENT	9:15 am

ACTION AGENDA
ADMINISTRATION/FINANCE ISSUES COMMITTEE MEETING
Thursday, January 14, 2016

ROLL CALL	**ACTIONS**
Shawn Dewane Jan Flory (not present) Roger Yoh (not present) Dina Nguyen (not present) Denis Bilodeau (arrived 8:20 a.m.) <u>Alternates</u> Steve Sheldon (not present) Philip Anthony Roman Reyna (arrived 9:00 a.m.) Jordan Brandman (not present) Cathy Green	Quorum of Cte: Yes Quorum of Board: No
ITEMS RECEIVED TOO LATE TO BE AGENDIZED	
VISITOR PARTICIPATION	
CONSENT CALENDAR (ITEMS NOS. 1 – 4)	
1. MINUTES OF ADMINISTRATION/FINANCE ISSUES COMMITTEE MEETING HELD DECEMBER 10, 2015 RECOMMENDATION: Approve minutes as presented	Approved
2. MONTHLY CASH CONTROL REPORT RECOMMENDATION: Agendize for January 20 Board meeting: Receive and file Summary Cash and Cash Equivalents Control Report dated December 31, 2015	Approved
3. RENEWAL OF LICENSE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR GWRS SOUTHEAST BARRIER PIPELINE AND GREEN ACRES PROJECT PIPELINE RECOMMENDATION: Agendize for January 20 Board meeting: 1. Authorize renewal of SCE License Contract No. 9.4068 formerly Contract No. L2110 required for the Green Acres Project pipeline for a five-year period commencing February 1, 2016 for a total fee of $99,218; and 2. Authorize renewal of SCE License Contract No. 9.4172 formerly Contract No. L3272 required for the Southeast Barrier Pipeline for a five-year period commencing October 1, 2016 for a total fee of $59,835	Approved
4. LIMITED-TERM EMPLOYMENT AGREEMENT FOR ASSISTANT HYDROGEOLOGIST RECOMMENDATION: Agendize for January 20 Board meeting: Approve and authorize execution of Limited-Term Employment Agreement for Assistant Hydrogeologist Brendan Neel for a one-year period commencing January 21, 2016	Approved

MATTERS FOR CONSIDERATION	
5. INVESTMENT PORTFOLIO HOLDINGS REPORTS RECOMMENDATION: Agendize for January 20 Board meeting: Receive and file the Investment Portfolio Holdings Reports dated December 31, 2015	Approved
6. REVISED DISTRICT RESERVE POLICY RECOMMENDATION: Agendize for January 20 Board meeting: Adopt revised District Reserve Policy	Approved
7. AGREEMENT TO AUTOSCRIBE INFORMATICS FOR LABORATORY INFORMATION MANAGEMENT SYSTEM (LIMS) IMPLEMENTATION RECOMMENDATION: Agendize for January 20 Board meeting: 1. Authorize increase 2015/2016 Capital Improvement Budget line item C15001 by $221,000 to $721,000; and 2. Approve and authorize issuance of Agreement to Autoscribe Informatics for an amount not to exceed $621,494 for the acquisition of the Autoscribe Matrix Gemini Laboratory Information Management System software and related implementation services	Approved
8. BASIN PRODUCTION PERCENTAGE AND REPLENISHMENT ASSESSMENT ESTIMATES FOR FISCAL YEAR 2016-17 RECOMMENDATION: Agendize for January 20 Board meeting: Provide the Fiscal Year 2016-17 Replenishment Assessment and Basin Production Percentage estimates to the Groundwater Producers along with any additional Board comments	Approved
INFORMATIONAL ITEMS	
9. EMPLOYMENT STATUS REPORT	Informational
10. MONTHLY CASH DISBURSEMENTS DETAIL REPORT	Informational
ITEMS TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE JANUARY 20 BOARD MEETING	
DIRECTOR'S ANNOUNCEMENTS/REPORTS	
GENERAL MANAGER'S ANNOUNCEMENT/REPORT	
ADJOURNMENT	**9:10 a.m.**