

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

March 11, 2019

PLEDGE OF ALLEGIANCE

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

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

NOTICE

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

COMMUNICATIONS TO THE BOARD

1. A. Written:
- B. Oral:
2. ITEMS RECEIVED TOO LATE TO BE AGENDIZED
 Recommendation: Determine the need to discuss and/or take immediate action on item(s).

PUBLIC HEARING

3. EVALUATING A CHANGE IN THE ELECTIONS PROCESS FOR THE
IRVINE RANCH WATER DISTRICT BOARD OF DIRECTORS AND
ESTABLISHING DIVISION BOUNDARIES
 - A. Declare the Board meeting to be the time and place for the third public hearing since the drafting and publication of draft maps;
 - B. Announce the hearing was noticed by publication;
 - C. Receive and file the Affidavits of Posting and Proof of Publications;
 - D. Request legal counsel to describe the nature of the proceedings, and purpose;
 - E. Open the hearing to solicit and accept comments on the proposed move to by-division elections;
 - F. Request that the Government Relations Officer provide a report to the Board regarding the draft division maps and on any written comments received;

PUBLIC HEARING (CONTINUED)

- G. Inquire whether there is any person present who wishes to provide comments;
- H. Inquire whether there are any comments or questions from the members of the Board; and
- I. Request that the Board close the Public Hearing and take one of the following actions:
 - 1) That the Board agendize an additional public hearing for April 8, 2019, for the Board of Directors to consider final action on a transition to by-division elections, and to consider adoption of a final map of division boundaries based on map ___ (*a, a-1, b, b-1, c, c-1, d, d-1, or e*), and a sequence of elections with the election for division numbers ___ and ___ (*1, 2, 3, 4, or 5*) to be held in 2020 and the election for division numbers ____, ___ and ___ (*1, 2, 3, 4, or 5*) to be held in 2022, or
 - 2) That the Board revise the draft map(s) or develop additional map(s), and agendize an additional public hearing for April 8, 2019, for the Board of Directors to solicit and accept comment on the proposed move to by-division elections, the composition of divisions, draft division maps, and sequence of elections.

CONSENT CALENDAR

Resolution No. 2019-8

Items 4-10

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

Recommendation: That the Board ratify/approve the meetings and events for Mary Aileen Matheis, Doug Reinhart, Steve LaMar, Doug Reinhart, Peer Swan and John Withers, as described.

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the February 11, 2019 Regular Board meeting be approved as presented.

CONSENT CALENDAR (Continued)

Resolution No. 2019-8

Items 4-10

6. SERRANO SUMMIT / LENNAR PROMISSORY NOTE REQUEST TO EXTEND MATURITY

Recommendation: That the Board authorize the General Manager to execute an amendment to the current promissory note between IRWD and Lennar Homes of California for an eight-month extension to April 30, 2020, at the current interest rate of 4.00%, to be applicable to both the principal and accrued interest amount as of September 1, 2019, without changing any other terms of the existing note.

7. SERRANO SUMMIT / CITY OF LAKE FOREST CIVIC CENTER SITE CONSTRUCTION SUPPORT SERVICES VARIANCE REQUEST NO. 5

Recommendation: That the Board authorize the General Manager to execute Variance No. 5 to the Professional Services Agreement with Michael Baker International for \$99,180 to provide remaining construction support services.

8. ANNUAL ORACLE SOFTWARE MAINTENANCE AND SUPPORT AGREEMENT RENEWAL

Recommendation: That the Board authorize the General Manager to approve renewal of the annual Oracle software maintenance and support agreements and additional licenses and support in the amount of \$1,121,000 for FY 2019-20 and \$969,000 for FY 2020-21.

9. REVISED IRWD REAL ESTATE INVESTMENT POLICY

Recommendation: That the Board adopt a resolution rescinding Resolution No. 2017-9 and adopting a revised IRWD Real Estate Investment Policy.

Reso. No. 2019-

10. JANUARY 2019 TREASURY REPORTS

Recommendation: That the Board receive and file the Treasurer's Investment Summary Report, the Summary of Fixed and Variable Rate Debt, and Disclosure Report of Reimbursements to Board Members and Staff; approve the January 2019 Summary of Payroll ACH payments in the total amount of \$1,924,211 and approve the January 2019 accounts payable Disbursement Summary of warrants 394725 through 395759 Workers' Compensation distributions, wire transfers, payroll withholding distributions and voided checks in the total amount of \$30,438,893.

ACTION CALENDAR - Continued

11. SAN JOAQUIN RESERVOIR FILTRATION BUDGET ADDITION AND CONSULTANT SELECTION

Recommendation: That the Board authorize the addition of San Joaquin Reservoir Filtration, Project 10379, to the FY 2018-19 Capital Budget in the amount of \$3,654,000; and authorize the General Manager to execute a Professional Services Agreement with Carollo Engineers in the amount of \$634,888 for engineering design services for the San Joaquin Reservoir Filtration, Project 10379.

12. SUSTAINABLE GROUNDWATER MANAGEMENT ACT COMPLIANCE FOR IRWD'S KERN COUNTY WATER BANKING FACILITIES

Recommendation: That the Board authorize the General Manager to execute the Memorandum of Agreement - Sustainable Groundwater Management Act Agreement with Rosedale-Rio Bravo Water Storage District and to execute the Groundwater Sustainability Planning Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District, subject to non-substantive changes approved by legal counsel.

13. DRAFT TERMS FOR A ONE-YEAR RECHARGE PROGRAM WITH BUEANA VISTA WATER STORAGE DISTRICT

Recommendation: That the Board authorize the General Manager to execute a letter agreement with Buena Vista Water Storage District based on the proposed draft terms for a one-year recharge program for 2019 to augment recharge on the Strand Ranch by utilizing the Stockdale West recharge basins, subject to substantive changes approved by the Supply Reliability Programs Committee.

14. DRAFT TERMS FOR A 4-FOR-1 PILOT EXCHANGE PROGRAM WITH MOJAVE WATER AGENCY

Recommendation: That the Board authorize the General Manager to execute a 4-for-1 pilot exchange letter agreement as well as a side agreement to compensate Mojave Water Agency for the water delivered into storage that incorporate the proposed exchange and compensation terms, both subject to substantive changes approved by the Supply Reliability Programs Committee.

OTHER BUSINESS

Pursuant to Government Code Section 54954.2, members of the Board of Directors or staff may ask questions for clarification, make brief announcements, and make brief reports on his/her own activities. The Board or a Board member may provide a reference to staff or other resources for factual information, request staff to report back at a subsequent meeting concerning any matter, or direct staff to place a matter of business on a future agenda. Such matters may be brought up under the General Manager's Report or Directors' Comments.

15. General Manager's Report
16. Directors' Comments
17. Receive oral update(s) from District liaison(s) regarding communities within IRWD's service area and provide information on relevant community events.
18. CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL — EXISTING LITIGATION - Pursuant to Government Code Section 54956.9(d)(1): *SCADA and Control Systems, Inc. v. Delta Systems Engineering, LLC, et al.*, Case No. 30-2018-01039707-CU-BC-CJC.
19. CLOSED SESSION CONFERENCE WITH LEGAL COUNSEL — EXISTING LITIGATION - Pursuant to Government Code Section 54956.9(d)(1): *Filanc-Balfour Beatty, JV v. IRWD*, Case No. 30-2019-01048770-CU-BC-CXC
20. Open Session
21. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Irvine Ranch Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Board Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance to the Board of Directors Room of the District Office. The Irvine Ranch Water District Board Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5300 during business hours at least seventy-two (72) hours prior to the scheduled meeting. This agenda can be obtained in alternative format upon written request to the District Secretary at least seventy-two (72) hours prior to the scheduled meeting.

March 11, 2019
Prepared and
submitted by: C. Compton
Approved by: Paul A. Cook 

PUBLIC HEARING

EVALUATING A CHANGE IN THE ELECTIONS PROCESS FOR THE IRVINE RANCH WATER DISTRICT BOARD OF DIRECTORS AND ESTABLISHING DIVISION BOUNDARIES

SUMMARY:

Pursuant to Water Code section 35180, IRWD uses an at-large method to elect the members of its Board of Directors. The at-large method allows for voters from the entire service area to elect each of the five members of the Board of Directors. The California Voting Rights Act favors a by-division method of election instead of an at-large method of election for electing members of local government governing bodies. A by-division method divides a service area into separate divisions and allows the voters from each division, as opposed to voters from the entire service area, to elect a member of the Board of Directors. In a by-division method of election, the elected individual serves as the division's representative on the board and must reside in that division.

Since 2017, Elections Code section 10650 has authorized special districts such as IRWD to move from an at-large method of election to a by-division method of election in furtherance of the purposes of the California Voting Rights Act. Elections Code section 10010 governs the process for evaluating and transitioning to a by-division method of election. The first step in initiating the process is the adoption of a resolution of "Intent to Initiate the Process of Establishing Divisions and Elections by Divisions." The IRWD Board of Directors adopted a resolution of "Intent to Initiate the Process of Establishing Divisions and Elections by Divisions" on April 2, 2018. The next steps involved a series of public hearings.

Pursuant to Elections Code section 10010, an additional public hearing, the third public hearing since the drafting and publication of draft maps, is now being held on March 11, 2019 after the drawing of draft maps. The first hearing after the drawing of draft maps was held on December 10, 2018. The second hearing after the drawing of draft maps was held on January 14, 2019. The purpose of both of these hearings, and the current hearing, is to invite and solicit public comments on the draft division maps, which have been published by the District on its website, and the potential sequence of elections for the directors from each division at different times to provide for staggered terms of office.

RECOMMENDED HEARING PROCEDURE:

President: Declare the Board meeting of March 11, 2019, to be the time and place for a hearing on evaluating a change in the elections process for the Irvine Ranch Water District Board of Directors and establishing division boundaries, and ask the Board Secretary to announce how the hearing was noticed.

Public Hearing: Evaluating a Change in the Elections Process for the Irvine Ranch Water District Board of Directors and Establishing Division Boundaries

March 11, 2019

Page 2

- Board Secretary: Announce that the hearing was noticed by publication in the *Orange County Register* on Sunday, February 24, 2019; by publication in Spanish in the *Excelsior Unidos* on Friday, February 22, 2019; by publication in Korean in the *Korea Times* on Saturday, February 23, 2019; by publication in English and Traditional Chinese in the *World Journal* on Saturday, February 23, 2019, and Sunday, February 24, 2019; by publication in Farsi in *Hafteh Bazaar* on Friday, February 22, 2019; by electronic posting in English, Farsi, Korean, Traditional Chinese, and Spanish on the IRWD website, through which the notice can be translated into approximately 20 languages; and by physical posting at IRWD's headquarters. Announce that four additional draft maps — Map A-1, Map B-1, Map C-1, Map D-1 and Map E — were published on IRWD's website on February 15, 2019. The Board Secretary presents affidavits of posting and proof of publication to the Board related to the hearing.
- Board of Directors: The Board of Directors receives and files the affidavits of posting and proof of publication as presented by the Board Secretary.
- President: Request legal counsel to describe the nature of the proceedings, and to explain the purpose of the hearing.
- Legal Counsel: Describe the nature of the proceedings, and explain the purpose of the hearing as being the opportunity to invite and solicit public comment on the draft division maps, which have been published by the District on its website at least seven days prior to the hearing, and the potential sequence of elections for the directors from each division at different times to provide for staggered terms of office.
- Board of Directors: Open the hearing by taking the following recommended action:
- RECOMMENDED MOTION: THAT THE PUBLIC HEARING BE OPENED TO SOLICIT AND ACCEPT COMMENT ON THE PROPOSED MOVE TO BY-DIVISION ELECTIONS, THE COMPOSITION OF DIVISIONS, THE DRAFT DIVISION MAPS, AND SEQUENCE OF ELECTIONS.**
- President: Request that the Government Relations Officer provide a report to the Board regarding the draft division maps, and on any written comments received.
- Government Relations Officer: Provide a report to the Board regarding the draft division maps, and on any written comments received.

President: Inquire whether there is any person present who wishes to provide comments on the proposed move to by-division elections, the composition of divisions, the draft maps, and the sequence of elections.

Inquire whether there are any comments or questions from members of the Board of Directors. After comments or questions, state that the hearing will be closed.

Board of Directors: Close the hearing. Take one of the following recommended actions:

RECOMMENDED MOTION: THAT THIS PUBLIC HEARING BE CLOSED AND THAT THE BOARD AUTHORIZE STAFF TO AGENDIZE AN ADDITIONAL PUBLIC HEARING FOR APRIL 8, 2019, FOR THE BOARD OF DIRECTORS TO CONSIDER FINAL ACTION ON A TRANSITION TO BY-DIVISION ELECTIONS, AND TO CONSIDER ADOPTION OF A FINAL MAP OF DIVISION BOUNDARIES BASED ON MAP ___ (A, A-1, B, B-1, C, C-1, D, D-1, OR E), AND A SEQUENCE OF ELECTIONS WITH THE ELECTION FOR DIVISION NUMBERS ___ AND ___ (1, 2, 3, 4, OR 5) TO BE HELD IN 2020 AND THE ELECTION FOR DIVISION NUMBERS ____, ___ AND ___ (1, 2, 3, 4, OR 5) TO BE HELD IN 2022.

OR

RECOMMENDED MOTION: THAT THIS PUBLIC HEARING BE CLOSED, AND THAT THE BOARD AUTHORIZE STAFF TO REVISE THE DRAFT MAP(S) OR DEVELOP ADDITIONAL MAP(S), AND AGENDIZE AN ADDITIONAL PUBLIC HEARING FOR APRIL 8, 2019, FOR THE BOARD OF DIRECTORS TO SOLICIT AND ACCEPT COMMENT ON THE PROPOSED MOVE TO BY-DIVISION ELECTIONS, THE COMPOSITION OF DIVISIONS, DRAFT DIVISION MAPS, AND SEQUENCE OF ELECTIONS.

BACKGROUND:

In 2002, Governor Gray Davis signed the California Voting Rights Act (CVRA) into law. The CVRA states that an at-large method of election may not be used to elect local governing boards if it “impairs the ability of a protected class to elect candidates of its choice or its ability to influence the outcome of an election.” (Elections Code §14027)

A violation of the CVRA may be established if it is shown that racially polarized voting, combined with an at-large voting system, impairs the ability of a protected class of voters to elect candidates of its choice or to influence the outcome of an election. (Elections Code §14028(a)) Under the CVRA, “racially polarized voting” means voting in which there is a difference between the choice of candidates or other electoral choices that are preferred by voters in a

protected class, and in the choice of candidates and electoral choices that are preferred by voters in the rest of the electorate. (Elections Code §14026(e))

As of the writing of this report, IRWD has not been presented with any evidence of racially polarized voting in its elections, but many local governments have had their at-large method of election challenged under the CVRA. Additionally, many local governments have voluntarily moved to a by-division method of election because it is the only election method not vulnerable to a challenge under the CVRA.

Statutorily Mandated Process for Evaluating a By-Division Method of Election:

While the current at-large method of election used by IRWD pursuant to Water Code section 35180 has served the District's customers and constituents well, Elections Code section 10650 allows the board of a special district, like IRWD, to move from an at-large method of election to a by-division method of election in furtherance of the purposes of the CVRA.

Elections Code section 10010 provides the process for evaluating divisions and a transition to by-division elections. That process requires, at a minimum, that a special district:

- Adopt a resolution of intent to change the election system;
- Hold at least four public hearings to discuss division maps and the sequence of the division elections;
 - The first and second hearings must be held within 30 days of each other and the public is invited to provide input regarding the composition of the divisions and sequence of elections;
 - After draft division maps are drawn, one or more proposed maps are published at least seven days before the third hearing. Any further revisions to the proposed map(s) would be published at least seven days before being adopted; and
 - The third and fourth public hearings are held within 45 days of each other; and
- Hold at least one more public hearing at which it considers final action to transition to by-division elections and considers adoption of a final map of division boundaries.

Legally Required Factors Considered When Evaluating Division Boundaries:

While a number of federal and state laws govern the drawing of division boundaries, the U.S. Constitution establishes the fundamental principle which governs the drawing of division boundaries. Above all else, the Constitution requires that divisions be equal, or nearly equal, in total population. Federal courts have ruled that this means that the population difference between the most and least populous divisions may not exceed ten percent. California Elections

Code section 22000 further suggests that divisions should be drawn to be, “as far as practicable, equal in population” using the population numbers from the last federal decennial census.

Provided that the equality in population, based on the last decennial census, requirement is met, the Elections Code also allows for consideration of: 1) topography, 2) geography, 3) cohesiveness, contiguity, integrity, and compactness of territory, and 4) communities of interests of the division when determining where division boundaries are placed.

IRWD Process to Evaluate Establishment of Divisions and Elections by Divisions:

On April 2, 2018, the IRWD Board of Director adopted a resolution of “Intent to Initiate the Process of Establishing Divisions and Elections by Divisions.” In its adoption of the resolution, the Board determined that the public interest was best served by initiating the process to evaluate divisions and a transition to by-division elections. The Board authorized the General Manager, or his designee, to initiate a public evaluation process that complies with Elections Code section 10010, and encourages and allows for full public participation, careful consideration and input into an evaluation of divisions and a transition to by-division elections within IRWD.

The first step in the District’s evaluation process was the release of data related to the population characteristics of the IRWD’s service area. That data was presented to the Board during a Board workshop on May 14, 2018. Attached as Exhibit “A” is a copy of the summary of “Existing Conditions for Irvine Ranch Water District” provided to the Board.

The second step in the District’s evaluation process was to hold two public hearings, which were held on June 4 and June 18. These hearings were conducted before the drawing of a draft map or maps of proposed division boundaries. The purpose of the hearings was to invite and solicit public comment on the proposed move to by-division elections, the composition of divisions and the sequence of elections prior to the drawing of draft maps.

The third step in the District’s evaluation process was for the Board to discuss criteria to be used by the District when drawing proposed director division boundaries. The criteria was discussed at a Board Workshop held on August 13, 2018. The criteria discussed at the August 13 workshop is included in the presentation materials attached as Exhibit “B” and was presented to the Board at its December 10, 2018, and January 14, 2019, meetings.

Following the workshop, prior to the drawing of potential division area maps, the District invited the public to submit additional comments on the composition of possible divisions and to submit conceptual maps for consideration as the potential division area maps were drawn. That public comment period ran from August 15 to October 15, 2018. During the comment period, the District received two comments and maps from the public. Those comments and maps were provided to the Board at its last Board meeting and are posted on IRWD’s website.

On December 10, 2018, and January 14, 2019, respectively, IRWD held a third and fourth public hearing to invite and solicit public comment on the draft division maps, which have been published by the District on its website, and the potential sequence of elections for the directors from each division at different times to provide for staggered terms of office. IRWD is now

holding an additional public hearing to invite and solicit public comment on the draft division maps, which have been published by the District on its website, and the potential sequence of elections for the directors from each division at different times to provide for staggered terms of office. The nine draft maps presented for discussion and comment are attached as Exhibit "C". The presentation, which will be made to the Board, is attached as Exhibit "B".

It is important to note that the draft maps are a starting point for the Board's discussion on possible division boundaries, and additional maps or refinements may be made should the Board want to see other options at the next public hearing.

FISCAL IMPACTS:

Due to the adoption of a resolution of "Intent to Initiate the Process of Establishing Divisions and Elections by Divisions" and by undertaking the Elections Code section 10010 process to evaluate by-divisions elections, the District is incurring costs of a demographer and special legal counsel in addition to potentially other costs.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was not reviewed by a Committee.

LIST OF EXHIBITS:

Exhibit "A" – Existing Conditions for Irvine Ranch Water District
Exhibit "B" – Presentation Materials for the March 11, 2019, Public Hearing
Exhibit "C" – Draft Division Maps A, A-1, B, B-1, C, C-1 and D

EXHIBIT "A"

Irvine Ranch Water District: 2018 Districting

Existing Conditions for Irvine Ranch Water District

Table 1. Population by Race/Ethnicity for IRWD

	Number	Percent
2010 Total Population	337,151	100.0%
Hispanic or Latino of any Race	40,325	12.0%
Non-Hispanic White	171,195	50.8%
Non-Hispanic Asian	104,775	31.1%
Non-Hispanic Black or African-American	5,173	1.5%
All Other Non-Hispanic Races/Ethnicities	15,681	4.7%
2010 Population 18 Years and Older	261,651	100.0%
Hispanic or Latino of any Race	28,531	10.9%
Non-Hispanic White	138,759	53.0%
Non-Hispanic Asian	81,062	31.0%
Non-Hispanic Black or African-American	4,029	1.5%
All Other Non-Hispanic Races/Ethnicities	9,266	3.5%
2016 Citizen Voting Age Population (CVAP)	244,343	100.0%
Hispanic or Latino of any Race	27,413	11.2%
Non-Hispanic White	135,507	55.5%
Non-Hispanic Asian	68,731	28.1%
Non-Hispanic Black or African-American	4,810	2.0%
All Other Non-Hispanic Races/Ethnicities	7,879	3.2%

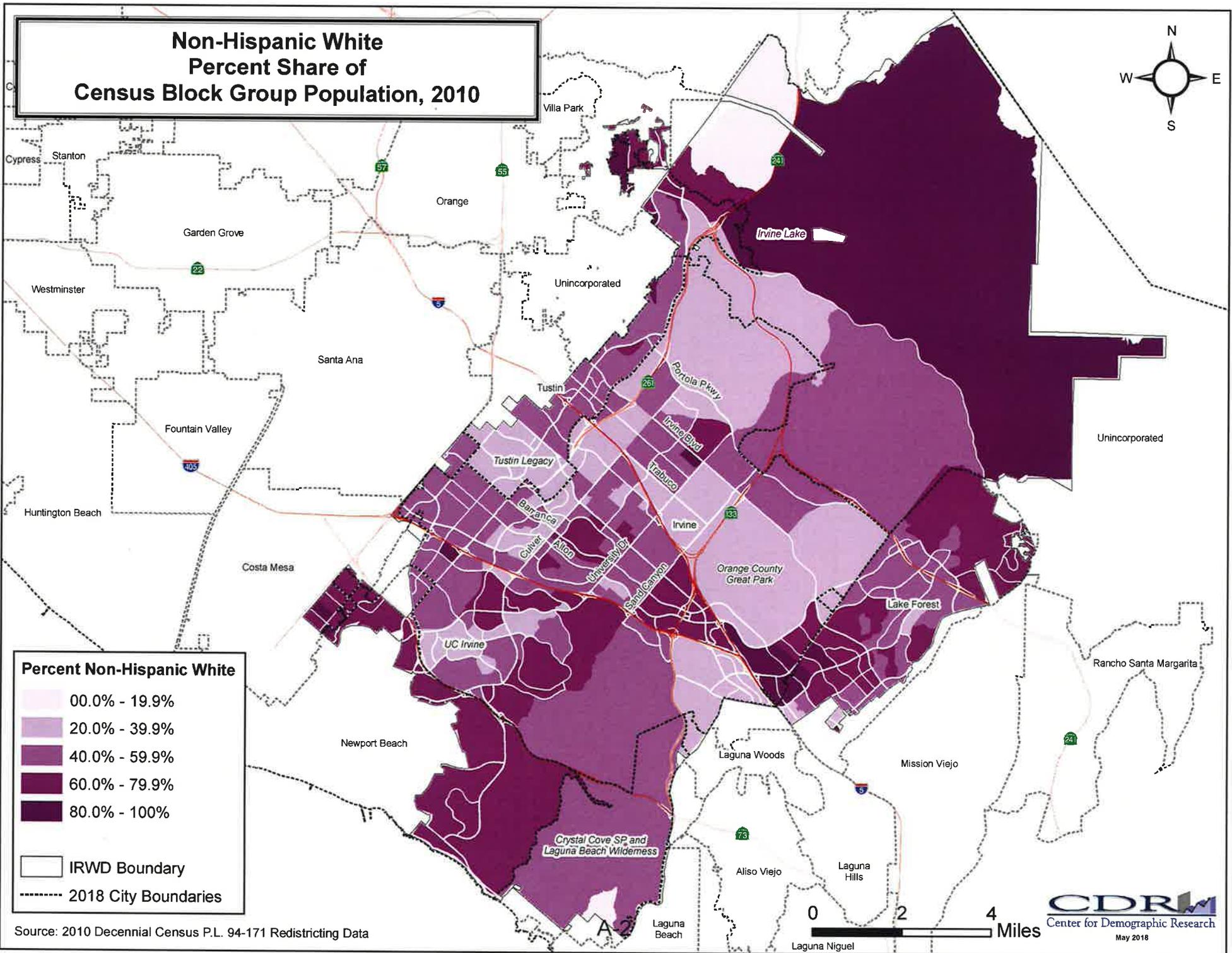
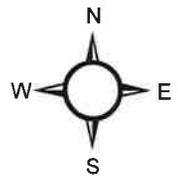
Sources: 2010 Decennial Census P.L. 94-171 Redistricting Data;
U.S. Census Bureau American Community Survey 5-year estimates, 2012-2016

The target director division population is calculated by dividing the total population by the number of board members.

Table 2. Target Population for Division Scenarios

Division ID	Division Type	Total 2010 Population	Target Population for Each Division	Division Majority (50% + 1)	Majority of CVAP (50% + 1)
5	5-Division Plan	337,151	67,430	33,716	24,435

Non-Hispanic White Percent Share of Census Block Group Population, 2010

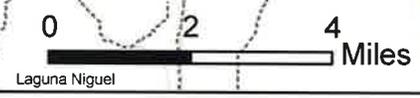


Percent Non-Hispanic White

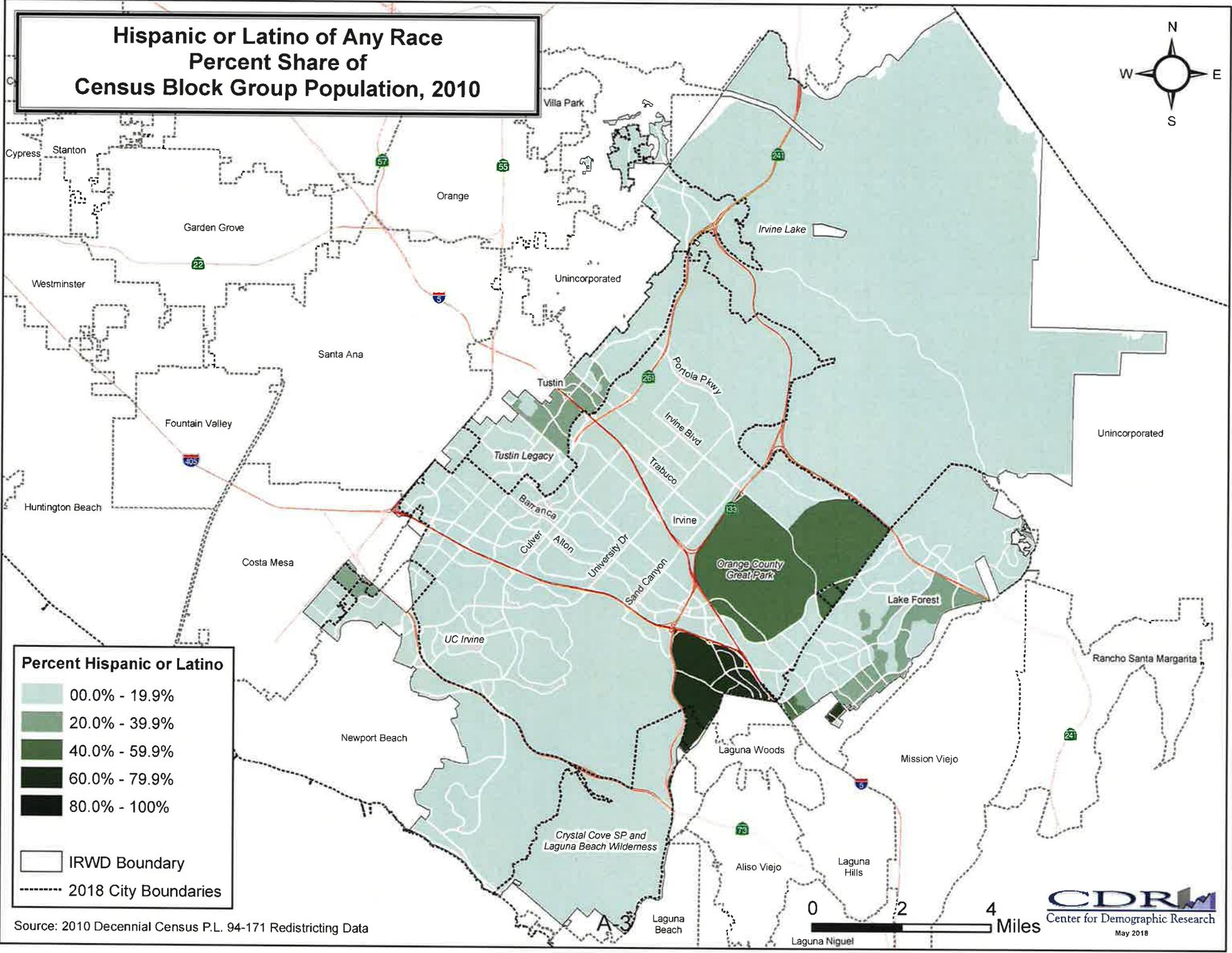
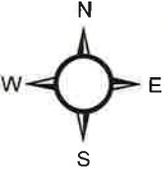
- 00.0% - 19.9%
- 20.0% - 39.9%
- 40.0% - 59.9%
- 60.0% - 79.9%
- 80.0% - 100%

IRWD Boundary
 2018 City Boundaries

Source: 2010 Decennial Census P.L. 94-171 Redistricting Data



Hispanic or Latino of Any Race Percent Share of Census Block Group Population, 2010



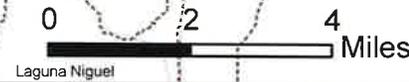
Percent Hispanic or Latino

- 00.0% - 19.9%
- 20.0% - 39.9%
- 40.0% - 59.9%
- 60.0% - 79.9%
- 80.0% - 100%

IRWD Boundary

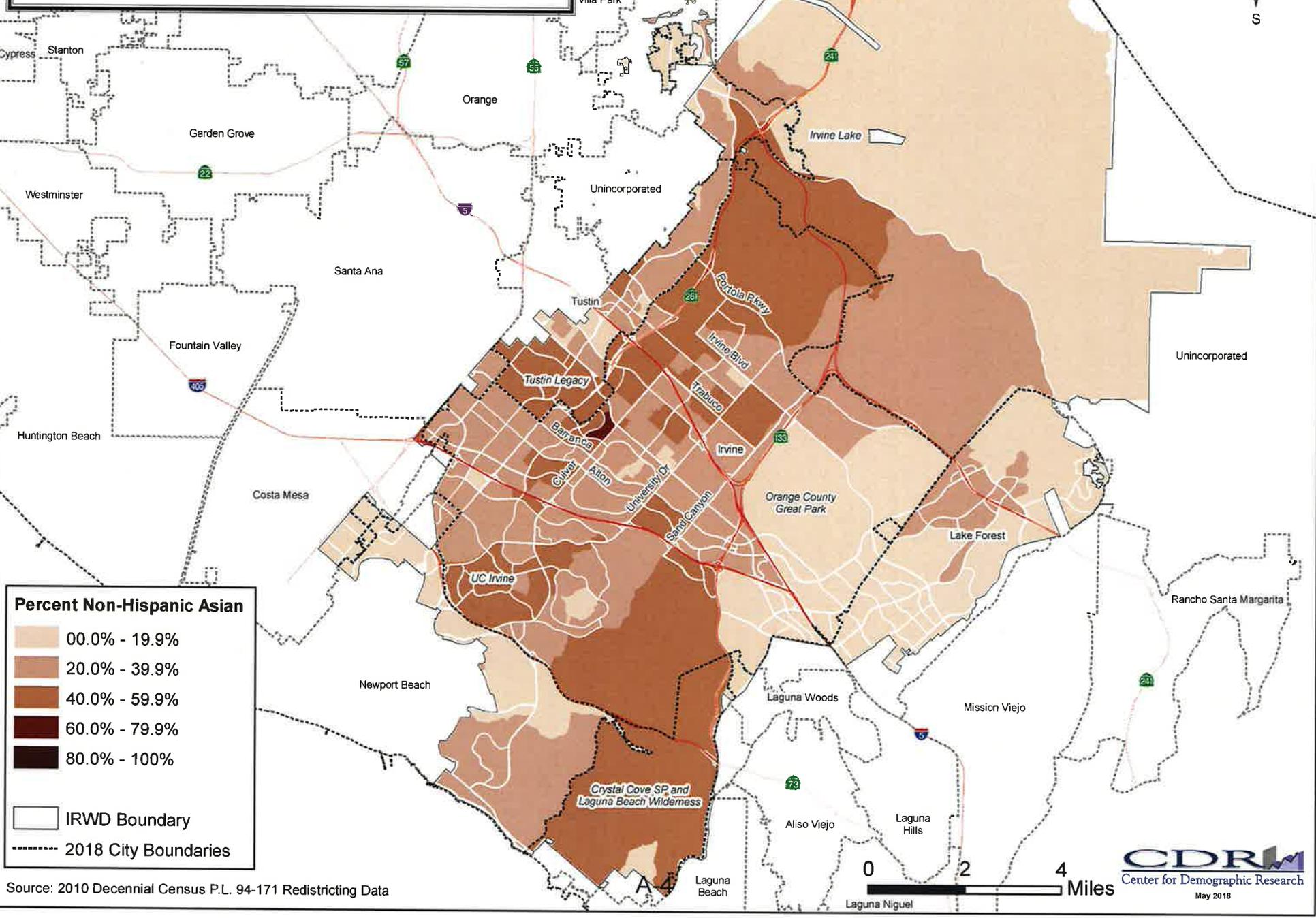
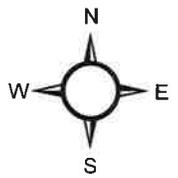
2018 City Boundaries

Source: 2010 Decennial Census P.L. 94-171 Redistricting Data



CDRM
Center for Demographic Research
May 2018

Non-Hispanic Asian Percent Share of Census Block Group Population, 2010

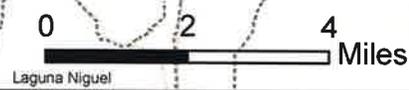


Percent Non-Hispanic Asian

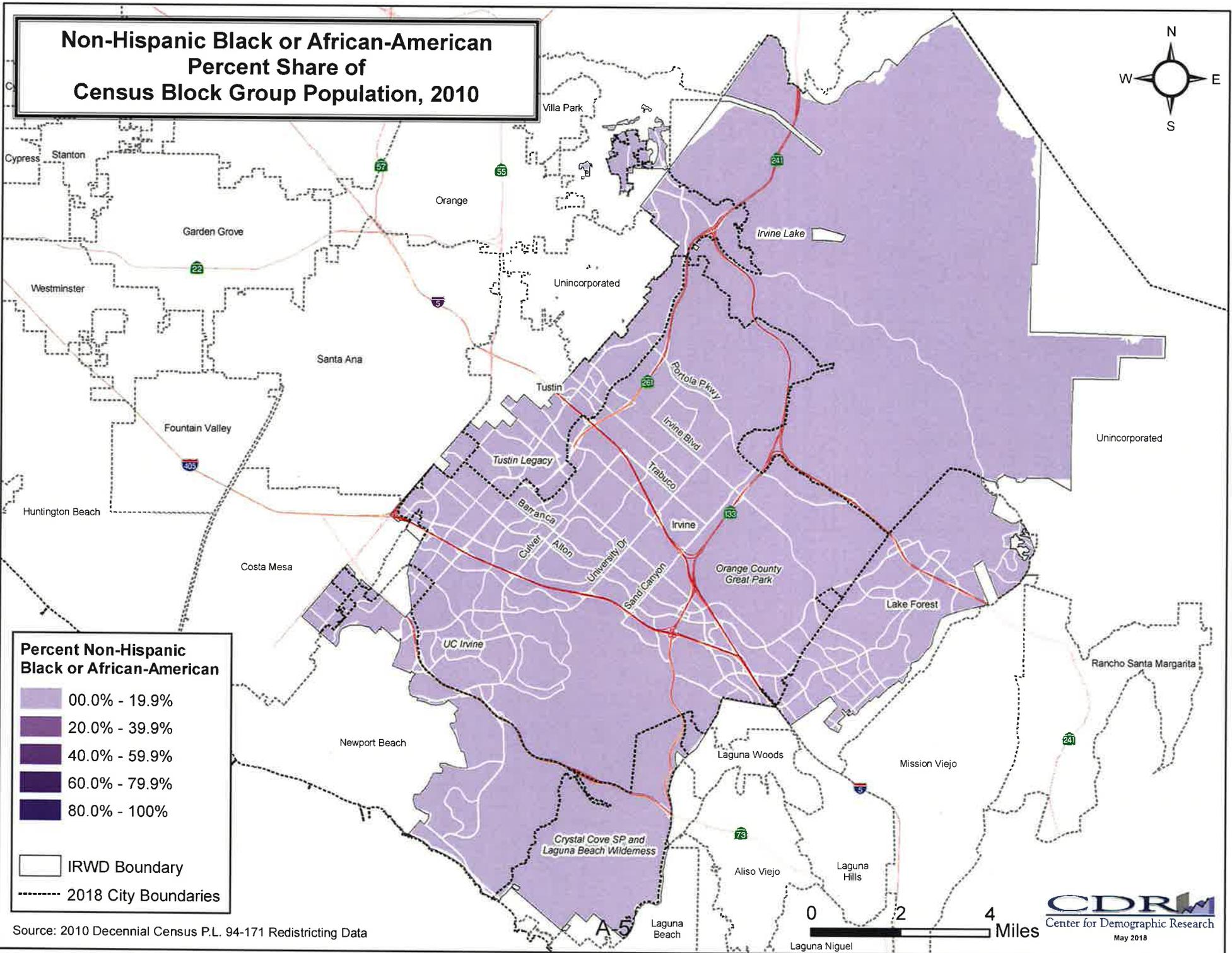
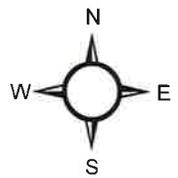
00.0% - 19.9%
20.0% - 39.9%
40.0% - 59.9%
60.0% - 79.9%
80.0% - 100%

IRWD Boundary
 2018 City Boundaries

Source: 2010 Decennial Census P.L. 94-171 Redistricting Data



Non-Hispanic Black or African-American Percent Share of Census Block Group Population, 2010



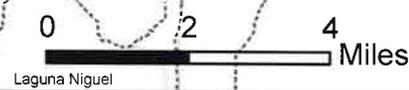
Percent Non-Hispanic Black or African-American

- 00.0% - 19.9%
- 20.0% - 39.9%
- 40.0% - 59.9%
- 60.0% - 79.9%
- 80.0% - 100%

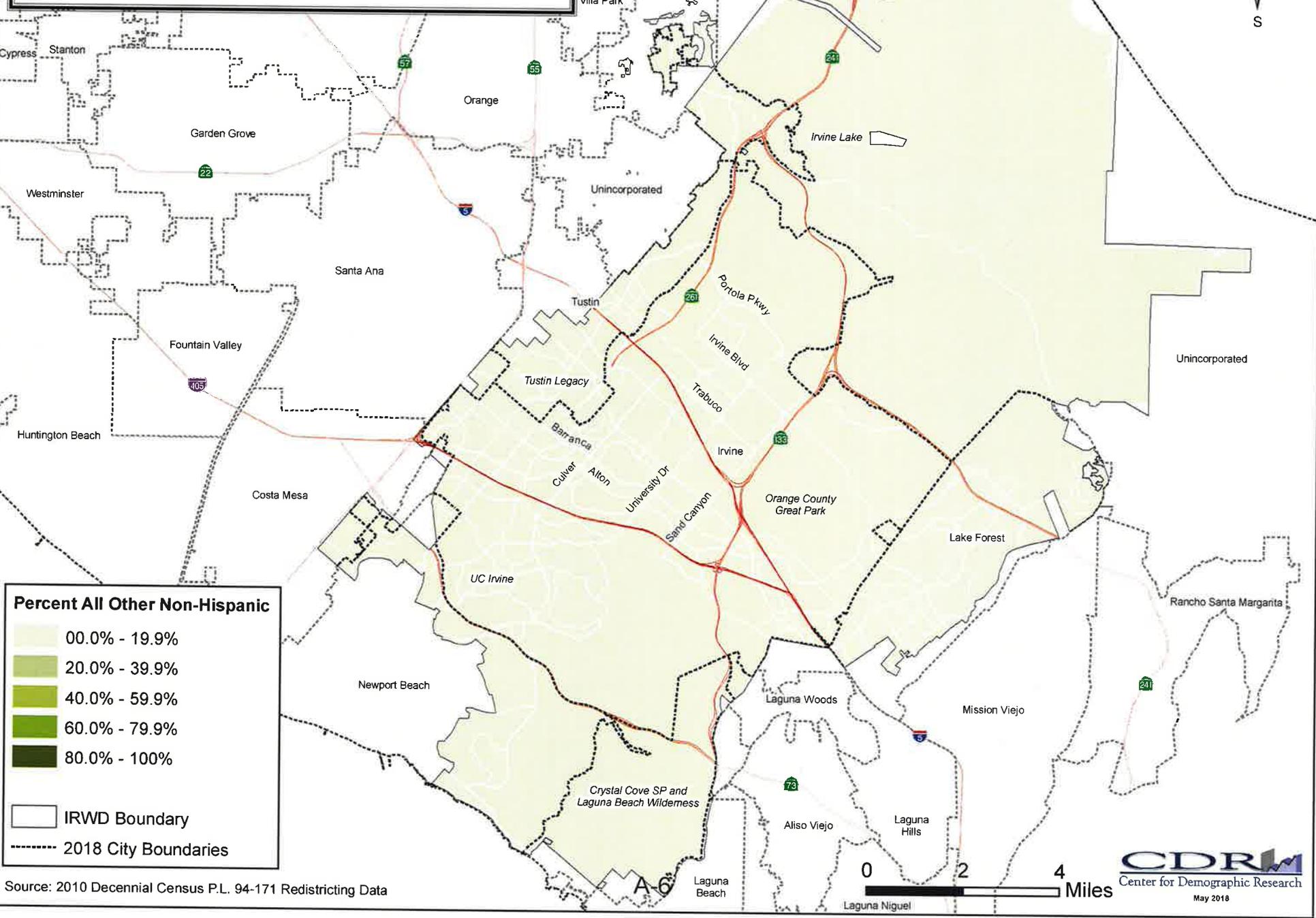
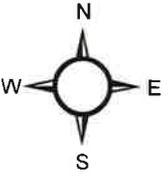
IRWD Boundary

2018 City Boundaries

Source: 2010 Decennial Census P.L. 94-171 Redistricting Data



All Other Non-Hispanic Races Percent Share of Census Block Group Population, 2010

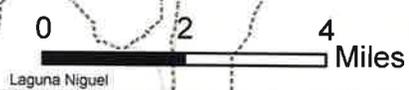


Percent All Other Non-Hispanic

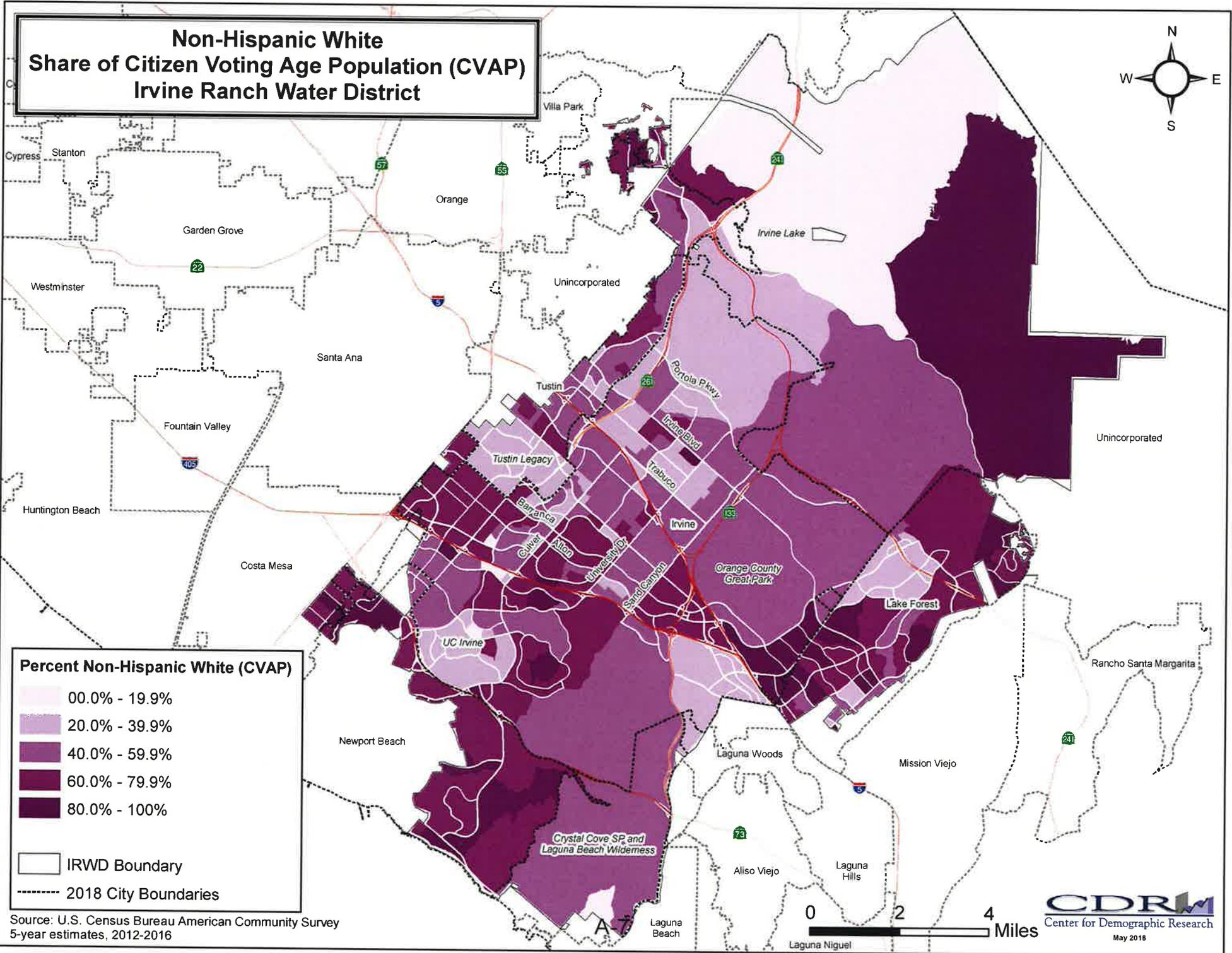
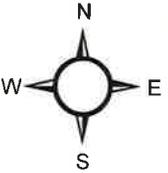
- 00.0% - 19.9%
- 20.0% - 39.9%
- 40.0% - 59.9%
- 60.0% - 79.9%
- 80.0% - 100%

IRWD Boundary
 2018 City Boundaries

Source: 2010 Decennial Census P.L. 94-171 Redistricting Data



Non-Hispanic White Share of Citizen Voting Age Population (CVAP) Irvine Ranch Water District



Percent Non-Hispanic White (CVAP)

- 00.0% - 19.9%
- 20.0% - 39.9%
- 40.0% - 59.9%
- 60.0% - 79.9%
- 80.0% - 100%

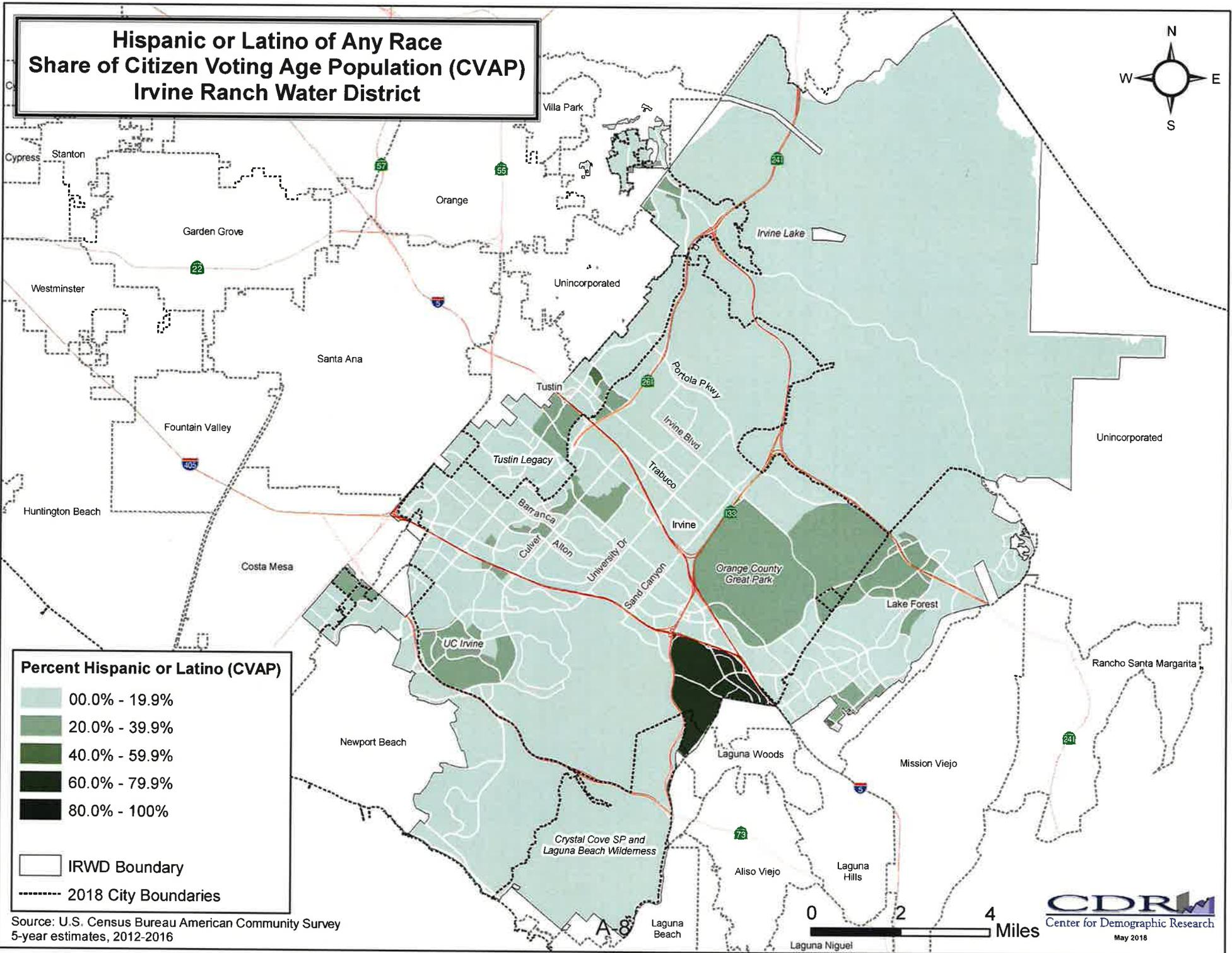
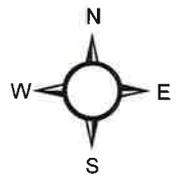
IRWD Boundary

2018 City Boundaries

Source: U.S. Census Bureau American Community Survey
5-year estimates, 2012-2016



Hispanic or Latino of Any Race Share of Citizen Voting Age Population (CVAP) Irvine Ranch Water District



Percent Hispanic or Latino (CVAP)

- 00.0% - 19.9%
- 20.0% - 39.9%
- 40.0% - 59.9%
- 60.0% - 79.9%
- 80.0% - 100%

IRWD Boundary
 2018 City Boundaries

Source: U.S. Census Bureau American Community Survey
5-year estimates, 2012-2016

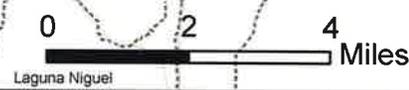
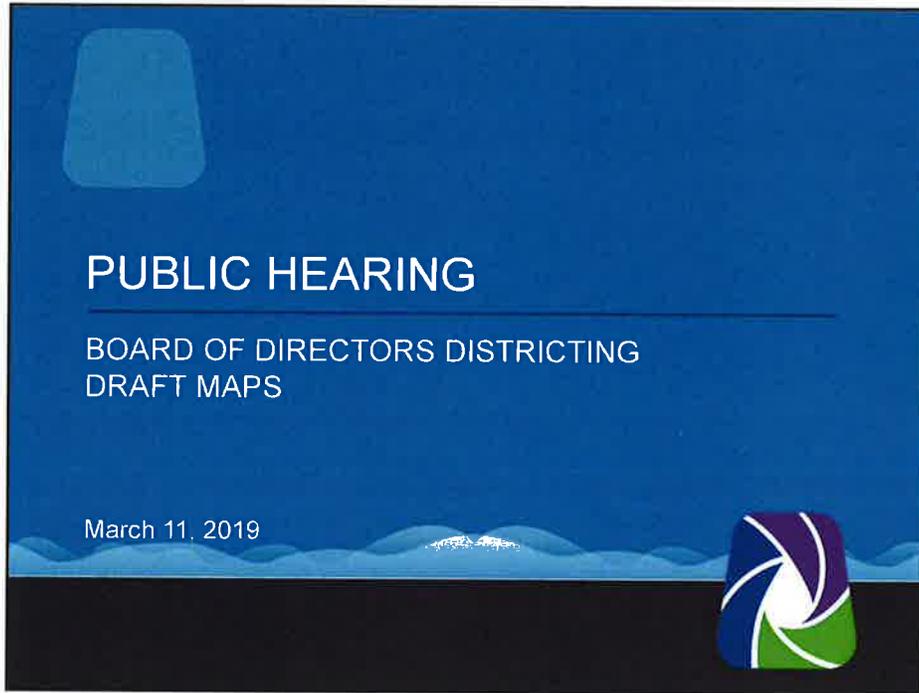


EXHIBIT "B"



PUBLIC HEARING

BOARD OF DIRECTORS DISTRICTING
DRAFT MAPS

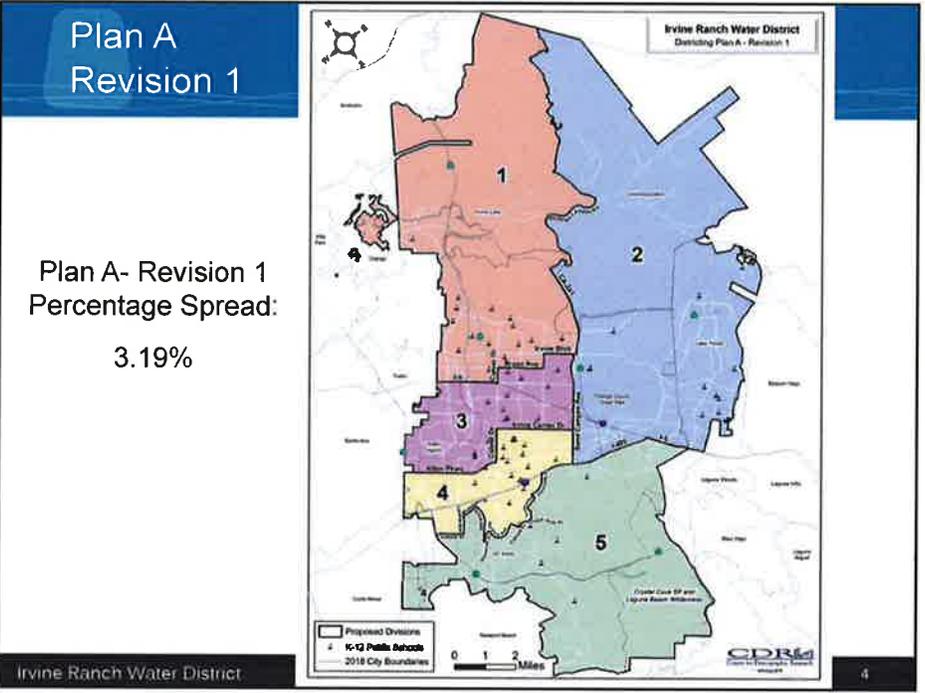
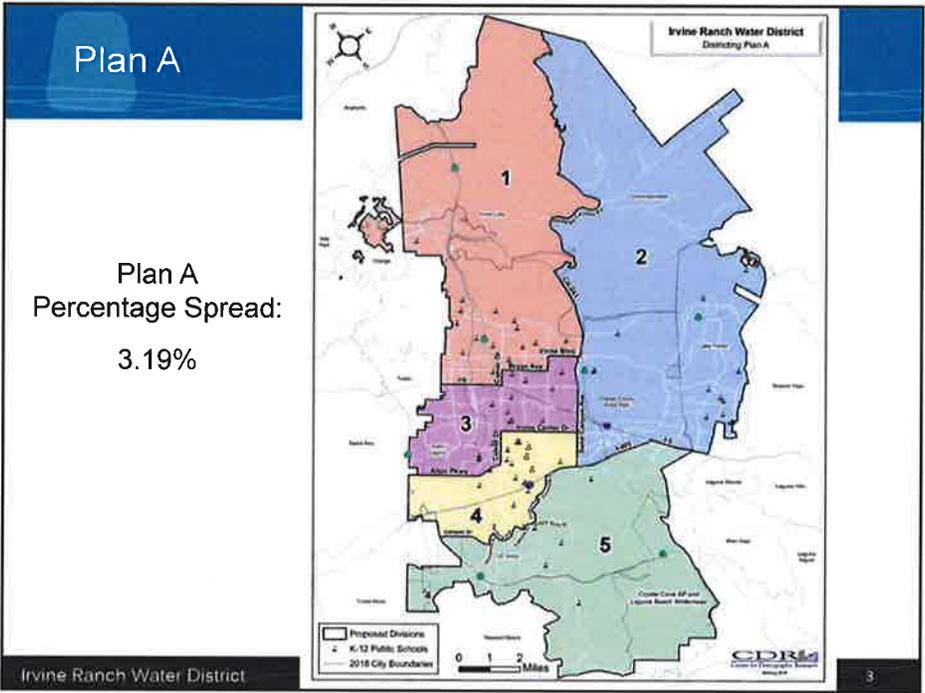
March 11, 2019



Recap of Plans

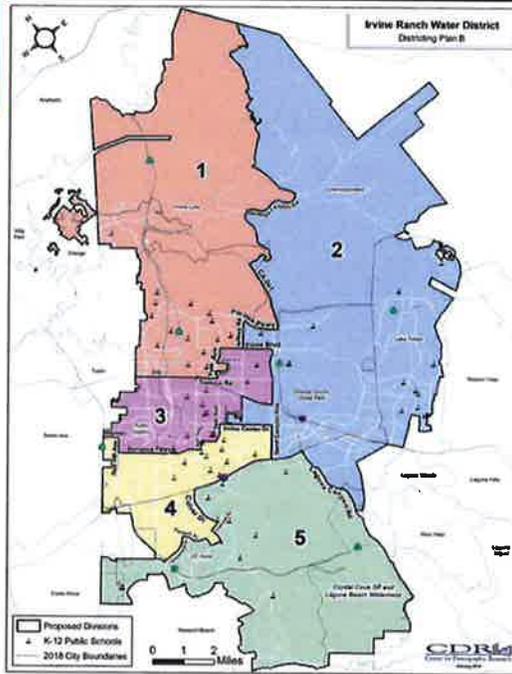
	Plan Overview
Plan A	Original submission
Plan A- Rev. 1	Added San Juan Marsh to Division 5
Plan B	Original submission
Plan B- Rev. 1	Added San Juan Marsh to Division 5
Plan C	Original submission
Plan C- Rev. 1	Added San Juan Marsh to Division 5
Plan D	Original submission
Plan D- Rev. 1	Added San Juan Marsh to Division 5
Plan E	Added San Juan Marsh to Division 5; larger portion of Irvine into Division 2

Irvine Ranch Water District 2



Plan B

Plan B
Percentage Spread:
8.60%

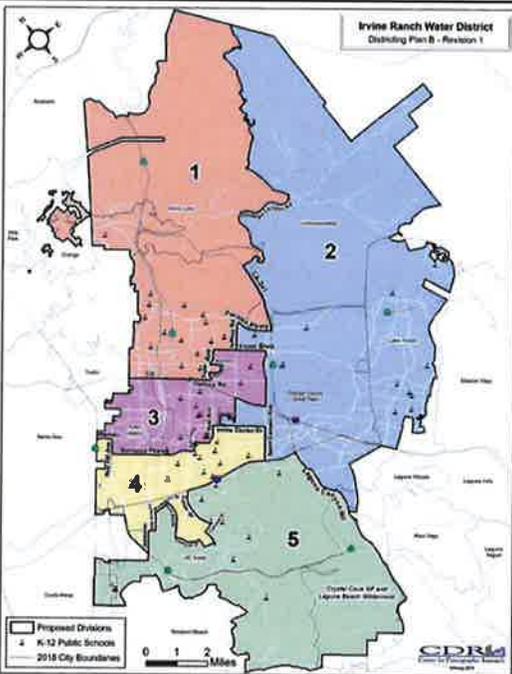


Irvine Ranch Water District

5

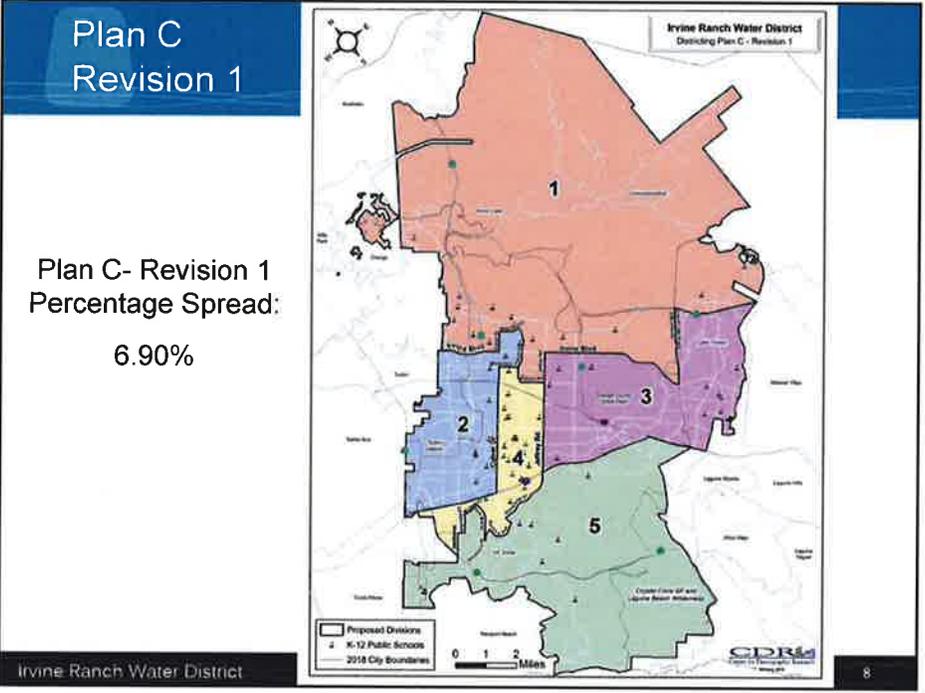
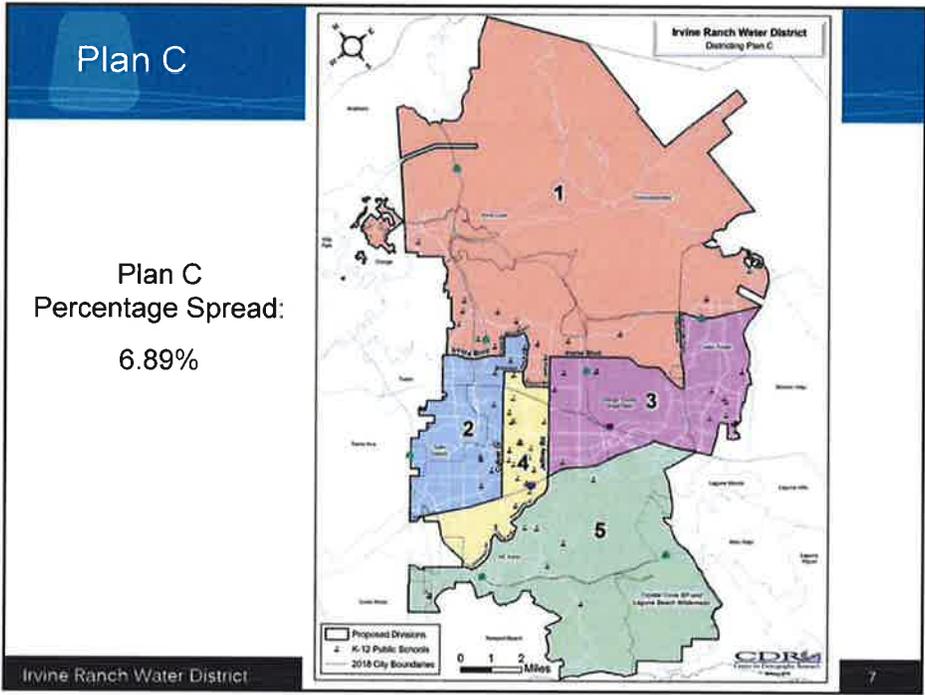
Plan B Revision 1

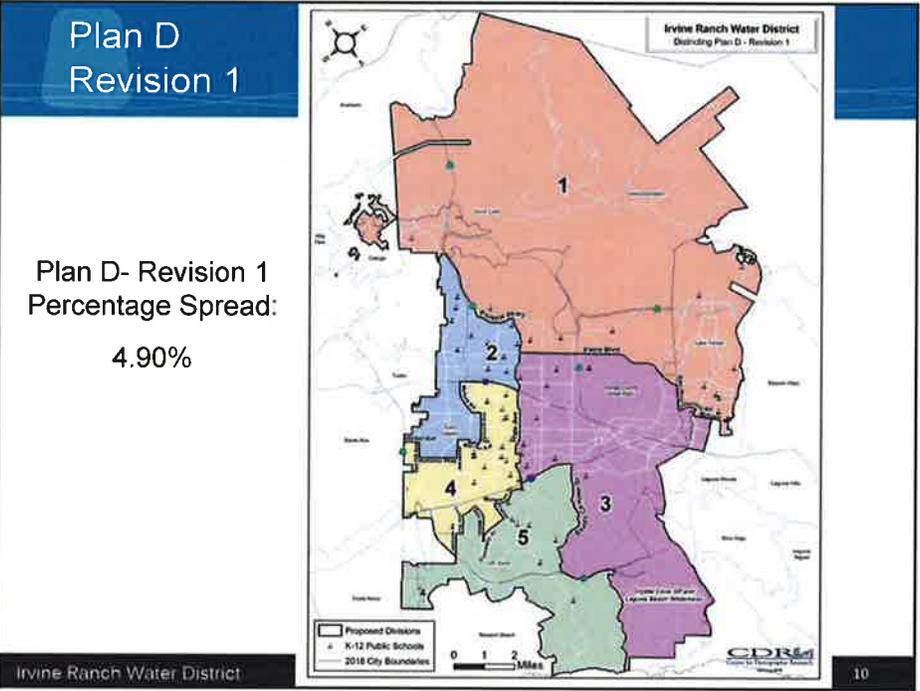
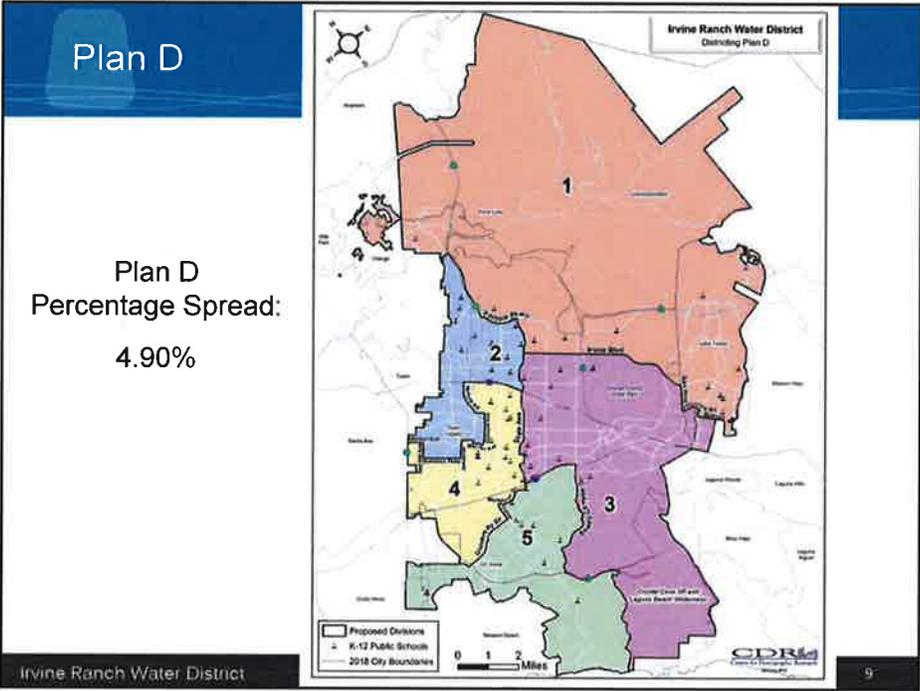
Plan B- Revision 1
Percentage Spread:
8.61%



Irvine Ranch Water District

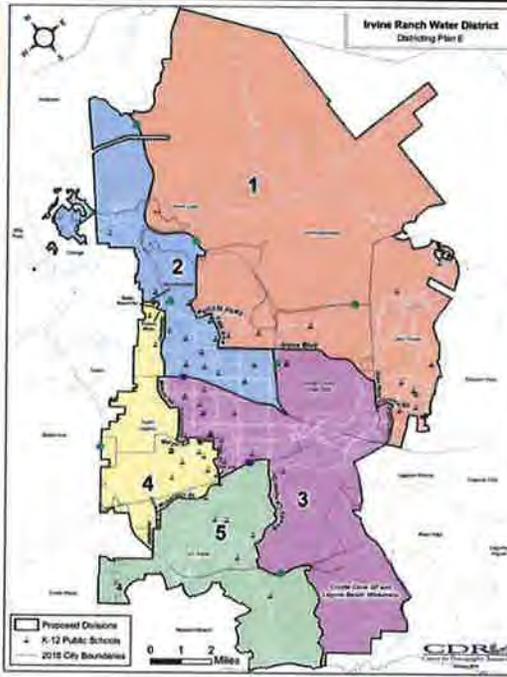
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Plan E

Plan E
Percentage Spread:
6.83%



Irvine Ranch Water District

11

Plan A

Plan A
Percentage Spread:
3.19%

Irvine Ranch Water District - Plan A

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	47,220	86,118	67,363	68,468	87,773	357,133
Hispanic or Latino of any Race	7,292	11,273	9,809	4,058	5,143	40,125
Non-Hispanic White	11,011	30,676	27,294	14,423	16,659	171,195
Non-Hispanic Asian	15,013	9,593	27,673	23,253	29,543	105,175
Non-Hispanic Black or African-American	993	1,260	1,284	1,323	713	5,173
All Other Non-Hispanic Race/Ethnicities	2,988	2,230	3,458	3,611	3,115	15,412
Population 18 Years and Older	49,793	90,500	70,950	74,799	94,428	344,811
Hispanic or Latino of any Race	4,817	9,969	5,422	4,428	4,831	28,331
Non-Hispanic White	24,432	71,302	51,967	26,806	31,836	198,763
Non-Hispanic Asian	18,265	7,641	30,748	18,347	30,661	115,262
Non-Hispanic Black or African-American	751	835	813	828	400	4,029
All Other Non-Hispanic Race/Ethnicities	1,507	1,494	1,860	2,330	1,875	9,236
Citizens Voting Age Population (CVAP)	47,023	86,068	66,812	68,008	87,672	344,543
Hispanic or Latino of any Race	4,875	9,138	5,511	4,097	4,502	27,413
Non-Hispanic White	11,771	32,994	29,425	29,084	31,234	181,510
Non-Hispanic Asian	18,195	7,893	27,500	18,310	31,796	98,772
Non-Hispanic Black or African-American	1,091	1,081	1,224	960	463	4,819
All Other Non-Hispanic Race/Ethnicities	1,089	1,430	1,680	1,442	1,838	7,849
Target Division Population	67,400					
Division Difference from Target Population	-200	-1,114	40	1,784	140	
Percent Difference from Target Population	-0.30%	-1.65%	0.06%	2.65%	0.21%	
Percentage Spread						3.19%

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	15.3%	13.0%	14.6%	5.9%	5.9%
Non-Hispanic White	23.3%	35.6%	40.5%	20.9%	18.9%
Non-Hispanic Asian	31.8%	11.1%	41.1%	33.8%	33.6%
Non-Hispanic Black or African-American	2.1%	1.4%	1.9%	1.9%	0.8%
All Other Non-Hispanic Race/Ethnicities	4.4%	4.0%	4.9%	5.5%	4.8%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.7%	11.1%	7.6%	5.9%	5.1%
Non-Hispanic White	49.1%	62.5%	73.2%	34.8%	31.5%
Non-Hispanic Asian	34.6%	15.1%	40.7%	33.5%	29.0%
Non-Hispanic Black or African-American	1.3%	1.2%	1.4%	1.4%	0.7%
All Other Non-Hispanic Race/Ethnicities	3.0%	2.6%	3.7%	4.3%	3.7%
Citizens Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.3%	10.6%	11.0%	5.9%	5.1%
Non-Hispanic White	49.7%	66.4%	74.0%	34.8%	31.5%
Non-Hispanic Asian	34.2%	15.2%	41.8%	33.3%	29.0%
Non-Hispanic Black or African-American	1.6%	1.2%	1.6%	1.6%	0.8%
All Other Non-Hispanic Race/Ethnicities	3.6%	2.9%	3.6%	4.3%	3.2%

Irvine Ranch Water District

12

Plan A Revision 1

Plan A- Revision 1
Percentage Spread:
3.19%

Irvine Ranch Water District- Plan A- Revision 1

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	57,229	55,314	47,265	58,845	65,775	327,431
Hispanic or Latino of any Race	7,092	13,213	7,839	6,556	8,143	46,573
Non-Hispanic White	31,515	39,670	33,294	34,420	38,662	177,197
Non-Hispanic Asian	25,533	9,639	22,673	23,213	18,343	104,795
Non-Hispanic Black or African American	993	1,000	1,384	1,113	719	5,173
All Other Non-Hispanic Race/Ethnicities	2,989	2,876	3,426	3,813	3,155	13,661
Population 18 Years and Older	49,792	50,755	40,650	54,797	55,457	261,681
Hispanic or Latino of any Race	4,807	8,961	5,477	4,438	4,831	26,531
Non-Hispanic White	24,432	31,702	21,987	28,804	31,484	138,763
Non-Hispanic Asian	18,243	7,661	20,748	18,847	16,061	81,562
Non-Hispanic Black or African American	753	805	933	688	402	3,079
All Other Non-Hispanic Race/Ethnicities	1,507	1,484	1,860	2,190	2,075	8,266
Citizen Voting Age Population (CVAP)	47,641	49,668	40,431	49,890	51,671	244,343
Hispanic or Latino of any Race	4,875	8,338	5,553	4,097	4,550	27,413
Non-Hispanic White	21,779	32,994	20,420	29,782	31,736	135,510
Non-Hispanic Asian	18,195	7,831	21,550	19,955	17,796	89,711
Non-Hispanic Black or African American	1,093	1,081	1,324	950	482	4,810
All Other Non-Hispanic Race/Ethnicities	1,689	1,430	1,680	1,442	1,639	7,279

Target Division Population 67,430

Division Difference from Target Population -903

Percent Difference from Target Population -1.00%

Percent Spread 0.19%

Table 2. Share of Division Population

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	12.5%	23.9%	16.6%	11.1%	12.4%
Non-Hispanic White	55.0%	71.7%	70.5%	50.0%	57.0%
Non-Hispanic Asian	44.5%	17.8%	48.1%	39.4%	27.6%
Non-Hispanic Black or African American	1.7%	1.8%	2.9%	1.9%	1.1%
All Other Non-Hispanic Race/Ethnicities	4.8%	4.0%	4.9%	4.4%	4.0%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.2%	17.3%	13.5%	8.0%	8.7%
Non-Hispanic White	48.1%	62.5%	49.2%	51.4%	57.5%
Non-Hispanic Asian	36.8%	15.1%	46.7%	31.5%	28.0%
Non-Hispanic Black or African American	1.5%	1.7%	2.3%	1.6%	1.3%
All Other Non-Hispanic Race/Ethnicities	3.2%	2.9%	3.7%	3.2%	3.2%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.2%	16.8%	13.7%	8.2%	8.8%
Non-Hispanic White	45.7%	66.4%	47.0%	50.4%	56.4%
Non-Hispanic Asian	38.2%	15.8%	47.8%	37.3%	27.8%
Non-Hispanic Black or African American	2.3%	2.2%	2.6%	1.9%	1.6%
All Other Non-Hispanic Race/Ethnicities	3.6%	2.8%	3.4%	2.9%	3.2%

Plan B

Plan B
Percentage Spread:
8.60%

Irvine Ranch Water District- Plan B

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	57,004	68,606	63,550	64,912	70,700	327,182
Hispanic or Latino of any Race	7,247	11,468	7,859	6,562	8,033	40,129
Non-Hispanic White	30,793	41,003	37,034	36,279	41,612	171,197
Non-Hispanic Asian	25,535	10,118	26,224	33,287	19,318	104,775
Non-Hispanic Black or African American	962	1,114	1,543	1,241	709	5,172
All Other Non-Hispanic Race/Ethnicities	2,967	2,703	3,387	3,568	3,244	15,881
Population 18 Years and Older	49,410	51,602	43,138	52,779	53,128	244,881
Hispanic or Latino of any Race	4,792	8,187	5,149	4,885	4,219	26,111
Non-Hispanic White	24,024	32,846	21,200	25,748	31,975	138,763
Non-Hispanic Asian	18,483	8,281	18,177	18,024	15,364	81,562
Non-Hispanic Black or African American	722	900	913	693	537	3,079
All Other Non-Hispanic Race/Ethnicities	1,479	1,570	1,721	2,425	2,074	8,266
Citizen Voting Age Population (CVAP)	44,561	51,000	47,505	48,371	51,718	244,343
Hispanic or Latino of any Race	4,486	8,512	5,974	4,803	5,646	27,413
Non-Hispanic White	20,375	34,544	21,111	26,058	31,441	135,510
Non-Hispanic Asian	17,081	8,991	18,025	17,887	15,383	89,711
Non-Hispanic Black or African American	1,085	1,128	1,187	1,068	597	4,810
All Other Non-Hispanic Race/Ethnicities	1,524	1,534	1,981	1,883	1,527	7,279

Target Division Population 67,430

Division Difference from Target Population -266

Percent Difference from Target Population -0.50%

Percent Spread 0.60%

Table 2. Share of Division Population

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	12.7%	16.6%	12.4%	10.1%	11.4%
Non-Hispanic White	52.1%	59.8%	58.3%	55.9%	57.4%
Non-Hispanic Asian	44.8%	14.6%	42.7%	40.4%	27.5%
Non-Hispanic Black or African American	1.6%	1.6%	2.4%	2.0%	1.0%
All Other Non-Hispanic Race/Ethnicities	4.4%	4.0%	4.8%	4.5%	4.0%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.7%	15.7%	11.9%	9.3%	8.0%
Non-Hispanic White	48.4%	62.2%	49.8%	48.8%	56.4%
Non-Hispanic Asian	37.4%	15.7%	46.5%	33.8%	27.6%
Non-Hispanic Black or African American	1.5%	1.7%	1.9%	1.6%	1.0%
All Other Non-Hispanic Race/Ethnicities	3.0%	2.6%	3.2%	4.0%	3.0%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.1%	16.5%	12.6%	10.1%	10.7%
Non-Hispanic White	45.7%	60.7%	44.4%	44.7%	53.3%
Non-Hispanic Asian	38.2%	16.7%	47.8%	38.6%	27.8%
Non-Hispanic Black or African American	2.4%	2.2%	2.3%	2.4%	0.7%
All Other Non-Hispanic Race/Ethnicities	3.5%	2.9%	3.7%	3.2%	2.8%



Plan B Revision 1

Plan B- Revision 1
Percentage Spread:
8.61%

Irvine Ranch Water District- Plan B- Revision 1

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	57,794	84,881	55,550	64,929	76,712	337,111
Hispanic or Latino of any Race	7,047	13,848	7,408	6,342	4,091	48,736
Non-Hispanic White	35,343	41,001	27,631	30,172	41,405	175,552
Non-Hispanic Asian	5,530	10,519	28,214	23,842	19,118	107,223
Non-Hispanic Black or African American	902	1,114	1,143	1,248	908	5,315
All Other Non-Hispanic Race/Ethnicities	2,302	5,799	3,140	5,546	3,241	21,030
Population 18 Years and Older	48,413	73,402	49,531	57,777	67,151	296,274
Hispanic or Latino of any Race	4,992	9,191	5,149	4,603	4,719	34,654
Non-Hispanic White	23,934	32,848	22,260	25,748	33,577	148,367
Non-Hispanic Asian	3,843	8,794	18,577	18,924	15,784	85,922
Non-Hispanic Black or African American	779	906	821	912	587	4,605
All Other Non-Hispanic Race/Ethnicities	1,475	3,530	1,721	2,426	1,732	13,225
Older Voting Age Population (CVAP)	44,341	67,099	47,099	48,872	53,218	262,639
Hispanic or Latino of any Race	4,486	8,511	5,471	4,998	5,066	37,432
Non-Hispanic White	20,375	34,144	21,711	20,096	31,664	158,522
Non-Hispanic Asian	3,241	8,081	18,043	17,887	15,587	86,839
Non-Hispanic Black or African American	1,065	1,128	1,197	1,008	792	6,832
All Other Non-Hispanic Race/Ethnicities	1,119	3,348	1,761	3,481	2,007	17,877
Target Division Population	67,430					
Division Difference from Target Population	-936	1,406	-1,880	-2,523	1,092	
Percent Difference from Target Population	-1.39%	2.09%	-2.79%	-3.74%	1.61%	
Percentage Spread						8.61%

Table 2. Share of Division Populations

	DIVISION					Total
	1	2	3	4	5	
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	12.4%	16.3%	13.3%	9.8%	5.3%	14.5%
Non-Hispanic White	61.2%	48.3%	49.7%	46.3%	52.9%	55.0%
Non-Hispanic Asian	9.6%	12.4%	50.6%	36.0%	24.7%	24.3%
Non-Hispanic Black or African American	1.0%	1.3%	2.1%	1.9%	1.2%	1.6%
All Other Non-Hispanic Race/Ethnicities	15.8%	21.7%	4.3%	6.1%	14.9%	13.9%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.3%	12.4%	10.4%	8.1%	7.0%	10.7%
Non-Hispanic White	49.4%	43.2%	45.2%	41.8%	49.5%	47.5%
Non-Hispanic Asian	7.9%	12.7%	35.5%	35.9%	27.6%	23.6%
Non-Hispanic Black or African American	1.6%	1.2%	1.6%	1.6%	1.0%	1.4%
All Other Non-Hispanic Race/Ethnicities	29.4%	28.5%	5.5%	12.4%	23.4%	23.0%
Older Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.1%	12.5%	11.5%	10.4%	9.4%	11.4%
Non-Hispanic White	45.7%	43.2%	44.4%	41.7%	48.8%	47.2%
Non-Hispanic Asian	7.3%	12.7%	37.4%	34.6%	23.8%	23.8%
Non-Hispanic Black or African American	1.6%	1.2%	1.6%	1.6%	1.0%	1.4%
All Other Non-Hispanic Race/Ethnicities	33.3%	28.4%	6.1%	10.3%	26.4%	23.2%

Plan C

Plan C
Percentage Spread:
6.89%

Irvine Ranch Water District- Plan C

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	47,287	68,734	64,881	47,554	88,137	317,111
Hispanic or Latino of any Race	7,207	8,368	11,970	4,545	6,217	48,307
Non-Hispanic White	34,071	37,773	34,295	34,978	30,119	171,236
Non-Hispanic Asian	21,206	27,814	14,497	21,118	19,838	104,373
Non-Hispanic Black or African American	842	1,195	1,055	1,211	724	5,069
All Other Non-Hispanic Race/Ethnicities	1,019	2,164	2,064	2,446	1,587	13,041
Population 18 Years and Older	40,130	52,120	49,811	53,908	54,414	250,683
Hispanic or Latino of any Race	4,964	7,738	8,137	4,739	4,889	28,511
Non-Hispanic White	26,757	32,422	28,000	29,217	31,261	138,357
Non-Hispanic Asian	15,296	21,313	11,988	16,762	14,611	80,060
Non-Hispanic Black or African American	681	988	846	908	432	4,006
All Other Non-Hispanic Race/Ethnicities	1,472	1,939	1,540	2,206	1,529	13,225
Older Voting Age Population (CVAP)	48,708	65,563	47,579	49,264	52,111	264,225
Hispanic or Latino of any Race	4,740	5,511	5,614	4,408	4,842	29,413
Non-Hispanic White	25,854	34,812	29,136	29,019	31,179	151,510
Non-Hispanic Asian	14,038	16,710	10,470	12,896	11,997	66,111
Non-Hispanic Black or African American	889	1,160	1,028	971	612	4,659
All Other Non-Hispanic Race/Ethnicities	1,547	1,800	1,931	2,110	1,451	13,692
Target Division Population	67,430					
Division Difference from Target Population	-1943	1,304	-1,841	74	1,707	
Percent Difference from Target Population	-2.88%	1.93%	-2.74%	0.11%	2.53%	
Percentage Spread						6.89%

Table 2. Share of Division Populations

	DIVISION					Total
	1	2	3	4	5	
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	15.2%	12.2%	18.4%	9.6%	7.0%	15.3%
Non-Hispanic White	72.0%	54.9%	52.7%	73.6%	34.2%	55.6%
Non-Hispanic Asian	44.7%	40.2%	22.3%	44.4%	22.6%	32.6%
Non-Hispanic Black or African American	1.8%	1.7%	1.6%	2.5%	0.8%	1.6%
All Other Non-Hispanic Race/Ethnicities	15.9%	21.0%	4.0%	11.9%	34.4%	15.5%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	12.3%	14.8%	16.3%	8.8%	9.0%	12.7%
Non-Hispanic White	54.4%	41.9%	44.4%	54.4%	54.2%	51.2%
Non-Hispanic Asian	28.1%	40.8%	24.5%	31.2%	29.3%	29.3%
Non-Hispanic Black or African American	1.8%	1.7%	1.7%	1.7%	1.1%	1.6%
All Other Non-Hispanic Race/Ethnicities	3.2%	3.9%	3.1%	4.1%	3.2%	3.2%
Older Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.7%	12.2%	11.7%	10.0%	9.2%	11.2%
Non-Hispanic White	47.2%	44.2%	44.2%	44.2%	48.2%	47.2%
Non-Hispanic Asian	27.6%	27.1%	21.8%	26.1%	21.9%	26.1%
Non-Hispanic Black or African American	1.8%	1.8%	1.8%	1.8%	0.9%	1.6%
All Other Non-Hispanic Race/Ethnicities	13.7%	13.7%	18.5%	15.1%	13.2%	13.2%

Plan C Revision 1

Plan C- Revision 1
Percentage Spread:
6.90%

Irvine Ranch Water District- Plan C- Revision 1

Table 1. Population by Division and Race/Ethnicity

	DIVISION				
	1	2	3	4	5
Total Population	47,217	48,734	46,449	47,907	48,140
Hispanic or Latino of any Race	7,907	8,356	11,979	8,543	6,217
Non-Hispanic White	34,817	27,275	34,297	36,926	39,181
Non-Hispanic Asian	21,208	22,954	14,497	13,118	12,935
Non-Hispanic Black or African American	843	1,281	1,065	1,217	724
All Other Non-Hispanic Race/Ethnicities	3,072	8,944	7,662	8,426	3,180
Population 18 Years and Older	40,188	42,330	40,821	42,496	42,711
Hispanic or Latino of any Race	4,994	5,748	8,537	4,739	4,883
Non-Hispanic White	26,753	22,422	28,097	29,535	31,263
Non-Hispanic Asian	15,248	15,231	11,244	10,793	14,551
Non-Hispanic Black or African American	481	668	540	554	420
All Other Non-Hispanic Race/Ethnicities	1,423	1,949	1,540	2,206	936
Citizen Voting Age Population (CVAP)	48,790	45,613	47,913	49,452	52,333
Hispanic or Latino of any Race	4,740	5,111	8,534	4,848	4,440
Non-Hispanic White	25,854	19,822	25,236	28,017	31,241
Non-Hispanic Asian	16,488	16,710	10,470	12,858	11,997
Non-Hispanic Black or African American	880	1,146	1,249	973	462
All Other Non-Hispanic Race/Ethnicities	1,548	1,805	1,777	1,730	789

Target Division Population 47,490
Division Difference from Target Population -243
Percent Difference from Target Population -0.51%
Percent Difference from Target Population 0.10%
Percentage Spread 0.10%

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	16.7%	17.2%	25.8%	17.8%	12.9%
Non-Hispanic White	73.6%	55.8%	73.8%	77.1%	81.4%
Non-Hispanic Asian	44.9%	47.1%	31.2%	27.4%	26.9%
Non-Hispanic Black or African American	1.8%	2.6%	2.3%	2.5%	1.5%
All Other Non-Hispanic Race/Ethnicities	6.5%	18.3%	15.9%	17.2%	7.9%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	12.4%	13.8%	20.7%	11.2%	11.4%
Non-Hispanic White	67.4%	52.9%	72.9%	76.4%	80.9%
Non-Hispanic Asian	35.1%	40.8%	23.5%	21.3%	28.3%
Non-Hispanic Black or African American	2.4%	3.6%	3.1%	3.1%	2.3%
All Other Non-Hispanic Race/Ethnicities	8.0%	11.2%	9.2%	11.6%	6.1%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.7%	11.2%	17.8%	9.8%	8.5%
Non-Hispanic White	53.2%	40.2%	53.0%	58.9%	65.9%
Non-Hispanic Asian	23.6%	23.1%	14.8%	14.1%	22.8%
Non-Hispanic Black or African American	1.8%	2.3%	2.3%	2.0%	0.9%
All Other Non-Hispanic Race/Ethnicities	13.7%	18.2%	15.1%	16.2%	9.6%

Plan D

Plan D
Percentage Spread:
4.90%

Irvine Ranch Water District- Plan D

Table 1. Population by Division and Race/Ethnicity

	DIVISION				
	1	2	3	4	5
Total Population	49,017	47,632	49,353	47,317	46,026
Hispanic or Latino of any Race	14,249	7,813	7,213	8,607	6,120
Non-Hispanic White	41,119	38,817	42,140	38,190	39,706
Non-Hispanic Asian	15,168	16,648	13,012	10,345	10,362
Non-Hispanic Black or African American	1,026	1,045	1,082	1,155	710
All Other Non-Hispanic Race/Ethnicities	2,738	3,664	3,199	3,517	1,161
Population 18 Years and Older	41,570	40,715	42,430	41,282	40,391
Hispanic or Latino of any Race	4,544	5,193	5,074	6,749	4,874
Non-Hispanic White	31,440	27,325	32,739	29,342	30,641
Non-Hispanic Asian	9,565	10,847	7,494	5,971	5,913
Non-Hispanic Black or African American	511	774	634	1,009	601
All Other Non-Hispanic Race/Ethnicities	1,479	1,541	1,489	2,219	1,206
Citizen Voting Age Population (CVAP)	42,544	41,512	43,182	41,493	40,517
Hispanic or Latino of any Race	4,590	4,574	4,892	4,604	4,264
Non-Hispanic White	31,329	28,854	34,935	31,296	31,511
Non-Hispanic Asian	9,180	11,643	8,558	6,662	6,540
Non-Hispanic Black or African American	363	1,114	1,064	1,173	617
All Other Non-Hispanic Race/Ethnicities	1,175	1,621	1,587	1,963	1,220

Target Division Population 47,430
Division Difference from Target Population 1,202
Percent Difference from Target Population 2.53%
Percent Difference from Target Population 0.26%
Percentage Spread 4.90%

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	29.1%	16.4%	14.6%	18.2%	13.3%
Non-Hispanic White	83.9%	81.5%	85.4%	80.5%	86.1%
Non-Hispanic Asian	31.0%	34.9%	26.5%	21.9%	22.5%
Non-Hispanic Black or African American	2.3%	2.2%	2.2%	2.4%	1.5%
All Other Non-Hispanic Race/Ethnicities	5.6%	7.6%	6.4%	7.4%	2.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	11.0%	12.5%	12.0%	16.3%	12.0%
Non-Hispanic White	66.8%	67.3%	77.0%	70.7%	75.7%
Non-Hispanic Asian	23.5%	26.6%	17.4%	14.2%	14.6%
Non-Hispanic Black or African American	1.4%	1.9%	1.5%	2.4%	1.5%
All Other Non-Hispanic Race/Ethnicities	2.8%	3.7%	3.6%	4.9%	3.3%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.8%	10.5%	11.3%	13.6%	10.5%
Non-Hispanic White	65.2%	69.1%	79.2%	72.4%	76.4%
Non-Hispanic Asian	21.8%	27.8%	19.6%	15.3%	15.8%
Non-Hispanic Black or African American	0.8%	2.7%	2.4%	2.6%	1.5%
All Other Non-Hispanic Race/Ethnicities	3.4%	4.4%	3.9%	4.9%	3.2%

Plan D Revision 1

Plan D- Revision 1
Percentage Spread:
4.90%

Irvine Ranch Water District- Plan D- Revision 1

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	58,457	67,602	65,360	57,184	68,029	317,131
Hispanic or Latino of any Race	12,543	7,853	7,313	6,607	8,100	46,521
Non-Hispanic White	43,187	38,932	40,844	36,545	49,708	177,187
Non-Hispanic Asian	11,184	24,546	23,621	25,545	14,262	109,179
Non-Hispanic Black or African American	1,020	1,045	1,062	1,110	715	5,179
All Other Non-Hispanic Race/Ethnicities	2,723	1,084	973	6,547	3,128	13,661
Population 18 Years and Older	31,891	48,715	46,450	33,278	56,093	261,853
Hispanic or Latino of any Race	6,562	3,749	3,679	3,168	4,214	28,361
Non-Hispanic White	32,446	22,525	25,179	21,130	34,061	134,763
Non-Hispanic Asian	8,565	19,542	17,349	19,875	15,735	81,062
Non-Hispanic Black or African American	813	774	861	1,059	605	4,029
All Other Non-Hispanic Race/Ethnicities	1,429	1,043	890	2,718	1,260	6,166
Citizen Voting Age Population (CVAP)	30,844	44,370	42,542	42,488	53,050	244,343
Hispanic or Latino of any Race	6,562	4,568	4,882	4,004	6,784	27,413
Non-Hispanic White	31,939	28,400	34,310	24,794	31,571	135,510
Non-Hispanic Asian	9,180	23,443	16,545	13,603	11,542	68,711
Non-Hispanic Black or African American	567	1,124	1,084	1,173	462	4,810
All Other Non-Hispanic Race/Ethnicities	1,575	1,681	1,180	1,763	1,791	7,829
Target Division Population	67,430					
Division Difference from Target Population	1,227	172	-2,080	808	578	
Percent Difference from Target Population	1.82%	0.25%	-3.08%	1.19%	0.86%	
Percentage Spread	4.90%					

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	19.8%	11.6%	11.0%	9.8%	11.9%
Non-Hispanic White	65.0%	42.8%	47.2%	45.2%	56.4%
Non-Hispanic Asian	18.9%	36.3%	35.8%	37.8%	27.0%
Non-Hispanic Black or African American	1.7%	1.5%	1.7%	1.9%	1.2%
All Other Non-Hispanic Race/Ethnicities	4.0%	1.8%	1.6%	3.2%	2.5%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	20.6%	10.8%	10.1%	9.6%	11.8%
Non-Hispanic White	63.4%	45.7%	50.3%	47.1%	56.7%
Non-Hispanic Asian	26.5%	39.3%	34.2%	37.0%	27.8%
Non-Hispanic Black or African American	1.8%	1.6%	1.7%	1.9%	1.2%
All Other Non-Hispanic Race/Ethnicities	2.8%	2.2%	1.9%	3.2%	2.3%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	21.4%	10.2%	9.6%	10.2%	12.7%
Non-Hispanic White	62.8%	43.5%	48.2%	45.4%	55.4%
Non-Hispanic Asian	24.1%	40.0%	33.8%	39.2%	27.3%
Non-Hispanic Black or African American	1.9%	2.0%	2.0%	2.0%	1.3%
All Other Non-Hispanic Race/Ethnicities	3.1%	1.3%	1.4%	3.0%	2.3%

Plan E

Plan E
Percentage Spread:
6.83%

Irvine Ranch Water District- Plan E

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	66,374	67,029	65,111	68,006	69,721	337,131
Hispanic or Latino of any Race	13,091	5,198	5,997	6,830	8,121	46,221
Non-Hispanic White	38,495	28,814	31,022	31,288	40,881	171,141
Non-Hispanic Asian	22,062	27,826	24,900	23,681	28,798	109,179
Non-Hispanic Black or African American	1,680	1,020	976	1,411	728	5,179
All Other Non-Hispanic Race/Ethnicities	2,046	8,220	3,186	3,476	3,174	15,681
Population 18 Years and Older	35,065	49,353	49,621	34,402	57,812	244,843
Hispanic or Latino of any Race	8,801	4,321	4,230	4,279	4,466	28,511
Non-Hispanic White	30,789	22,543	25,149	26,174	34,508	134,763
Non-Hispanic Asian	8,188	20,113	17,012	18,717	16,602	81,062
Non-Hispanic Black or African American	828	747	748	1,001	617	4,029
All Other Non-Hispanic Race/Ethnicities	1,449	1,620	1,830	2,130	1,417	6,166
Citizen Voting Age Population (CVAP)	34,200	48,174	48,480	47,000	54,251	244,343
Hispanic or Latino of any Race	6,181	4,427	4,399	5,179	4,681	27,413
Non-Hispanic White	31,137	21,256	25,450	24,105	31,401	135,510
Non-Hispanic Asian	8,528	22,090	14,243	14,196	11,730	68,711
Non-Hispanic Black or African American	1,207	1,325	1,466	1,561	662	4,810
All Other Non-Hispanic Race/Ethnicities	1,807	1,883	1,663	1,929	1,299	7,829
Target Division Population	67,430					
Division Difference from Target Population	-1,056	-401	-1,215	1,478	1,291	
Percent Difference from Target Population	-1.56%	-0.59%	-1.84%	2.16%	1.90%	
Percentage Spread	6.83%					

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	19.7%	7.7%	9.2%	12.8%	11.8%
Non-Hispanic White	57.9%	42.9%	47.6%	45.9%	58.5%
Non-Hispanic Asian	33.3%	41.2%	38.3%	34.8%	27.0%
Non-Hispanic Black or African American	2.5%	1.5%	1.5%	2.0%	1.2%
All Other Non-Hispanic Race/Ethnicities	4.0%	4.8%	4.9%	3.0%	2.5%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	17.7%	8.8%	8.5%	11.3%	7.8%
Non-Hispanic White	61.4%	45.8%	50.4%	48.1%	56.9%
Non-Hispanic Asian	34.4%	40.8%	35.9%	34.4%	27.8%
Non-Hispanic Black or African American	1.8%	1.5%	1.5%	2.0%	1.1%
All Other Non-Hispanic Race/Ethnicities	2.9%	3.2%	3.2%	2.1%	1.9%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	17.7%	9.2%	9.3%	11.9%	11.7%
Non-Hispanic White	64.1%	43.8%	54.7%	51.8%	61.8%
Non-Hispanic Asian	27.3%	41.4%	30.7%	30.0%	21.4%
Non-Hispanic Black or African American	2.3%	2.5%	2.0%	2.3%	0.9%
All Other Non-Hispanic Race/Ethnicities	2.8%	2.8%	2.3%	4.1%	3.2%



IRWD Criteria for Drawing Division Boundaries

- 1) Each director division shall contain a nearly equal number of inhabitants as reflected in the most recent decennial census.
- 2) Divisions shall be drawn in a manner that complies with the Federal Voting Rights Act.
- 3) Divisions shall consist of contiguous territory.
- 4) Divisions will be in as compact a form as possible given the other criteria set forth.
- 5) Division boundaries will respect communities of interest as much as possible.
- 6) Division boundaries will consider jurisdictional boundaries as much as possible.
- 7) Division boundaries will observe topography and geography such as man-made and natural geographic features insofar as practicable.
- 8) Division boundaries will attempt to allow the voters to retain current Directors if they choose by avoiding placing Directors in the same division insofar as this does not conflict with federal or state law requirements.
- 9) To the extent proposed divisions do not contain equal population as reflected in the most recent decennial census, population growth since the last decennial census and anticipated population growth before the next decennial census may be considered so long as population deviation remains within the parameters allowed by law.

Population Spread by Proposed Plan

	Population Spread
Plan A	3.19%
Plan A- Rev. 1	3.19%
Plan B	8.60%
Plan B- Rev. 1	8.61%
Plan C	6.89%
Plan C- Rev. 1	6.90%
Plan D	4.90%
Plan D- Rev. 1	4.90%
Plan E	6.83%

Proposed Divisions with Largest Share of Citizen Voting Age Population (CVAP)

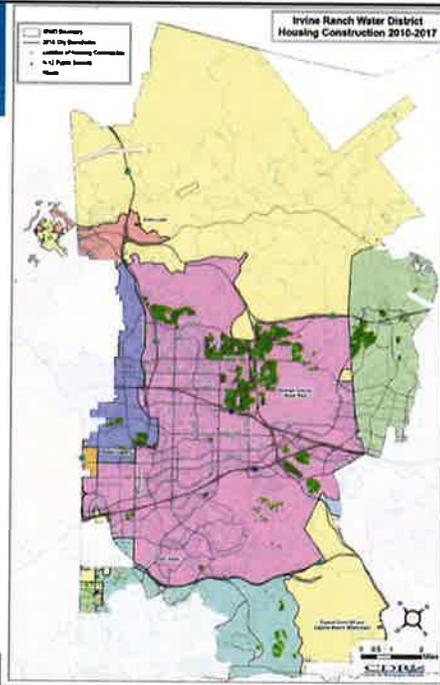
	Division with largest Hispanic CVAP	Share	Division with largest NH Asian CVAP	Share
Plan A	2	12.8%	1	38.2%
Plan A- Rev. 1	2	12.8%	1	38.2%
Plan B	2	12.5%	1	38.2%
Plan B- Rev. 1	2	12.5%	1	38.2%
Plan C	5	12.7%	2	37.1%
Plan C- Rev. 1	5	12.7%	2	37.1%
Plan D	1	13.0%	2	40.0%
Plan D- Rev. 1	1	13.0%	2	40.0%
Plan E	1 & 5	12.7%	2	41.6%

How many current board members are in each proposed division?

	1	2	3	4	5
Plan A	2	0	0	2	1
Plan A- Rev. 1	2	0	0	2	1
Plan B	2	0	0	2	1
Plan B- Rev. 1	2	0	0	2	1
Plan C	1	1	1	1	1
Plan C- Rev. 1	1	1	1	1	1
Plan D	1	1	1	1	1
Plan D- Rev. 1	1	1	1	1	1
Plan E	1	1	1	1	1

Housing Growth

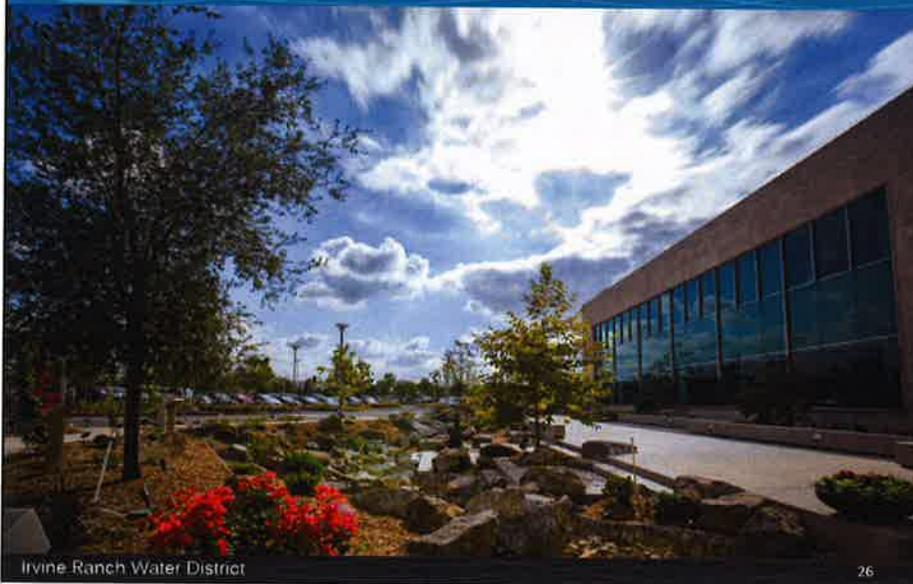
26,283 units constructed between 2010 and 2017



Irvine Ranch Water District

25

Next Steps

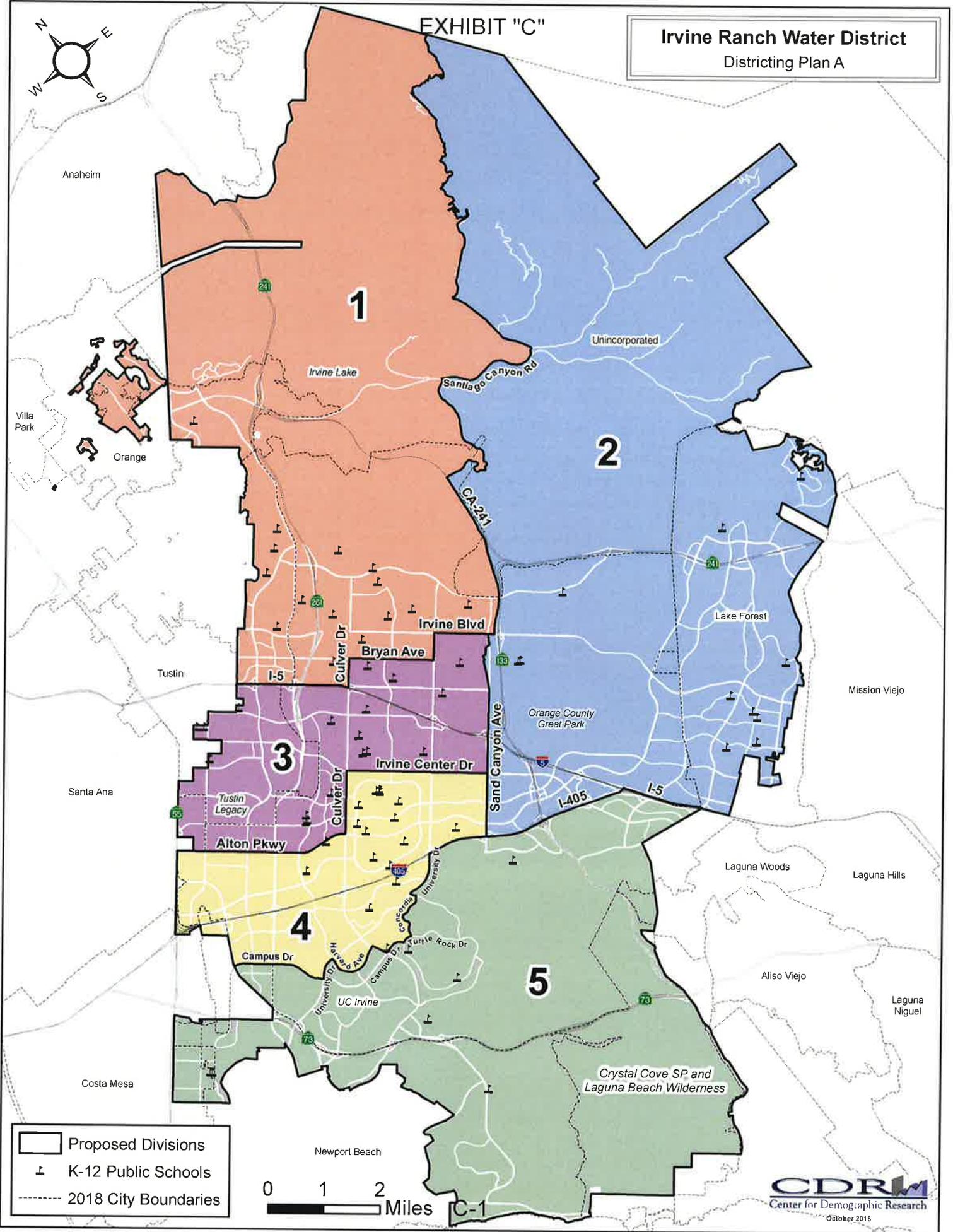


Irvine Ranch Water District

26

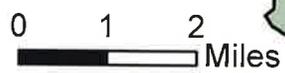
EXHIBIT "C"

Irvine Ranch Water District Districting Plan A



Legend:

- Proposed Divisions
- K-12 Public Schools
- 2018 City Boundaries



Irvine Ranch Water District- Plan A

Table 1. Population by Division and Race/Ethnicity

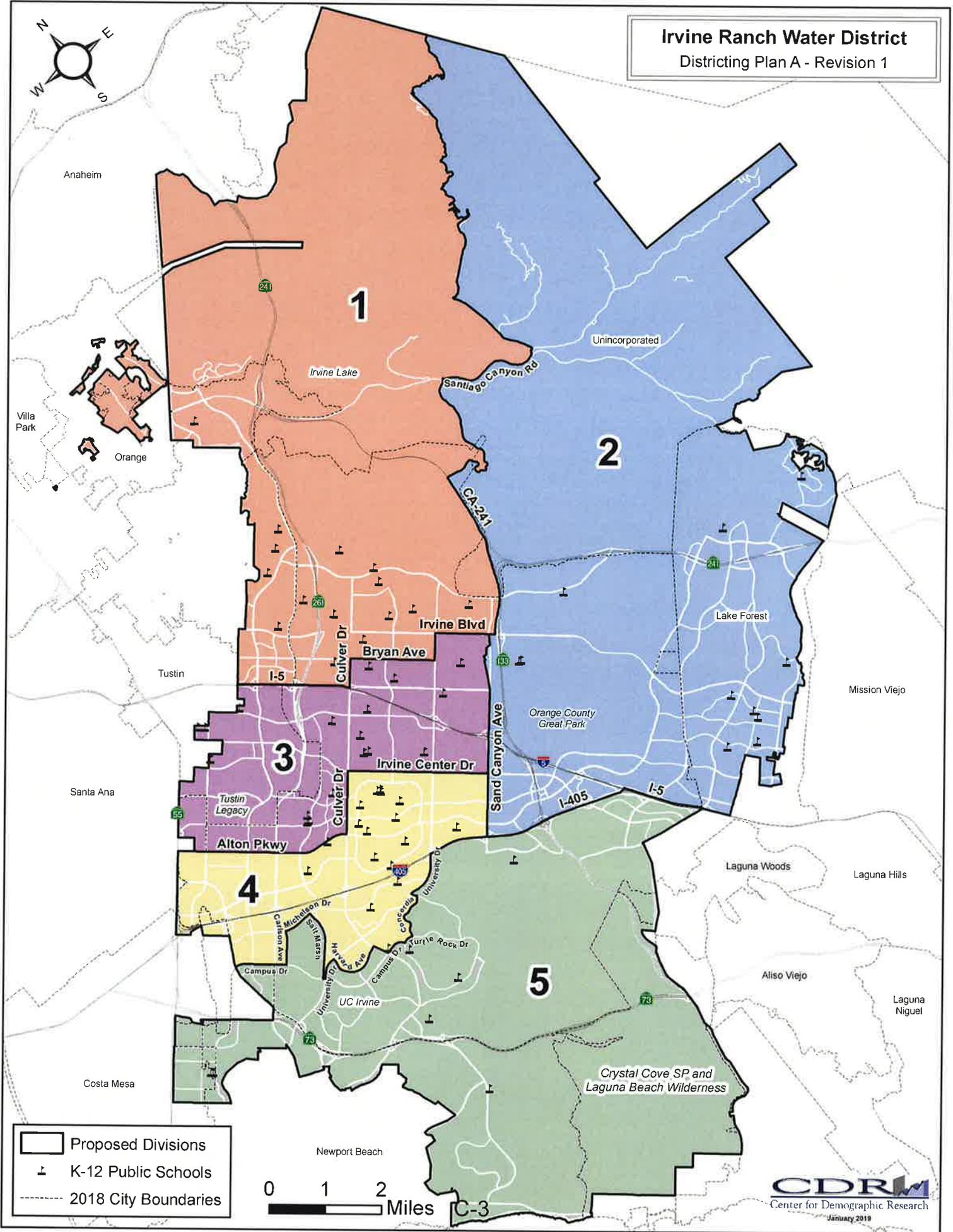
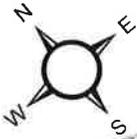
	DIVISION					Total
	1	2	3	4	5	
Total Population	67,229	66,316	67,365	68,468	67,773	337,151
Hispanic or Latino of any Race	7,092	13,223	7,809	6,058	6,143	40,325
Non-Hispanic White	31,151	39,670	27,294	34,423	38,659	171,197
Non-Hispanic Asian	25,013	9,693	27,673	23,253	19,143	104,775
Non-Hispanic Black or African-American	993	1,060	1,284	1,123	713	5,173
All Other Non-Hispanic Races/Ethnicities	2,980	2,670	3,305	3,611	3,115	15,681
Population 18 Years and Older	49,792	50,705	50,950	54,799	55,405	261,651
Hispanic or Latino of any Race	4,857	8,993	5,422	4,428	4,831	28,531
Non-Hispanic White	24,432	31,702	21,987	28,806	31,836	138,763
Non-Hispanic Asian	18,245	7,661	20,748	18,347	16,061	81,062
Non-Hispanic Black or African-American	751	855	933	888	602	4,029
All Other Non-Hispanic Races/Ethnicities	1,507	1,494	1,860	2,330	2,075	9,266
Citizen Voting Age Population (CVAP)	47,635	49,668	46,432	48,938	51,670	244,343
Hispanic or Latino of any Race	4,875	6,338	5,553	4,097	6,550	27,413
Non-Hispanic White	21,773	32,994	20,425	29,094	31,224	135,510
Non-Hispanic Asian	18,195	7,835	17,550	13,355	11,796	68,731
Non-Hispanic Black or African-American	1,093	1,081	1,224	950	462	4,810
All Other Non-Hispanic Races/Ethnicities	1,699	1,420	1,680	1,442	1,638	7,879

Target Division Population	67,430					
Division Difference from Target Population	-201	-1,114	-65	1,038	343	
Percent Difference from Target Population	-0.30%	-1.65%	-0.10%	1.54%	0.51%	
Percentage Spread	3.19%					

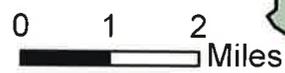
Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.5%	19.9%	11.6%	8.8%	9.1%
Non-Hispanic White	46.3%	59.8%	40.5%	50.3%	57.0%
Non-Hispanic Asian	37.2%	14.6%	41.1%	34.0%	28.2%
Non-Hispanic Black or African-American	1.5%	1.6%	1.9%	1.6%	1.1%
All Other Non-Hispanic Races/Ethnicities	4.4%	4.0%	4.9%	5.3%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.8%	17.7%	10.6%	8.1%	8.7%
Non-Hispanic White	49.1%	62.5%	43.2%	52.6%	57.5%
Non-Hispanic Asian	36.6%	15.1%	40.7%	33.5%	29.0%
Non-Hispanic Black or African-American	1.5%	1.7%	1.8%	1.6%	1.1%
All Other Non-Hispanic Races/Ethnicities	3.0%	2.9%	3.7%	4.3%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.2%	12.8%	12.0%	8.4%	12.7%
Non-Hispanic White	45.7%	66.4%	44.0%	59.5%	60.4%
Non-Hispanic Asian	38.2%	15.8%	37.8%	27.3%	22.8%
Non-Hispanic Black or African-American	2.3%	2.2%	2.6%	1.9%	0.9%
All Other Non-Hispanic Races/Ethnicities	3.6%	2.9%	3.6%	2.9%	3.2%

Irvine Ranch Water District
 Districting Plan A - Revision 1



Proposed Divisions
 K-12 Public Schools
 2018 City Boundaries



Irvine Ranch Water District- Plan A- Revision 1

Table 1. Population by Division and Race/Ethnicity

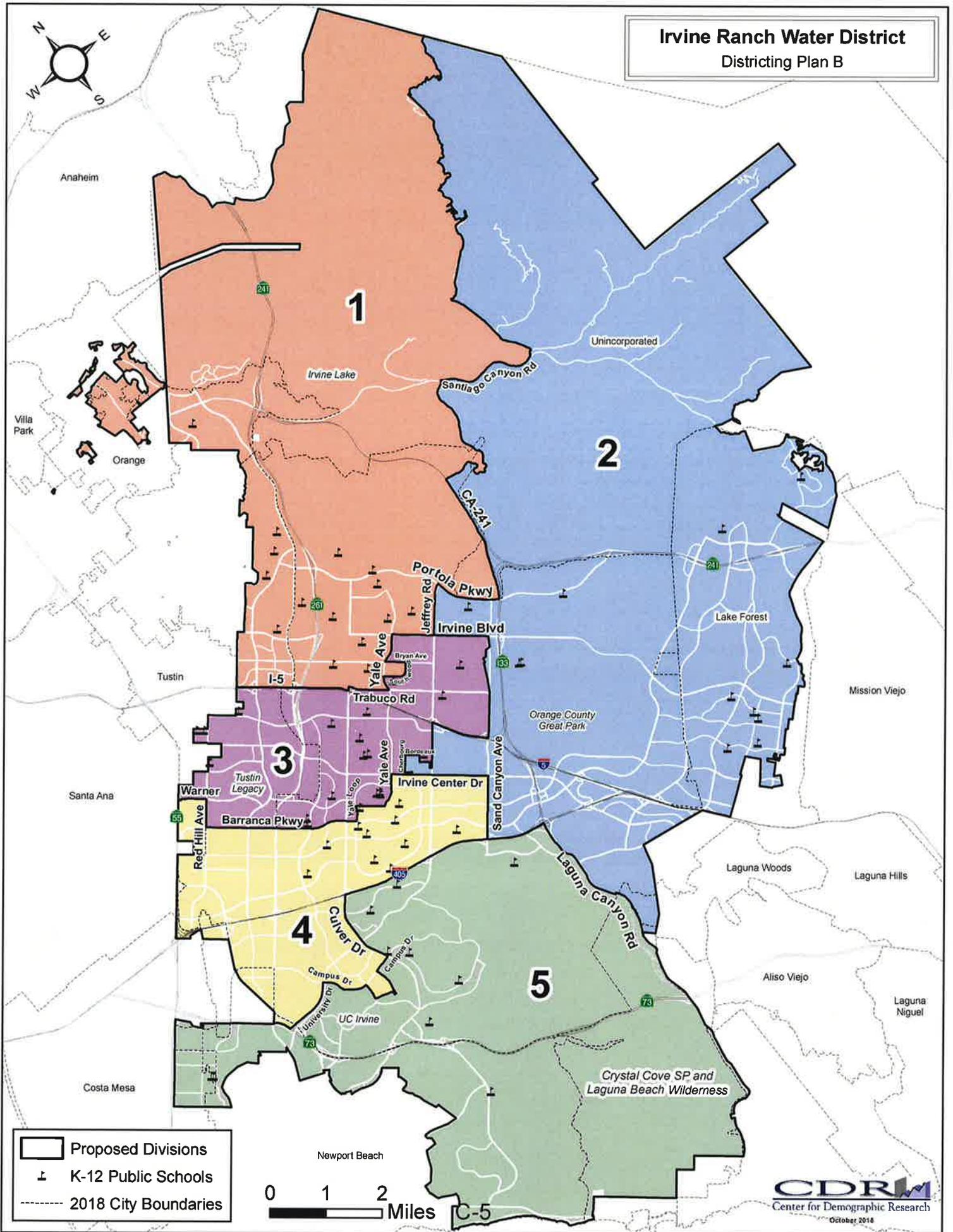
	DIVISION					Total
	1	2	3	4	5	
Total Population	67,229	66,316	67,365	68,465	67,776	337,151
Hispanic or Latino of any Race	7,092	13,223	7,809	6,058	6,143	40,325
Non-Hispanic White	31,151	39,670	27,294	34,420	38,662	171,197
Non-Hispanic Asian	25,013	9,693	27,673	23,253	19,143	104,775
Non-Hispanic Black or African-American	993	1,060	1,284	1,123	713	5,173
All Other Non-Hispanic Races/Ethnicities	2,980	2,670	3,305	3,611	3,115	15,681
Population 18 Years and Older	49,792	50,705	50,950	54,797	55,407	261,651
Hispanic or Latino of any Race	4,857	8,993	5,422	4,428	4,831	28,531
Non-Hispanic White	24,432	31,702	21,987	28,804	31,838	138,763
Non-Hispanic Asian	18,245	7,661	20,748	18,347	16,061	81,062
Non-Hispanic Black or African-American	751	855	933	888	602	4,029
All Other Non-Hispanic Races/Ethnicities	1,507	1,494	1,860	2,330	2,075	9,266
Citizen Voting Age Population (CVAP)	47,635	49,668	46,432	48,936	51,672	244,343
Hispanic or Latino of any Race	4,875	6,338	5,553	4,097	6,550	27,413
Non-Hispanic White	21,773	32,994	20,425	29,092	31,226	135,510
Non-Hispanic Asian	18,195	7,835	17,550	13,355	11,796	68,731
Non-Hispanic Black or African-American	1,093	1,081	1,224	950	462	4,810
All Other Non-Hispanic Races/Ethnicities	1,699	1,420	1,680	1,442	1,638	7,879

Target Division Population	67,430					
Division Difference from Target Population	-201	-1,114	-65	1,035	346	
Percent Difference from Target Population	-0.30%	-1.65%	-0.10%	1.53%	0.51%	
Percentage Spread	3.19%					

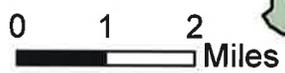
Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.5%	19.9%	11.6%	8.8%	9.1%
Non-Hispanic White	46.3%	59.8%	40.5%	50.3%	57.0%
Non-Hispanic Asian	37.2%	14.6%	41.1%	34.0%	28.2%
Non-Hispanic Black or African-American	1.5%	1.6%	1.9%	1.6%	1.1%
All Other Non-Hispanic Races/Ethnicities	4.4%	4.0%	4.9%	5.3%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.8%	17.7%	10.6%	8.1%	8.7%
Non-Hispanic White	49.1%	62.5%	43.2%	52.6%	57.5%
Non-Hispanic Asian	36.6%	15.1%	40.7%	33.5%	29.0%
Non-Hispanic Black or African-American	1.5%	1.7%	1.8%	1.6%	1.1%
All Other Non-Hispanic Races/Ethnicities	3.0%	2.9%	3.7%	4.3%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.2%	12.8%	12.0%	8.4%	12.7%
Non-Hispanic White	45.7%	66.4%	44.0%	59.4%	60.4%
Non-Hispanic Asian	38.2%	15.8%	37.8%	27.3%	22.8%
Non-Hispanic Black or African-American	2.3%	2.2%	2.6%	1.9%	0.9%
All Other Non-Hispanic Races/Ethnicities	3.6%	2.9%	3.6%	2.9%	3.2%

Irvine Ranch Water District Districting Plan B



- Proposed Divisions
- K-12 Public Schools
- 2018 City Boundaries



C-5

Irvine Ranch Water District- Plan B

Table 1. Population by Division and Race/Ethnicity

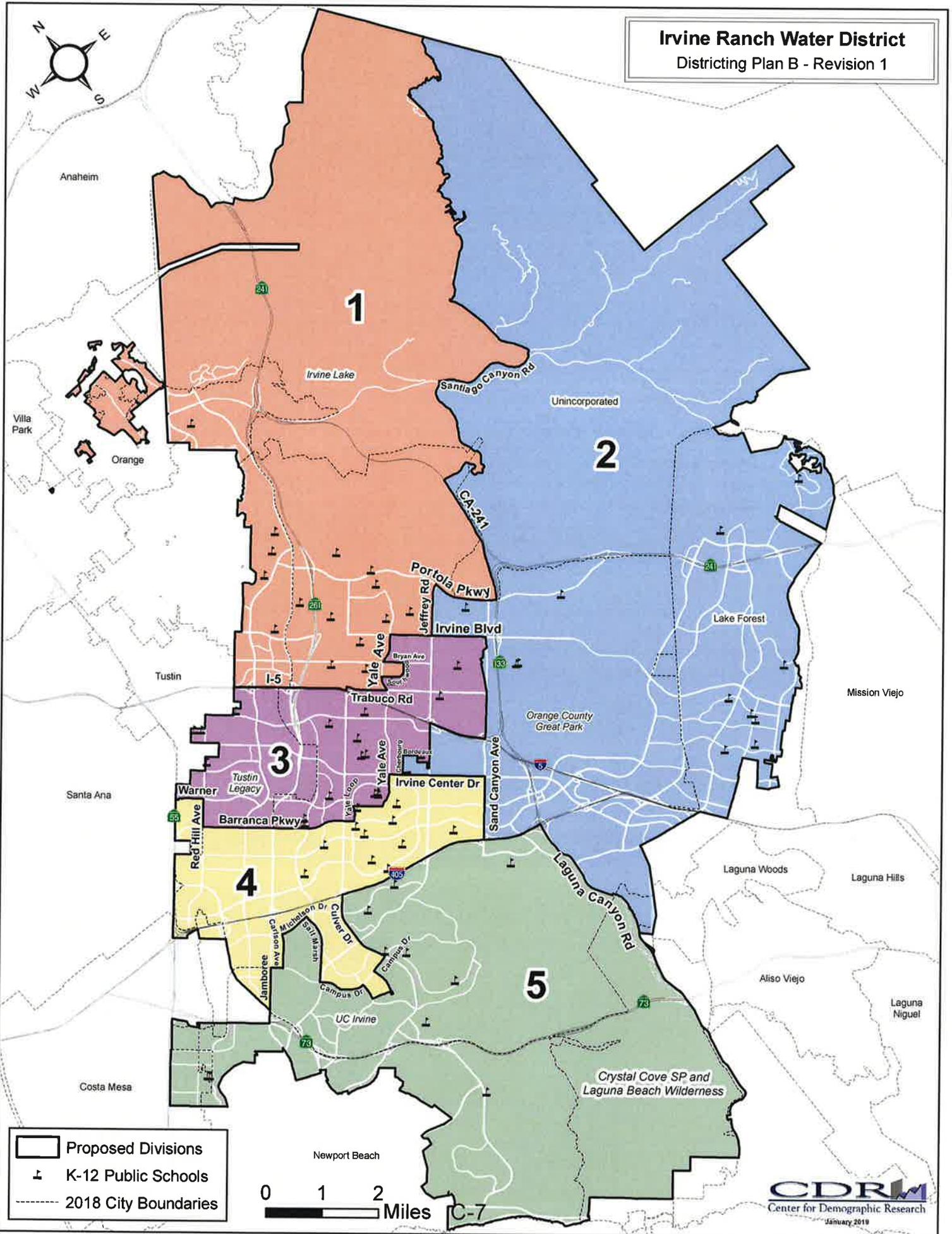
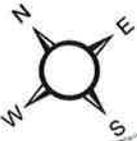
	DIVISION					Total
	1	2	3	4	5	
Total Population	67,094	68,886	65,550	64,912	70,709	337,151
Hispanic or Latino of any Race	7,047	13,468	7,409	6,362	6,039	40,325
Non-Hispanic White	30,783	41,003	27,634	30,375	41,402	171,197
Non-Hispanic Asian	25,335	10,516	26,224	23,382	19,318	104,775
Non-Hispanic Black or African-American	962	1,114	1,143	1,245	709	5,173
All Other Non-Hispanic Races/Ethnicities	2,967	2,785	3,140	3,548	3,241	15,681
Population 18 Years and Older	49,410	52,802	49,516	52,774	57,149	261,651
Hispanic or Latino of any Race	4,792	9,192	5,143	4,685	4,719	28,531
Non-Hispanic White	23,934	32,846	22,260	25,748	33,975	138,763
Non-Hispanic Asian	18,483	8,294	19,577	18,924	15,784	81,062
Non-Hispanic Black or African-American	725	900	815	992	597	4,029
All Other Non-Hispanic Races/Ethnicities	1,476	1,570	1,721	2,425	2,074	9,266
Citizen Voting Age Population (CVAP)	44,561	52,099	47,595	46,874	53,214	244,343
Hispanic or Latino of any Race	4,486	6,512	5,471	4,898	6,046	27,413
Non-Hispanic White	20,375	34,244	21,111	26,098	33,682	135,510
Non-Hispanic Asian	17,041	8,681	18,035	13,387	11,587	68,731
Non-Hispanic Black or African-American	1,085	1,128	1,197	1,008	392	4,810
All Other Non-Hispanic Races/Ethnicities	1,574	1,534	1,781	1,483	1,507	7,879

Target Division Population	67,430					
Division Difference from Target Population	-336	1,456	-1,880	-2,518	3,279	
Percent Difference from Target Population	-0.50%	2.16%	-2.79%	-3.73%	4.86%	
Percentage Spread	8.60%					

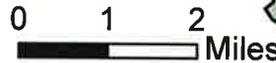
Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.5%	19.6%	11.3%	9.8%	8.5%
Non-Hispanic White	45.9%	59.5%	42.2%	46.8%	58.6%
Non-Hispanic Asian	37.8%	15.3%	40.0%	36.0%	27.3%
Non-Hispanic Black or African-American	1.4%	1.6%	1.7%	1.9%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.4%	4.0%	4.8%	5.5%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.7%	17.4%	10.4%	8.9%	8.3%
Non-Hispanic White	48.4%	62.2%	45.0%	48.8%	59.4%
Non-Hispanic Asian	37.4%	15.7%	39.5%	35.9%	27.6%
Non-Hispanic Black or African-American	1.5%	1.7%	1.6%	1.9%	1.0%
All Other Non-Hispanic Races/Ethnicities	3.0%	3.0%	3.5%	4.6%	3.6%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.1%	12.5%	11.5%	10.4%	11.4%
Non-Hispanic White	45.7%	65.7%	44.4%	55.7%	63.3%
Non-Hispanic Asian	38.2%	16.7%	37.9%	28.6%	21.8%
Non-Hispanic Black or African-American	2.4%	2.2%	2.5%	2.2%	0.7%
All Other Non-Hispanic Races/Ethnicities	3.5%	2.9%	3.7%	3.2%	2.8%

Irvine Ranch Water District
Districting Plan B - Revision 1



Proposed Divisions
 K-12 Public Schools
 2018 City Boundaries



Irvine Ranch Water District- Plan B- Revision 1

Table 1. Population by Division and Race/Ethnicity

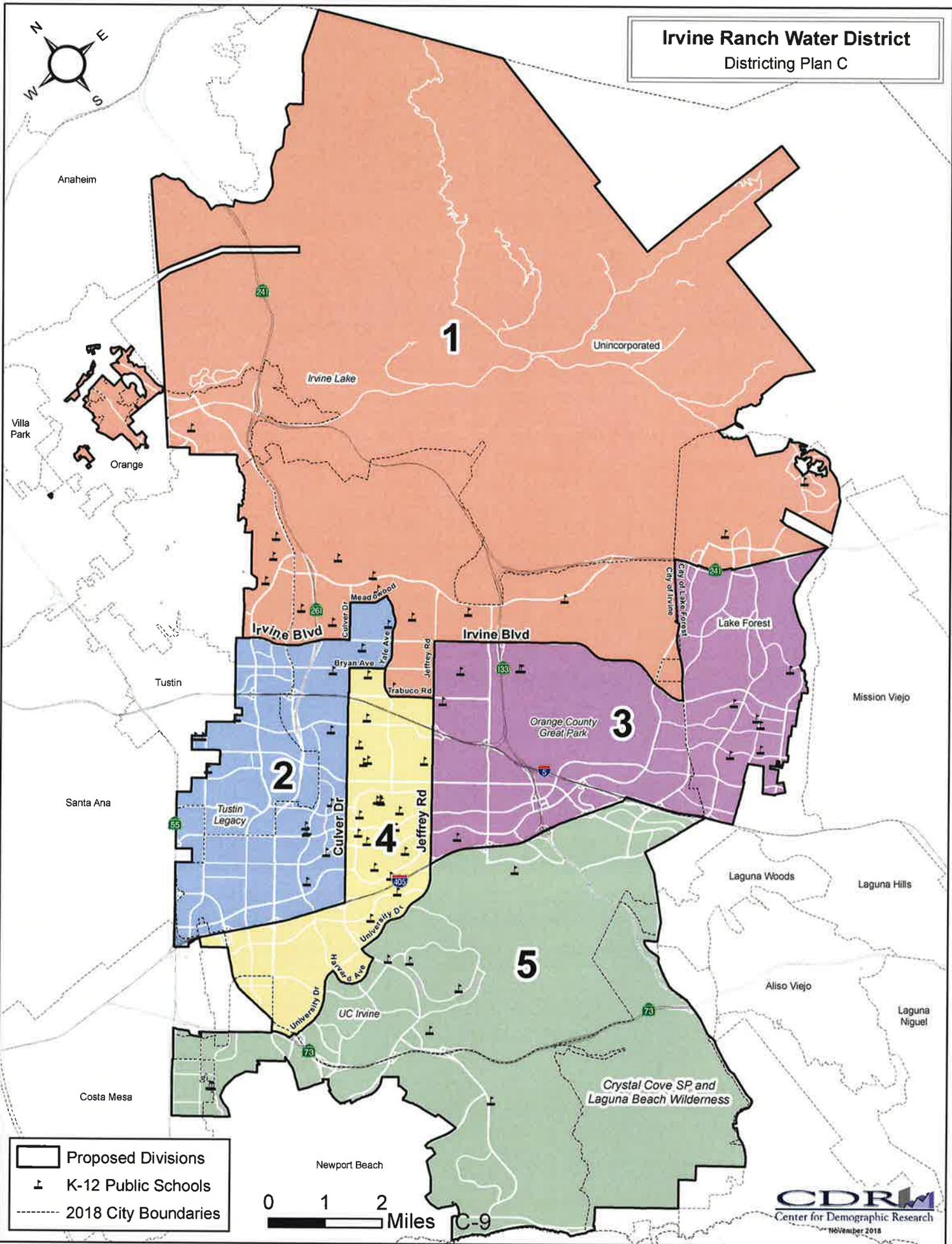
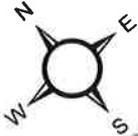
	DIVISION					Total
	1	2	3	4	5	
Total Population	67,094	68,886	65,550	64,909	70,712	337,151
Hispanic or Latino of any Race	7,047	13,468	7,409	6,362	6,039	40,325
Non-Hispanic White	30,783	41,003	27,634	30,372	41,405	171,197
Non-Hispanic Asian	25,335	10,516	26,224	23,382	19,318	104,775
Non-Hispanic Black or African-American	962	1,114	1,143	1,245	709	5,173
All Other Non-Hispanic Races/Ethnicities	2,967	2,785	3,140	3,548	3,241	15,681
Population 18 Years and Older	49,410	52,802	49,516	52,772	57,151	261,651
Hispanic or Latino of any Race	4,792	9,192	5,143	4,685	4,719	28,531
Non-Hispanic White	23,934	32,846	22,260	25,746	33,977	138,763
Non-Hispanic Asian	18,483	8,294	19,577	18,924	15,784	81,062
Non-Hispanic Black or African-American	725	900	815	992	597	4,029
All Other Non-Hispanic Races/Ethnicities	1,476	1,570	1,721	2,425	2,074	9,266
Citizen Voting Age Population (CVAP)	44,561	52,099	47,595	46,872	53,216	244,343
Hispanic or Latino of any Race	4,486	6,512	5,471	4,898	6,046	27,413
Non-Hispanic White	20,375	34,244	21,111	26,096	33,684	135,510
Non-Hispanic Asian	17,041	8,681	18,035	13,387	11,587	68,731
Non-Hispanic Black or African-American	1,085	1,128	1,197	1,008	392	4,810
All Other Non-Hispanic Races/Ethnicities	1,574	1,534	1,781	1,483	1,507	7,879

Target Division Population	67,430					
Division Difference from Target Population	-336	1,456	-1,880	-2,521	3,282	
Percent Difference from Target Population	-0.50%	2.16%	-2.79%	-3.74%	4.87%	
Percentage Spread	8.61%					

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.5%	19.6%	11.3%	9.8%	8.5%
Non-Hispanic White	45.9%	59.5%	42.2%	46.8%	58.6%
Non-Hispanic Asian	37.8%	15.3%	40.0%	36.0%	27.3%
Non-Hispanic Black or African-American	1.4%	1.6%	1.7%	1.9%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.4%	4.0%	4.8%	5.5%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.7%	17.4%	10.4%	8.9%	8.3%
Non-Hispanic White	48.4%	62.2%	45.0%	48.8%	59.5%
Non-Hispanic Asian	37.4%	15.7%	39.5%	35.9%	27.6%
Non-Hispanic Black or African-American	1.5%	1.7%	1.6%	1.9%	1.0%
All Other Non-Hispanic Races/Ethnicities	3.0%	3.0%	3.5%	4.6%	3.6%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.1%	12.5%	11.5%	10.4%	11.4%
Non-Hispanic White	45.7%	65.7%	44.4%	55.7%	63.3%
Non-Hispanic Asian	38.2%	16.7%	37.9%	28.6%	21.8%
Non-Hispanic Black or African-American	2.4%	2.2%	2.5%	2.2%	0.7%
All Other Non-Hispanic Races/Ethnicities	3.5%	2.9%	3.7%	3.2%	2.8%

Irvine Ranch Water District Districting Plan C



 Proposed Divisions
 K-12 Public Schools
 2018 City Boundaries



C-9

Irvine Ranch Water District- Plan C

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	67,287	68,734	64,489	67,504	69,137	337,151
Hispanic or Latino of any Race	7,207	8,366	11,970	6,565	6,217	40,325
Non-Hispanic White	34,971	27,775	34,295	34,978	39,178	171,197
Non-Hispanic Asian	21,208	27,914	14,497	21,318	19,838	104,775
Non-Hispanic Black or African-American	882	1,285	1,065	1,217	724	5,173
All Other Non-Hispanic Races/Ethnicities	3,019	3,394	2,662	3,426	3,180	15,681
Population 18 Years and Older	49,198	52,320	49,821	53,898	56,414	261,651
Hispanic or Latino of any Race	4,994	5,738	8,157	4,759	4,883	28,531
Non-Hispanic White	26,753	22,422	28,090	29,237	32,261	138,763
Non-Hispanic Asian	15,298	21,233	11,188	16,792	16,551	81,062
Non-Hispanic Black or African-American	681	988	846	904	610	4,029
All Other Non-Hispanic Races/Ethnicities	1,472	1,939	1,540	2,206	2,109	9,266
Citizen Voting Age Population (CVAP)	49,766	45,063	47,919	49,264	52,331	244,343
Hispanic or Latino of any Race	4,740	5,511	5,614	4,908	6,640	27,413
Non-Hispanic White	25,854	19,822	29,236	29,019	31,579	135,510
Non-Hispanic Asian	16,698	16,710	10,470	12,856	11,997	68,731
Non-Hispanic Black or African-American	889	1,160	1,328	971	462	4,810
All Other Non-Hispanic Races/Ethnicities	1,585	1,860	1,271	1,510	1,653	7,879

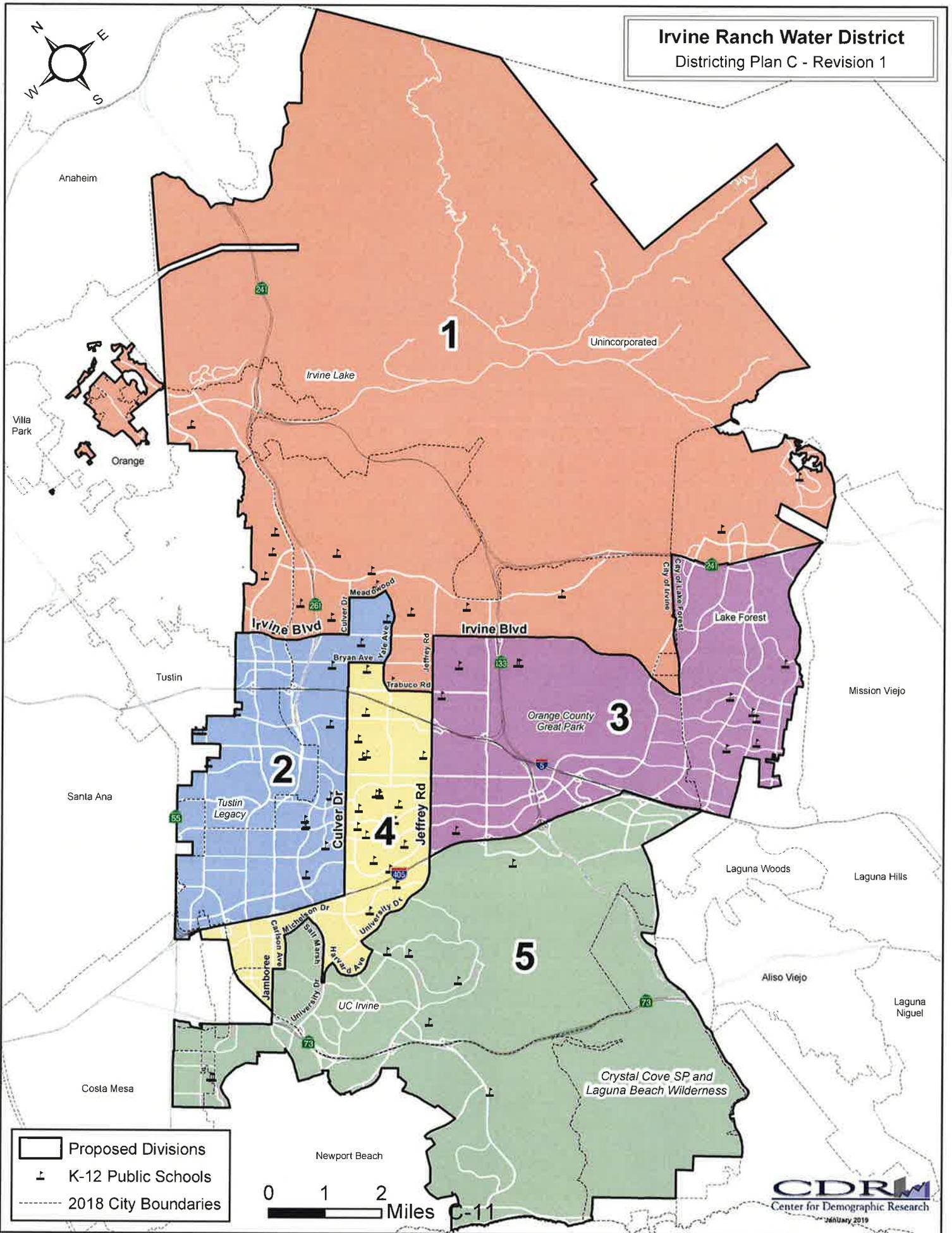
Target Division Population	67,430					
Division Difference from Target Population	-143	1,304	-2,941	74	1,707	
Percent Difference from Target Population	-0.21%	1.93%	-4.36%	0.11%	2.53%	
Percentage Spread	6.89%					

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.7%	12.2%	18.6%	9.7%	9.0%
Non-Hispanic White	52.0%	40.4%	53.2%	51.8%	56.7%
Non-Hispanic Asian	31.5%	40.6%	22.5%	31.6%	28.7%
Non-Hispanic Black or African-American	1.3%	1.9%	1.7%	1.8%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.5%	4.9%	4.1%	5.1%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.2%	11.0%	16.4%	8.8%	8.7%
Non-Hispanic White	54.4%	42.9%	56.4%	54.2%	57.2%
Non-Hispanic Asian	31.1%	40.6%	22.5%	31.2%	29.3%
Non-Hispanic Black or African-American	1.4%	1.9%	1.7%	1.7%	1.1%
All Other Non-Hispanic Races/Ethnicities	3.0%	3.7%	3.1%	4.1%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.5%	12.2%	11.7%	10.0%	12.7%
Non-Hispanic White	52.0%	44.0%	61.0%	58.9%	60.3%
Non-Hispanic Asian	33.6%	37.1%	21.8%	26.1%	22.9%
Non-Hispanic Black or African-American	1.8%	2.6%	2.8%	2.0%	0.9%
All Other Non-Hispanic Races/Ethnicities	3.2%	4.1%	2.7%	3.1%	3.2%

Irvine Ranch Water District

Districting Plan C - Revision 1



Irvine Ranch Water District- Plan C- Revision 1

Table 1. Population by Division and Race/Ethnicity

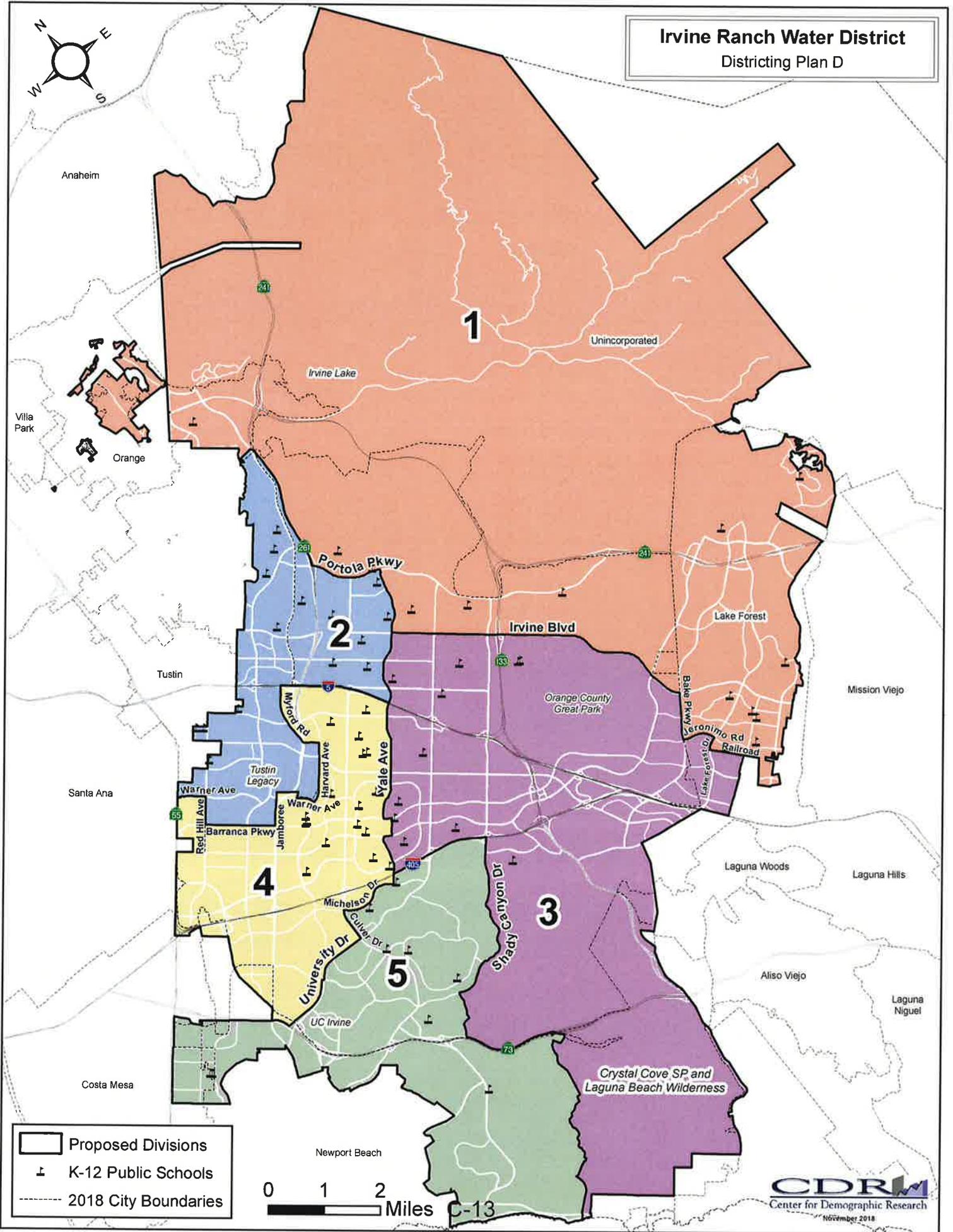
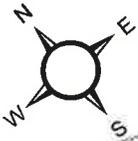
	DIVISION					Total
	1	2	3	4	5	
Total Population	67,287	68,734	64,489	67,501	69,140	337,151
Hispanic or Latino of any Race	7,207	8,366	11,970	6,565	6,217	40,325
Non-Hispanic White	34,971	27,775	34,295	34,975	39,181	171,197
Non-Hispanic Asian	21,208	27,914	14,497	21,318	19,838	104,775
Non-Hispanic Black or African-American	882	1,285	1,065	1,217	724	5,173
All Other Non-Hispanic Races/Ethnicities	3,019	3,394	2,662	3,426	3,180	15,681
Population 18 Years and Older	49,198	52,320	49,821	53,896	56,416	261,651
Hispanic or Latino of any Race	4,994	5,738	8,157	4,759	4,883	28,531
Non-Hispanic White	26,753	22,422	28,090	29,235	32,263	138,763
Non-Hispanic Asian	15,298	21,233	11,188	16,792	16,551	81,062
Non-Hispanic Black or African-American	681	988	846	904	610	4,029
All Other Non-Hispanic Races/Ethnicities	1,472	1,939	1,540	2,206	2,109	9,266
Citizen Voting Age Population (CVAP)	49,766	45,063	47,919	49,262	52,333	244,343
Hispanic or Latino of any Race	4,740	5,511	5,614	4,908	6,640	27,413
Non-Hispanic White	25,854	19,822	29,236	29,017	31,581	135,510
Non-Hispanic Asian	16,698	16,710	10,470	12,856	11,997	68,731
Non-Hispanic Black or African-American	889	1,160	1,328	971	462	4,810
All Other Non-Hispanic Races/Ethnicities	1,585	1,860	1,271	1,510	1,653	7,879

Target Division Population	67,430					
Division Difference from Target Population	-143	1,304	-2,941	71	1,710	
Percent Difference from Target Population	-0.21%	1.93%	-4.36%	0.10%	2.54%	
Percentage Spread	6.90%					

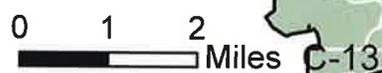
Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.7%	12.2%	18.6%	9.7%	9.0%
Non-Hispanic White	52.0%	40.4%	53.2%	51.8%	56.7%
Non-Hispanic Asian	31.5%	40.6%	22.5%	31.6%	28.7%
Non-Hispanic Black or African-American	1.3%	1.9%	1.7%	1.8%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.5%	4.9%	4.1%	5.1%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	10.2%	11.0%	16.4%	8.8%	8.7%
Non-Hispanic White	54.4%	42.9%	56.4%	54.2%	57.2%
Non-Hispanic Asian	31.1%	40.6%	22.5%	31.2%	29.3%
Non-Hispanic Black or African-American	1.4%	1.9%	1.7%	1.7%	1.1%
All Other Non-Hispanic Races/Ethnicities	3.0%	3.7%	3.1%	4.1%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	9.5%	12.2%	11.7%	10.0%	12.7%
Non-Hispanic White	52.0%	44.0%	61.0%	58.9%	60.3%
Non-Hispanic Asian	33.6%	37.1%	21.8%	26.1%	22.9%
Non-Hispanic Black or African-American	1.8%	2.6%	2.8%	2.0%	0.9%
All Other Non-Hispanic Races/Ethnicities	3.2%	4.1%	2.7%	3.1%	3.2%

Irvine Ranch Water District Districting Plan D



- Proposed Divisions
- K-12 Public Schools
- 2018 City Boundaries



Irvine Ranch Water District- Plan D

Table 1. Population by Division and Race/Ethnicity

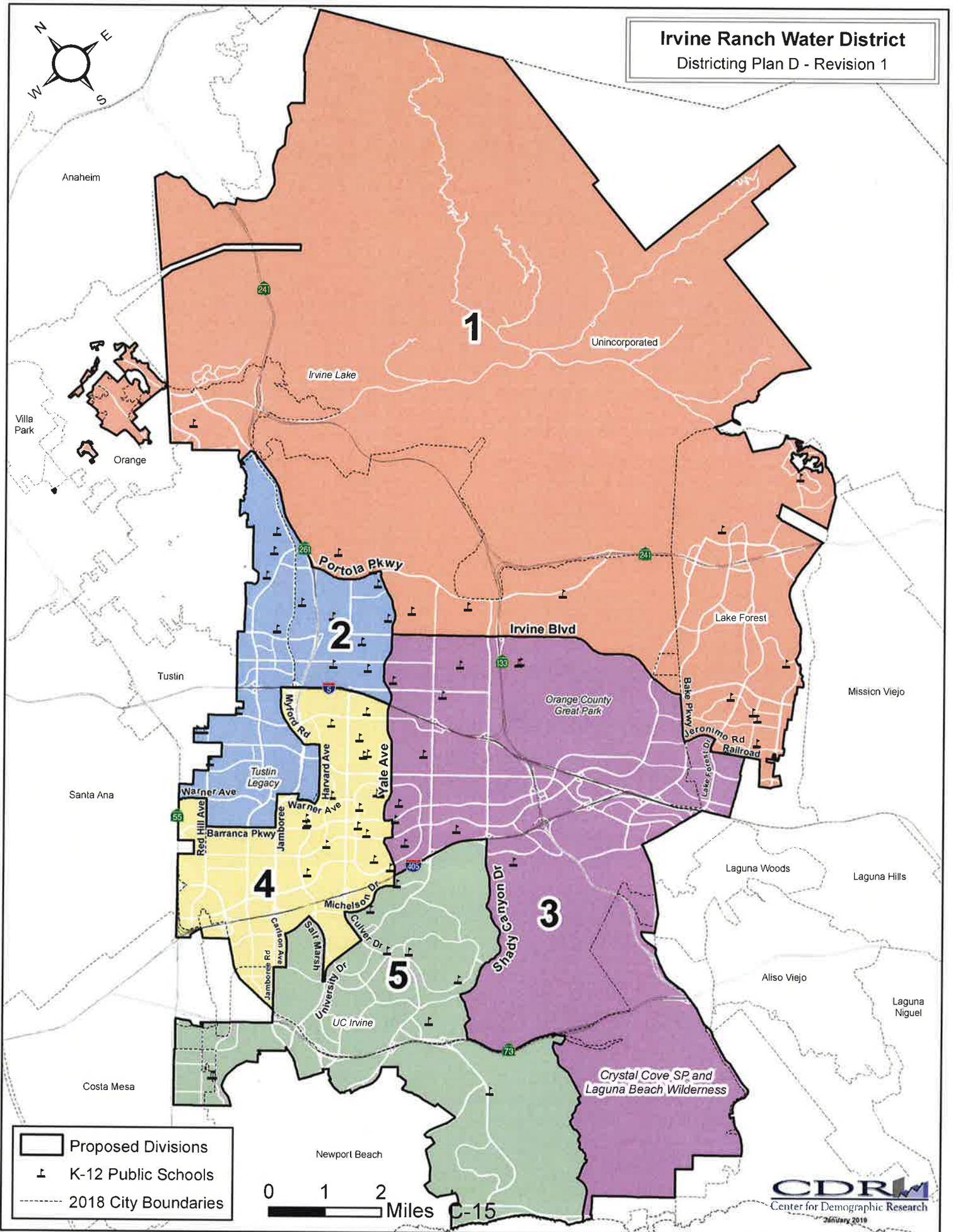
	DIVISION					Total
	1	2	3	4	5	
Total Population	68,657	67,602	65,350	67,537	68,005	337,151
Hispanic or Latino of any Race	12,543	7,853	7,213	6,607	6,109	40,325
Non-Hispanic White	41,197	28,932	30,824	30,538	39,706	171,197
Non-Hispanic Asian	11,168	26,688	23,012	25,545	18,362	104,775
Non-Hispanic Black or African-American	1,026	1,045	1,082	1,310	710	5,173
All Other Non-Hispanic Races/Ethnicities	2,723	3,084	3,219	3,537	3,118	15,681
Population 18 Years and Older	51,839	49,715	50,426	53,280	56,391	261,651
Hispanic or Latino of any Race	8,542	5,293	5,073	4,749	4,874	28,531
Non-Hispanic White	32,446	22,525	25,379	25,332	33,081	138,763
Non-Hispanic Asian	8,565	19,542	17,249	19,971	15,735	81,062
Non-Hispanic Black or African-American	811	774	834	1,009	601	4,029
All Other Non-Hispanic Races/Ethnicities	1,475	1,581	1,891	2,219	2,100	9,266
Citizen Voting Age Population (CVAP)	50,644	44,570	50,582	45,490	53,057	244,343
Hispanic or Latino of any Race	6,593	4,568	4,832	4,656	6,764	27,413
Non-Hispanic White	32,329	19,404	26,910	24,296	32,571	135,510
Non-Hispanic Asian	9,180	17,843	16,566	13,602	11,540	68,731
Non-Hispanic Black or African-American	967	1,124	1,084	1,173	462	4,810
All Other Non-Hispanic Races/Ethnicities	1,575	1,631	1,190	1,763	1,720	7,879

Target Division Population	67,430					
Division Difference from Target Population	1,227	172	-2,080	107	575	
Percent Difference from Target Population	1.82%	0.25%	-3.08%	0.16%	0.85%	
Percentage Spread	4.90%					

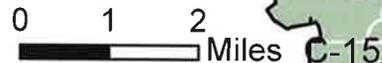
Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	18.3%	11.6%	11.0%	9.8%	9.0%
Non-Hispanic White	60.0%	42.8%	47.2%	45.2%	58.4%
Non-Hispanic Asian	16.3%	39.5%	35.2%	37.8%	27.0%
Non-Hispanic Black or African-American	1.5%	1.5%	1.7%	1.9%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.0%	4.6%	4.9%	5.2%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	16.5%	10.6%	10.1%	8.9%	8.6%
Non-Hispanic White	62.6%	45.3%	50.3%	47.5%	58.7%
Non-Hispanic Asian	16.5%	39.3%	34.2%	37.5%	27.9%
Non-Hispanic Black or African-American	1.6%	1.6%	1.7%	1.9%	1.1%
All Other Non-Hispanic Races/Ethnicities	2.8%	3.2%	3.8%	4.2%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	13.0%	10.2%	9.6%	10.2%	12.7%
Non-Hispanic White	63.8%	43.5%	53.2%	53.4%	61.4%
Non-Hispanic Asian	18.1%	40.0%	32.8%	29.9%	21.8%
Non-Hispanic Black or African-American	1.9%	2.5%	2.1%	2.6%	0.9%
All Other Non-Hispanic Races/Ethnicities	3.1%	3.7%	2.4%	3.9%	3.2%

Irvine Ranch Water District
 Districting Plan D - Revision 1



- Proposed Divisions
- K-12 Public Schools
- 2018 City Boundaries



Irvine Ranch Water District- Plan D- Revision 1

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	68,657	67,602	65,350	67,534	68,008	337,151
Hispanic or Latino of any Race	12,543	7,853	7,213	6,607	6,109	40,325
Non-Hispanic White	41,197	28,932	30,824	30,535	39,709	171,197
Non-Hispanic Asian	11,168	26,688	23,012	25,545	18,362	104,775
Non-Hispanic Black or African-American	1,026	1,045	1,082	1,310	710	5,173
All Other Non-Hispanic Races/Ethnicities	2,723	3,084	3,219	3,537	3,118	15,681
Population 18 Years and Older	51,839	49,715	50,426	53,278	56,393	261,651
Hispanic or Latino of any Race	8,542	5,293	5,073	4,749	4,874	28,531
Non-Hispanic White	32,446	22,525	25,379	25,330	33,083	138,763
Non-Hispanic Asian	8,565	19,542	17,249	19,971	15,735	81,062
Non-Hispanic Black or African-American	811	774	834	1,009	601	4,029
All Other Non-Hispanic Races/Ethnicities	1,475	1,581	1,891	2,219	2,100	9,266
Citizen Voting Age Population (CVAP)	50,644	44,570	50,582	45,488	53,059	244,343
Hispanic or Latino of any Race	6,593	4,568	4,832	4,656	6,764	27,413
Non-Hispanic White	32,329	19,404	26,910	24,294	32,573	135,510
Non-Hispanic Asian	9,180	17,843	16,566	13,602	11,540	68,731
Non-Hispanic Black or African-American	967	1,124	1,084	1,173	462	4,810
All Other Non-Hispanic Races/Ethnicities	1,575	1,631	1,190	1,763	1,720	7,879

Target Division Population	67,430					
Division Difference from Target Population	1,227	172	-2,080	104	578	
Percent Difference from Target Population	1.82%	0.25%	-3.08%	0.15%	0.86%	
Percentage Spread	4.90%					

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	18.3%	11.6%	11.0%	9.8%	9.0%
Non-Hispanic White	60.0%	42.8%	47.2%	45.2%	58.4%
Non-Hispanic Asian	16.3%	39.5%	35.2%	37.8%	27.0%
Non-Hispanic Black or African-American	1.5%	1.5%	1.7%	1.9%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.0%	4.6%	4.9%	5.2%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	16.5%	10.6%	10.1%	8.9%	8.6%
Non-Hispanic White	62.6%	45.3%	50.3%	47.5%	58.7%
Non-Hispanic Asian	16.5%	39.3%	34.2%	37.5%	27.9%
Non-Hispanic Black or African-American	1.6%	1.6%	1.7%	1.9%	1.1%
All Other Non-Hispanic Races/Ethnicities	2.8%	3.2%	3.8%	4.2%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	13.0%	10.2%	9.6%	10.2%	12.7%
Non-Hispanic White	63.8%	43.5%	53.2%	53.4%	61.4%
Non-Hispanic Asian	18.1%	40.0%	32.8%	29.9%	21.7%
Non-Hispanic Black or African-American	1.9%	2.5%	2.1%	2.6%	0.9%
All Other Non-Hispanic Races/Ethnicities	3.1%	3.7%	2.4%	3.9%	3.2%

Irvine Ranch Water District- Plan E

Table 1. Population by Division and Race/Ethnicity

	DIVISION					Total
	1	2	3	4	5	
Total Population	66,378	67,029	65,115	68,908	69,721	337,151
Hispanic or Latino of any Race	13,083	6,186	5,997	8,839	6,220	40,325
Non-Hispanic White	38,945	28,934	31,021	31,496	40,801	171,197
Non-Hispanic Asian	10,662	27,676	23,955	23,684	18,798	104,775
Non-Hispanic Black or African-American	1,030	1,028	976	1,411	728	5,173
All Other Non-Hispanic Races/Ethnicities	2,658	3,205	3,166	3,478	3,174	15,681
Population 18 Years and Older	50,065	49,292	49,901	54,461	57,932	261,651
Hispanic or Latino of any Race	8,863	4,224	4,239	6,239	4,966	28,531
Non-Hispanic White	30,749	22,583	25,149	26,174	34,108	138,763
Non-Hispanic Asian	8,188	20,133	17,932	18,717	16,092	81,062
Non-Hispanic Black or African-American	816	747	746	1,101	619	4,029
All Other Non-Hispanic Races/Ethnicities	1,449	1,605	1,835	2,230	2,147	9,266
Citizen Voting Age Population (CVAP)	48,305	48,274	46,449	47,060	54,255	244,343
Hispanic or Latino of any Race	6,133	4,422	4,395	5,578	6,885	27,413
Non-Hispanic White	31,135	21,206	25,410	24,356	33,403	135,510
Non-Hispanic Asian	8,528	20,090	14,241	14,136	11,736	68,731
Non-Hispanic Black or African-American	1,102	1,225	940	1,061	482	4,810
All Other Non-Hispanic Races/Ethnicities	1,407	1,331	1,463	1,929	1,749	7,879

Target Division Population	67,430					
Division Difference from Target Population	-1,052	-401	-2,315	1,478	2,291	
Percent Difference from Target Population	-1.56%	-0.59%	-3.43%	2.19%	3.40%	
Percentage Spread	6.83%					

Table 2. Share of Division Populations

	DIVISION				
	1	2	3	4	5
Total Population	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	19.7%	9.2%	9.2%	12.8%	8.9%
Non-Hispanic White	58.7%	43.2%	47.6%	45.7%	58.5%
Non-Hispanic Asian	16.1%	41.3%	36.8%	34.4%	27.0%
Non-Hispanic Black or African-American	1.6%	1.5%	1.5%	2.0%	1.0%
All Other Non-Hispanic Races/Ethnicities	4.0%	4.8%	4.9%	5.0%	4.6%
Population 18 Years and Older	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	17.7%	8.6%	8.5%	11.5%	8.6%
Non-Hispanic White	61.4%	45.8%	50.4%	48.1%	58.9%
Non-Hispanic Asian	16.4%	40.8%	35.9%	34.4%	27.8%
Non-Hispanic Black or African-American	1.6%	1.5%	1.5%	2.0%	1.1%
All Other Non-Hispanic Races/Ethnicities	2.9%	3.3%	3.7%	4.1%	3.7%
Citizen Voting Age Population (CVAP)	100.0%	100.0%	100.0%	100.0%	100.0%
Hispanic or Latino of any Race	12.7%	9.2%	9.5%	11.9%	12.7%
Non-Hispanic White	64.5%	43.9%	54.7%	51.8%	61.6%
Non-Hispanic Asian	17.7%	41.6%	30.7%	30.0%	21.6%
Non-Hispanic Black or African-American	2.3%	2.5%	2.0%	2.3%	0.9%
All Other Non-Hispanic Races/Ethnicities	2.9%	2.8%	3.1%	4.1%	3.2%

March 11, 2019

Prepared and

submitted by: K. Swan 

Approved by: Paul A. Cook 

CONSENT CALENDAR

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

SUMMARY:

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

Events/Meetings

Steven LaMar

February 15	Meeting with Zone 7 Water District Board Member, Livermore
February 21	OC Forum's <i>Meet Orange County's Congressional Delegation</i> , Newport
February 21	MWDOC 2019 Water Policy Forum: <i>Bay Delta Initiatives</i> , Costa Mesa
March 5	State Legislative Meetings, Sacramento
March 6	2019 ACWA Legislative Symposium, Sacramento
March 7	City of Irvine Great Park Ice Showcase Ceremonial Opening
March 7	48 th Annual Irvine Police Department Awards Banquet
March 11	Monthly Discussion of District Activities with the General Manager
March 22	District Overview for Water Education Foundation's 2019 Water Leader, Maya Mouawad
March 28	IRWD Tour/Briefing State Water Board, MWRP
April 1-3	National Water Resources Association Federal Water Issues Conference, Washington, D.C.
April 22	Monthly Discussion of District Activities with the General Manager

Mary Aileen Matheis

February 21	OC Forum's <i>Meet Orange County's Congressional Delegation</i> , Newport
February 21	MWDOC 2019 Water Policy Forum: <i>Bay Delta Initiatives</i> , Costa Mesa
March 7	City of Irvine Great Park Ice Showcase Ceremonial Opening
March 7	48 th Annual Irvine Police Department Awards Banquet
March 8	33 rd Annual Orange County Government Leaders' Prayer Breakfast, Irvine
March 17-19	WaterReuse California 2019 Annual Conference, Garden Grove
March 26	IRWD Briefing/Tour for City of Irvine Councilmember Farrah Khan
March 29	Water Education Foundation Santa Ana River Watershed Conference, Fullerton

Doug Reinhart

February 21	MWDOC 2019 Water Policy Forum: <i>Bay Delta Initiatives</i> , Costa Mesa
March 1	Urban Water Institute Spring Water Conference, Palm Springs

Consent Calendar: Ratify/Approve Board of Directors' Attendance at Meetings and Events

March 11, 2019

Page 2

Peer Swan

February 21	OC Forum's <i>Meet Orange County's Congressional Delegation</i> , Newport
March 7	ACWA Energy Committee Meeting, Sacramento
March 26-29	WaterNow's 4 th Annual Summit – Tap into Resilience, Austin, TX
April 26	Delta Sigma Theta Community Awards Banquet, Anaheim Hills

John Withers

February 19	NWRI Meeting with Kevin Hardy and James Swinden
February 21	OC Forum's <i>Meet Orange County's Congressional Delegation</i> , Newport
February 21	MWDOC 2019 Water Policy Forum: <i>Bay Delta Initiatives</i> , Costa Mesa
February 26	Mayor of Irvine's 2019 State of the City
March 5	NWRI Officers Committee Meeting
March 7	City of Irvine Great Park Ice Showcase Ceremonial Opening
March 8	33 rd Annual Orange County Government Leaders' Prayer Breakfast, Irvine
April 10	IRWD Briefing/Tour for City of Lake Forest Mayor Pro Tem Neeki Moatazed

RECOMMENDATION:

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

LIST OF EXHIBITS:

None.

March 11, 2019
Prepared and
Submitted by: L. Bonkowski
Approved by: Paul A. Cook



CONSENT CALENDAR

MINUTES OF BOARD MEETING

SUMMARY:

Provided are the minutes of the February 11, 2019 Regular Board meeting for approval.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

Not applicable.

RECOMMENDATION:

THAT THE MINUTES OF THE FEBRUARY 11, 2019 REGULAR BOARD MEETING BE APPROVED AS PRESENTED.

LIST OF EXHIBITS:

Exhibit "A" – February 11, 2019 Minutes of Regular Board Meeting

EXHIBIT "A"

MINUTES OF REGULAR MEETING – FEBRUARY 11, 2019

The regular meeting of the Board of Directors of the Irvine Ranch Water District (IRWD) was called to order at 5:00 p.m. by President LaMar on February 11, 2019 in the District office, 15600 Sand Canyon Avenue, Irvine, California.

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

Directors Absent: None.

Also Present: General Manager Cook, Executive of Engineering and Water Quality Burton, Executive Director of Water Policy Weghorst, Executive Director of Operations Chambers, Executive Director of Finance and Administration Clary, Director of Water Recycling Operations Zepeda, Director of Treasury and Risk Management Jacobson, Director of Water Resources Sanchez, Director of Water Quality Colston, Legal Counsel Collins, Legal Counsel Roux, Dintzer, and Wickersham of Alston & Bird, Secretary Bonkowski, Assistant Secretary Swan, Government Relations Officer/Deputy General Counsel Compton, Mr. Robert Hunter, Mr. Karl Seckel, Mr. Bruce Newell, staff and members of the public.

WRITTEN AND ORAL COMMUNICATIONS: None.

ITEMS TOO LATE TO BE AGENDIZED: None.

WORKSHOP

IRWD WATER BANKING OBJECTIVES, CAPACITIES AND SOURCES

Using a PowerPoint presentation, Director of Water Resources Sanchez highlighted the purpose of the IRWD Water Banking Program which is to capture and store water available in wet years for customer use in droughts and during supply interruptions. Ms. Sanchez highlighted the District's policy principles including: 1) the need for supplemental supplies and storage facilities for use during droughts and major supply interruptions; 2) securing low cost and diverse water supplies to benefit the District's customers; 3) developing partnerships for mutually beneficial exchanges; 4) long-term equity ownership of facilities; 5) minimizing third-party impacts; and 6) sharing water supply reliability benefits. She reviewed the existing banking components and facilities including an aquifer containing 126,000 acre-feet of storage, 761 acres of land for recharge, 13 wells; and three turnouts. She reviewed the District's current sources of water for banking including water from the State Water Project (SWP) and from non-SWP supplies. She said as of February 2019, IRWD had 30,834 acre-feet of storage with IRWD's partners having 8,126 acre-feet of storage. She reviewed extraordinary supply and the need for extraordinary supply, which would be required in the case of natural disasters, such as earthquakes.

Executive Director of Water Policy Weghorst reviewed the use of water banking capacities to various supply programs including Strand Ranch, Stockdale West, and Rosedale's leased storage. Mr. Weghorst reviewed the various scenarios for capacities to meet IRWD's requirements with or without the Syphon Reservoir. He then reviewed the 2014 Central Valley

Project program which allows transfers and exchanges of exchange contractor water, and reviewed its challenges.

Following discussion, President LaMar and members of the Board thanked staff for the update which they found very helpful.

CONSENT CALENDAR

Director Swan asked that Item No. 10, Newport Coast Lift Station Rehabilitation Budget Increase and Bid Rejection be moved to the Action Calendar for discussion. There being no objections, this item was moved accordingly. On MOTION by Swan, seconded and unanimously carried, CONSENT CALENDAR ITEMS 4 THROUGH 9 WERE APPROVED AS FOLLOWS:

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

Recommendation: That the Board ratify/approve the meetings and events for Mary Aileen Matheis, Doug Reinhart, Steve LaMar, Doug Reinhart, Peer Swan and John Withers, as described.

5. MINUTES OF BOARD MEETING

Recommendation: That the minutes of the January 28, 2019 Regular Board meeting be approved as presented.

6. 2019 LEGISLATIVE AND REGULATORY UPDATE

Recommendation: That the Board adopt an "oppose" position on the Safe and Affordable Drinking Water and Exide Cleanup Budget Trailer Bill; a "watch" position on AB 68 (Ting), AB 69 (Ting), and SB 13 (Wieckowski) and authorize staff to change the position to "seek amendments" should amendments need to protect the District's interests that relate to rate, charges and fees; a "watch" position on AB 134 (Bloom), AB 217 (Garcia), ACA 3 (Mathis/Garcia), SB 200 (Monning); a "support" position on AB 292 (Quirk), the Association of California Water Agencies/California Municipal Utilities Agencies' Safe Drinking Water Trust, SB 134 (Hertzberg), the San Diego County Water Authority's proposal related to military veterans and water/wastewater plant operator certification, and The Water Recycling Investment and Improvement Act (Napolitano); and a "support in concept" position on California Municipal Utilities Agencies/Eastern Municipal Water District's reintroduction of AB 2050.

7. PROPOSED 2019 INVESTMENT POLICY

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

CONSENT CALENDAR (CONTINUED)

RESOLUTION NO. 2019-6

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
IRVINE RANCH WATER DISTRICT APPROVING AN INVESTMENT
POLICY AND AUTHORIZING THE TREASURER AND ASSISTANT
TREASURERS TO INVEST AND REINVEST FUNDS OF THE
DISTRICT AND OF EACH OF ITS IMPROVEMENT DISTRICTS
AND TO SELL AND EXCHANGE SECURITIES

8. REVISED PERSONNEL POLICIES AND PROCEDURES

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

RESOLUTION NO. 2019 -7

RESOLUTION OF THE BOARD OF DIRECTORS
OF IRVINE RANCH WATER DISTRICT
SUPERSEDING RESOLUTION NO. 2016-5 AND ESTABLISHING
REVISED PERSONNEL POLICIES AND PROCEDURES

9. SAND CANYON PROFESSIONAL CENTER PHASE II MATERIALS TESTING
AND INSPECTION CONSULTANT SELECTION

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Koury Engineering & Testing, Inc. in the amount of \$137,807 for materials testing and inspection services for the Sand Canyon Professional Center Phase II, project 06210.

ACTION CALENDAR

NEWPORT COAST LIFT STATION REHABILITATION BUDGET INCREASE AND BID REJECTION

Following clarification of the project by Executive Director of Engineering and Water Quality Burton relative to Director Swan's inquiry, on MOTION by Swan, seconded and unanimously carried, THE BOARD AUTHORIZED A BUDGET INCREASE IN THE AMOUNT OF \$274,000, FROM \$2,654,600 TO \$2,928,600, FOR PROJECT 06400, REJECTED THE BID RECEIVED FOR THE NEWPORT COAST LIFT STATION LANDSCAPE PROJECT, AND AUTHORIZED STAFF TO RE-BID THE LANDSCAPE PROJECT AFTER REVISING THE PROJECT DOCUMENTS.

CYBERSECURITY RISK MANAGEMENT ASSESSMENT PROFESSIONAL SERVICES CONTRACT AWARD

Cybersecurity involves dealing with a constantly evolving nature of security risk. One of IRWD's strategic goals is to assess the District's overall cybersecurity risk profile and establish a program and practices to minimize risk. This includes establishing an overall plan for addressing cybersecurity awareness, education, response and prevention. The first step to implementing the strategy is to conduct an independent risk assessment.

A Request for Proposal was issued in September 2018 to five consultants with experience performing Cybersecurity Risk Management Assessments including Lewis Brisbois/Alvarez & Marsal, MossAdams, NovaCoast, Performance Technology Partners, and Tevora. Based on the interviews and the proposal rankings, staff believes that Tevora has the best understanding of the Cybersecurity Risk Management Assessment project. On MOTION by Swan, seconded and unanimously carried, THE BOARD AUTHORIZED THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH TEVORA AMOUNT OF \$178,200.

GENERAL MANAGER'S REPORT

General Manager Cook introduced the District's newly-hired Director of Maintenance, Mr. Richard Mykitta, and noted his previous experience.

Mr. Cook reported on the recent six-inch asbestos cement pipeline repair project on Barranca Parkway in Irvine where the District procured the services of Sanders Paving under the urgent necessity clause. This project was completed at a cost of \$143,705.95 with a job well done. He thanked Director of Water Operations Tom Roberts for his efforts.

He further reported on the rain events and noted that staff has been diverting water flows to the Orange County Sanitation District and the Green Acres Project to prevent the Sand Canyon Reservoir from spilling over. He said that if the rains continue, however, it may overflow soon.

DIRECTORS' COMMENTS

Director Reinhart reported on his attendance at an OCWD Board meeting and a SOCWA Board meeting.

Director Swan reported on his attendance at a WACO monthly meeting, MWDOC Board and Committee meetings, and an Orange County Business Council annual dinner.

Director Matheis reported on her attendance at an OCWD lunch meeting and an OC Forum 2019 State of the County event.

Director LaMar reported on his attendance at an ACWA Federal Affairs Committee meeting in Sacramento, an ACWA Board meeting, a Joint Hearing on Safe and Affordable Drinking Water in Sacramento, and an Orange County Business Council annual dinner.

COMMUNITY UPDATES: None.

CLOSED SESSION

General Counsel Collins announced that the following Closed Sessions would be held.

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION - Pursuant to Government Code Section 54956.9(d)(1): *Filanc-Balfour Beatty, JV v. IRWD*, Case No. 30-2019-01048770-CU-BC-CXC

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION - Pursuant to Government Code Section 54956.9(d)(1): *Orange County Water District v. Sabic Innovative Plastics US, LLC, et al.*, Case No. 30-2008-0078246-CU-TT-CXC

OPEN SESSION

Following the Closed Session, the meeting was reconvened with Directors Withers, LaMar, Swan, Matheis and Reinhart present. General Counsel Collins reported that the Board in Closed Session AUTHORIZED ALSTON & BIRD TO DEFEND THE LAWSUIT AND FILE A CROSS-COMPLAINT ON BEHALF OF THE DISTRICT IN *FILANC-BALFOUR BEATTY, JV V. IRWD* CASE, NO. 30-2019 01048770-CU-BC-CXC.

General Counsel Collins further reported that the Board in Closed Session AUTHORIZED ALSTON & BIRD TO DEFEND THE LAWSUIT AND FILE A CROSS-COMPLAINT ON BEHALF OF THE DISTRICT FOR *ORANGE COUNTY WATER DISTRICT V. SABIC INNOVATIVE PLASTICS US, LLC, ET AL.*, CASE NO. 30-2008-0078246-CU-TT-CXC

ADJOURNMENT

President LaMar adjourned the meeting at 7:21 p.m.

APPROVED and SIGNED this 11th day of March, 2019.

President, IRVINE RANCH WATER DISTRICT

Secretary IRVINE RANCH WATER DISTRICT

APPROVED AS TO FORM:

Claire Hervey Collins, Legal Counsel
– Lewis Brisbois

March 11, 2019

Prepared by: R. Jacobson 

Submitted by: C. Clary 

Approved by: Paul A. Cook 

CONSENT CALENDAR

SERRANO SUMMIT / LENNAR PROMISSORY NOTE REQUEST TO EXTEND MATURITY

SUMMARY:

Lennar Homes of California recently notified IRWD that construction of the first phase of homes at the Serrano Summit residential property in Lake Forest is delayed due to project design changes. Accordingly, Lennar has inquired if the District would prefer to receive full payment of principal and interest at the scheduled maturity date of September 1, 2019, or to extend the term of the secured promissory note between IRWD and Lennar for an additional eight-month period. Staff recommends that the Board authorize the General Manager to execute an amendment to the current promissory note for an eight-month extension to April 30, 2020, at the current interest rate of 4.00%, to be applicable to both the principal and the accrued interest amount as of September 1, 2019.

BACKGROUND:

In September 2017, Lennar purchased the Serrano Summit property from IRWD. Terms of the transaction included 60% of the purchase price (\$81.6 million) being financed by a promissory note in favor of IRWD with principal and interest due at maturity (September 1, 2019). The note is secured by a Deed of Trust, with the Serrano Summit residential property as security. The note terms included an annual interest rate of 4.0% (simple interest) with a scheduled maturity date of September 1, 2019, or upon the issuance of the first building permit at the site – whichever is earlier.

Recently, Lennar contacted IRWD and stated that it had experienced delays in its planned residential development schedule. Lennar is prepared to pay off the principal and interest on the scheduled maturity date, but inquired if the District would prefer to extend the maturity date by eight months to April 30, 2020.

Staff recommends that the Board approve an extension of the note maturity date at the current interest rate of 4.00% that will apply to both the principal and accrued interest as of September 1, 2019, calculated to be \$88.1 million. Because the interest rate on the note will also apply to the accrued interest as of September 1, 2019, the effective interest rate on the principal amount of the note will be 4.32%. A comparative analysis of the following potential scenarios is attached as Exhibit "A":

- The note payoff at scheduled maturity with reinvestment in fixed income securities;
- An extension of the principal amount with payment of accrued interest to date; and
- An extension based on staff's recommended terms.

No other terms of the note will be modified by the recommended amendment.

Based on a review of Lennar's current average borrowing rate for similar land-secured financing arrangements, staff believes that the proposed terms are fair to both IRWD and Lennar.

FISCAL IMPACTS:

IRWD's promissory note currently earns an interest rate of 4.00% per year, or annualized interest of \$3.26 million. The proposed note extension would provide interest income of \$2.35 million for the eight-month period ending April 30, 2020.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on March 5, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE AN AMENDMENT TO THE CURRENT PROMISSORY NOTE BETWEEN IRWD AND LENNAR HOMES OF CALIFORNIA FOR AN EIGHT-MONTH EXTENSION TO APRIL 30, 2020, AT THE CURRENT INTEREST RATE OF 4.00%, TO BE APPLICABLE TO BOTH THE PRINCIPAL AND ACCRUED INTEREST AMOUNT AS OF SEPTEMBER 1, 2019, WITHOUT CHANGING ANY OTHER TERMS OF THE EXISTING NOTE.

LIST OF EXHIBITS:

Exhibit "A" – Comparison of Note Payoff/Extension Alternatives

Exhibit "A"

Serrano Summit / Lennar Note Extension Alternatives

Original Note Terms

Principal Amt	\$81,600,000
Interest Rate ¹	4.00%
Start Date	9/1/2017
Maturity Date	9/1/2019
Interest Due at Maturity	\$6,528,000
Total Due at Maturity	\$88,128,000

Assumptions:

- Requested Note Extension Date 4/30/2020 (8-month term)
- IRWD reinvestment rate for 8 month on 8/31/2019² = 2.40%

Alternative #1 - Payoff Note at Maturity / Reinvest in Fixed Income Market

Cash to IRWD on 8/31/2019	88,128,000
Fixed Income Interest to 4/30/2020 ²	1,410,048
Principal & Interest at 4/30/2020	\$89,538,048

Alternative #2 - Receive Interest Earned to Date /Extend Note @ 4.00%

Cash to IRWD on 8/31/2019	6,528,000
Fixed Income Interest to 4/30/2020 ²	104,448
Note Principal Balance	81,600,000
Note Interest to 4/30/2020	2,176,000
Principal & Interest at 4/30/2020	\$90,408,448

\$870,400 = Variance to Alternative #1

Alternative #3 - Extend Note @ 4.00% on Principal & Interest to Date

Cash to IRWD on 8/31/2019	0
Fixed Income Interest to 4/30/2020 ²	0
Note Principal Balance	88,128,000
Note Interest to 4/30/2020	2,350,080
Principal & Interest at 4/30/2020	\$90,478,080

\$940,032 = Variance to Alternative #1

¹ Simple interest; no compounding

² Assumed rate for government agency security based on market rates as of 3/2/2019

March 11, 2019

Prepared by: R. Jacobson 

Submitted by: C. Clary 

Approved by: Paul A. Cook 

CONSENT CALENDAR

SERRANO SUMMIT / CITY OF LAKE FOREST CIVIC CENTER SITE CONSTRUCTION SUPPORT SERVICES VARIANCE REQUEST NO. 5

SUMMARY:

The Serrano Summit Development Agreement between IRWD and City of Lake Forest obligates IRWD to provide the City with a graded pad and utilities for its future Civic Center site. IRWD retained the firm of Michael Baker International to provide related engineering construction support services for the site grading and utilities project, which the City is managing. Staff recommends that the Board authorize the General Manager to execute Variance No. 5 to the Professional Services Agreement with Michael Baker International for \$99,180 to provide the remaining construction support services associated with this work.

BACKGROUND:

In July 2008, the Board approved the Serrano Summit Development Agreement between IRWD and the City of Lake Forest, which provided terms under which residential development could occur on the Serrano Summit project. Serrano Summit includes up to 608 residential units, neighborhood and passive parks, and a new Lake Forest City Hall / Civic Center complex. The project is located adjacent to the Baker Water Treatment Plant and other IRWD facilities.

In September 2017, the District sold the residential portion of the Serrano Summit property to Lennar Homes of California (Lennar). The Purchase and Sale Agreement transferred the rights and obligations included in the Development Agreement from IRWD to Lennar, with the exception of the reimbursement obligation to the City for its construction of an eight-acre buildable site. The related project, Phase 1 of the City's Civic Center construction project, included a substantial cut and fill operation to create the eight-acre pad and mitigation measures related to jurisdictional wetland impacts, as well as wet and dry utilities and storm drain access to the property. The project also included construction of IRWD's primary access road to the Baker Plant from Civic Center Drive.

Construction Support Services:

IRWD retained Michael Baker International in June 2017 to provide construction support services related to the site grading and utilities installation for the Civic Center. Services provided in the original scope of work included general construction support, survey support, and project bid documents and plan revisions as required. The initial contract amount for services was \$82,300.

Previous variances (Variance Nos. 1 through 4) totaled \$69,600. Additional services provided to date through these variances included various site plan revisions, additional construction support services, coordination with Trabuco Canyon Water District on impacted pipelines, fencing and gate plans, and services related to fuel modification requirements.

Consent Calendar: Serrano Summit / Civic Center Construction Support Services
Variance Request No. 5
March 11, 2019
Page 2

Variance No. 5 for \$99,180 includes additional construction support services provided through the estimated project completion in March 2019, as well as required meeting attendance during this period. Due to the total amount of previous variances plus the current variance request, Variance No. 5 requires Board approval.

FISCAL IMPACTS:

Variance No. 5, for an amount of \$99,180, represents an increase in real estate expense in the non-operating results and will be funded from the District's Replacement Fund.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with the California Code of Regulations Title 14, Chapter 3, Article 7, an Environmental Impact Report was certified by the City of Lake Forest on February 7, 2012.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on March 5, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE VARIANCE NO. 5 TO THE PROFESSIONAL SERVICES AGREEMENT WITH MICHAEL BAKER INTERNATIONAL FOR \$99,180 TO PROVIDE REMAINING CONSTRUCTION SUPPORT SERVICES.

LIST OF EXHIBITS:

Exhibit "A" – Variance Request No. 5

**IRVINE RANCH WATER DISTRICT
PROFESSIONAL SERVICES VARIANCE**

EXHIBIT "A"

Project Title: Serrano Summit – Construction Support Services

Project No.: 01264

Date: 4/25/18

Purchase Order No.: 602183

Variance No.: 5

Originator: IRWD ENGINEER/CONSULTANT Other (Explain)_____

Description of Variance (*attach any back-up material*):

Extension for Additional Construction Support Service

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
Additional Construction Support						\$ 94,700
Additional Meetings						4,480
Total \$ =						\$ 99,180

Schedule Impact:

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule

Required Approval Determination:

Total Original Contract	\$ <u>82,300</u>	<input type="checkbox"/> Director: Cumulative total of Variances less than or equal to \$50,000. <input type="checkbox"/> Executive Director: Cumulative total of Variances less than or equal to \$75,000. <input type="checkbox"/> General Manager: Cumulative total of Variances less than or equal to \$100,000. <input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$100,000.
Previous Variances	\$ <u>69,600</u>	
This Variance	\$ <u>99,180</u>	
Total Sum of Variances	\$ <u>168,780</u>	
New Contract Amount	\$ <u>251,080</u>	
Percentage of Total Variances to Original Contract	<u>205</u> %	

ENGINEER/CONSULTANT: Michael Baker Intl.
Company Name

IRVINE RANCH WATER DISTRICT

Project Engineer/Manager _____ Date _____

Department Director _____ Date _____

See Attached _____ 2/26/19 _____

Engineer's/Consultant's Management _____ Date _____

General Manager/Comm./Board _____ Date _____

February 26, 2019

JN 133020 / 159959

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

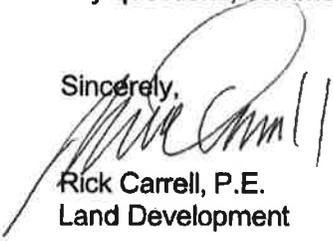
Subject: Serrano Summit – Addendum 5 Revised

Dear Rob:

Please find the enclosed an addendum for the Serrano Summit Project. Included is the time and cost for an extension of our on-going support and meeting attendance budget.

Enclosed is our proposed Scope of Services - Exhibit A, and Compensation - Exhibit B. We are happy to meet with you at your convenience to discuss this addendum in detail. We look forward to continuing to work with you and your consultant team on this project. You may reach me at (949) 855-3678 with any questions, comments or requests.

Sincerely,



Rick Carrell, P.E.
Land Development

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**EXHIBIT A
SCOPE OF SERVICES**

TASK 1 ADDITIONAL CONSTRUCTION SUPPORT

Michael Baker had a budget to provide construction support for the Phase 1 construction, however, due to field revisions and other un-anticipated requests, this budget has been exhausted. We are requesting an additional budget of 535 hours to provide office support for these ongoing construction related items. This budget is anticipated to cover the costs from April 2018 through March 2019. If additional services beyond the 535 hours is requested, a separate addendum will be authorized.

TASK 2 ADDITIONAL MEETINGS

Our existing meeting attendance budget has been exhausted, and we are requesting additional funding to continue attending bi-weekly construction meetings. This task assumes 4 hours of meeting per month, for a period of 4 months, June 2018 through December 2018. If additional meetings are requested there will be an addendum authorized for additional meeting time.

**EXHIBIT B
COMPENSATION**

Client will compensate Consultant (Michael Baker International) for the services in Exhibit A as follows:

TASK	DESCRIPTION	FEE
1	ADDITIONAL CONSTRUCTION SUPPORT	\$ 94,700
2	ADDITIONAL MEETINGS	\$ 4,480
TOTAL PROFESSIONAL SERVICES:		\$99,180

Progress billings will be forwarded to the Client monthly based on the percent complete of the various items, not to exceed the total fee authorized for this project, plus all direct costs advanced by Michael Baker International. Reimbursable expenses include mileage, blueprinting, overnight mail services, plotting (including in-house check plots and prints) and delivery services. The Client shall make every reasonable effort to review invoices within (15) working days from the date of receipt of the invoices and notify Michael Baker International in writing of any particular item that is alleged to be incorrect.

March 11, 2019

Prepared by: T. Mossbarger

Submitted by: C. Clary

Approved by: Paul A. Cook

CONSENT CALENDAR

ANNUAL ORACLE SOFTWARE MAINTENANCE AND SUPPORT AGREEMENT RENEWAL

SUMMARY:

IRWD's current Oracle Software Maintenance and Support Agreements, which expire in May 2019, provide for upgrades and maintenance of the District's Oracle Customer Care and Billing (CC&B) software, Oracle eBusiness Suite (EBS) Financial software, and Oracle Technology software. These agreements also provide pricing for software maintenance and licenses contained in the CC&B and Technology Software License Agreement and the EBS Financial Software Agreement. Staff recommends the Board authorize the General Manager to approve renewal of the annual Oracle Software Maintenance and Support Agreements, and additional licenses and support in the amount of \$1,121,000 for Fiscal Year (FY) 2019-20 and \$969,000 for FY 2020-21.

BACKGROUND:

The Board previously approved a software agreement with Oracle for Technology software and CC&B and EBS software licenses. The District uses Oracle Technology software to run the servers and databases that support the Oracle EBS Financial applications, Oracle CC&B applications, Oracle Business Intelligence, and Maximo Enterprise Asset Management applications software. The agreements cover all versions of Oracle Technology software products, CC&B software products, and EBS Financial products purchased by the District, and allows for upgrade to new versions as they become available.

Several of the EBS software programs are licensed by enterprise based on operating revenue. For the District, this value is the audited operating revenue before adjustments for expenses and taxes generated during a fiscal year. The agreement provides that if the operating revenues increase, the District is required to order additional licenses and technical support for such licenses. The formula, as required by the agreement, generated an increase for additional licenses and support for FY 2019-20 and another increase is anticipated for FY 2020-21. Due to growth in the number of customer accounts since August 2014, additional licenses for the District's Oracle CC&B are required per the software agreement for FY 2019-20.

The following table provides a summary of costs for the Oracle software maintenance and support agreements and additional licenses and support:

Description	FY 2019-20	FY 2020-21
Oracle Technology (ULA) Software & Support Maintenance	\$640,000	\$640,000
Oracle CC&B Software & Support Maintenance	\$131,000	\$158,000
Oracle EBS Financial Software & Support Maintenance	\$132,000	\$132,000
Oracle EBS Financial Software Added Licenses & Support (FY 2019-20: \$60,200 license, \$14,800 support) (FY 2020-21: \$32,500 license, \$6,500 support)	\$75,000	\$39,000
Oracle Customer Care and Billing Added Licenses & Support (FY 2019-20: \$117,000 license, \$26,000 Support)	\$143,000	
<i>Total Oracle Software Maintenance and Support Agreements & Additional Licenses & Support:</i>	<i>\$1,121,000</i>	<i>\$969,000</i>

Staff recommends renewal of the annual Oracle Software Maintenance and Support Agreements and additional licenses and support in the amount of \$1,121,000 for FY 2019-20 and \$969,000 for FY 2020-21.

FISCAL IMPACTS:

Oracle Software Maintenance and Support Agreements are included in the FY 2019-20 and FY 2020-21 Operating Budgets.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on March 5, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO APPROVE RENEWAL OF THE ANNUAL ORACLE SOFTWARE MAINTENANCE AND SUPPORT AGREEMENTS AND ADDITIONAL LICENSES AND SUPPORT IN THE AMOUNT OF \$1,121,000 FOR FY 2019-20 AND \$969,000 FOR FY 2020-21.

LIST OF EXHIBITS.

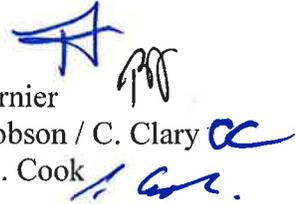
None.

March 11, 2019

Prepared By: T. Fournier

Submitted By: R. Jacobson / C. Clary

Approved By: Paul A. Cook



CONSENT CALENDAR

REVISED IRWD REAL ESTATE INVESTMENT POLICY

SUMMARY:

Revisions are proposed to the IRWD Real Estate Investment Policy that remove references to the IRWD Asset Management Committee and replace such references with the Finance and Personnel Committee. Staff recommends the Board adopt a resolution revising the IRWD Real Estate Investment Policy accordingly.

BACKGROUND:

The District's Real Estate Investment Policy was first adopted by the Board in August 1990, shortly after the District received authority from the State legislature to invest up to 30% of its Replacement Fund in real estate located in Orange County. The Policy has been revised periodically since then, most recently in March 2017 to provide for new accounting fair market value reporting requirements.

On January 22, 2018, the Asset Management Committee was dissolved and the Finance and Personnel Committee became the Board committee for reviewing current and proposed real estate investment opportunities. Staff has revised the IRWD Real Estate Investment Policy to remove references to the Asset Management Committee and substituted such references with the Finance and Personnel Committee. The proposed Revised Real Estate Investment Policy is attached as Exhibit "A". Staff recommends that the Board adopt a resolution revising IRWD's Real Estate Investment Policy.

FISCAL IMPACTS:

None.

ENVIRONMENTAL IMPACTS:

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

COMMITTEE STATUS:

This item was reviewed by the Finance and Personnel Committee on March 5, 2019.

RECOMMENDATION:

THAT THE BOARD ADOPT THE FOLLOWING RESOLUTION BY TITLE:

RESOLUTION NO. 2019-_____

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE IRVINE RANCH WATER DISTRICT
RESCINDING RESOLUTION NO. 2017-9 AND
ADOPTING REVISED REAL ESTATE INVESTMENT POLICY

LIST OF EXHIBITS:

Exhibit "A" – Revised IRWD Real Estate Investment Policy
Exhibit "B" – Resolution

Exhibit "A"

IRVINE RANCH WATER DISTRICT

PROPOSED REVISED REAL ESTATE INVESTMENT POLICY

March 2019

The primary goal of the District's real estate investment program is to utilize real estate as an alternative investment vehicle, when appropriate, to enhance the long-term portfolio return on the District's replacement funds, thus increasing available funding for the replacement of facilities when they reach the end of their useful lives.

To implement this real estate investment program, the Board of Directors has established that the District's Finance and Personnel Committee comprised of two of its members, and an alternate, will be responsible for reviewing all proposed real estate investments and making recommendations to the District's Board of Directors and/or the Bardeen Partners, Inc. Board of Directors.

A. Legal Requirements

The District may invest up to 30% of its replacement funds in real estate located in Orange County (California Water Code Section 35912). This is permissive statutory authority for the District to invest in real estate and does not require that any such investments be made.

B. Allocation Objectives

It is not the District's intention to set nor to achieve any target allocations or time frames for the investment of replacement funds in real estate. Investments in real estate will be based on individual opportunities as they occur and not to meet pre-specified allocation targets or time frames.

C. Property Types and Financing Structures

The District may invest its real estate funds in any property types or financing structures that are legally permissible and generally would be considered of investment grade by institutional investors or real estate fiduciaries.

Property types may include, but are not limited to, residential housing, office, industrial, retail, mixed-use projects, or other properties deemed appropriate by the District's Finance and Personnel Committee.

Financing structures may include both debt and equity positions and any combinations or variations thereof, all as deemed appropriate by the District's Finance and Personnel Committee.

D. Risk/Return Guidelines

As a guideline, the District's real estate portfolio should be expected to achieve a long-term compounded real rate of return (net of inflation and expenses) of at least six percent (6%). This

IRVINE RANCH WATER DISTRICT

PROPOSED REVISED REAL ESTATE INVESTMENT POLICY

March 2019

real rate of return is intended only to be a guideline, and applies to the real estate portfolio as a whole and not to individual investments.

Real estate investments will be made with special attention given to the preservation of capital through the investment in properties that are expected to maintain their values and/or returns over appropriate time periods.

As part of managing the risk associated with real estate investment, consideration will be given to diversity in property types, financing structures, location, development stage and market cycles; however, the District does not wish to establish any specific targets or restrictions based on these factors.

E. Percentage Limitation Guidelines

The District's aggregate real estate investments will not exceed thirty percent (30%) of its total replacement funds. These guidelines are being established as a means to determine compliance with this requirement.

The 30% limitation will be calculated prior to taking a legally binding debt or equity position in any real estate investment. For real estate investments which involve development of an operating property owned by the District, the 30% limitation will be calculated at the time the proposed real estate development project is approved by the Board.

Calculations of the percentage limitation will apply to the real estate portfolio as a whole and not to individual investments.

All or a portion of any real estate investments made in compliance with the percentage limitation at the time of investment will not be required to be liquidated if the percentage limitation is exceeded at a subsequent calculation date.

The most recent monthly cash balance in the replacement funds, plus the "net equity position" of existing real estate investments, plus any interdistrict receivables due the replacement funds will be used in calculating the percentage limitation on real estate investments. The "net equity position" is defined as the fair market value as reported in the District's most recent annual financial statements, less any outstanding liens or encumbrances, which are recourse only to the real estate investments.

Borrowings may be made against real estate investments, provided that the total outstanding amount of all such borrowings do not exceed sixty percent (60%) of the market value of the real estate portfolio at the time the borrowings are made, and are secured only by the investment in the real estate portfolio and are non-recourse to other District funds. Borrowings based on market values will require an appropriate form of valuation or appraisal of all existing real estate holdings

IRVINE RANCH WATER DISTRICT

PROPOSED REVISED REAL ESTATE INVESTMENT POLICY

March 2019

prior to such borrowings being made. Total net proceeds from any real estate investment borrowings shall be available for reinvestment in approved real estate investments.

F. Third-Party Agreements

The District may enter into agreements with qualified third parties for services related to property acquisition, development, operation and disposition, portfolio management and any other activities consistent with the real estate investment program.

G. Annual Review

The Board of Directors will review its real estate investment policies on an annual basis. This review may be part of the review and approval of the District's annual investment policy.

Exhibit "B"

RESOLUTION NO. 2019 - _____

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE IRVINE RANCH WATER DISTRICT
RESCINDING RESOLUTION NO. 2017-9 AND
ADOPTING REVISED REAL ESTATE INVESTMENT POLICY

The Irvine Ranch Water District is authorized by California Water Code Section 35912 to invest and reinvest up to thirty percent (30%) of its capital facilities replacement funds in real estate and interests therein and improvements thereon, located in Orange County, for the production of income.

This Board of Directors has established real estate investment policies governing the use of real estate investments as alternative investment vehicles, when appropriate, to enhance the long-term portfolio return on the District's replacement fund.

The Board desires to revise the real estate investment policies of the District.

NOW THEREFORE, the Board of Directors of Irvine Ranch Water District DOES HEREBY RESOLVE, DETERMINE and ORDER as follows:

Section 1. The Real Estate Investment Policy of the District is adopted in the form attached as Exhibit "A".

Section 2. Resolution No. 2017-9 dated March 27, 2017 is hereby rescinded in its entirety.

ADOPTED, SIGNED AND APPROVED this 11th day of March 2019.

President
IRVINE RANCH WATER DISTRICT and
The Board of Directors thereof

Secretary
IRVINE RANCH WATER DISTRICT and
The Board of Directors thereof

APPROVED AS TO FORM:
LEWIS BRISBOIS BISGAARD & SMITH LLP

Legal Counsel - IRWD

March 11, 2019

Prepared by: J. Davis/T. Fournier

Submitted by: R. Jacobson/C. Clary

Approved by: Paul A. Cook

CONSENT CALENDAR

JANUARY 2019 TREASURY REPORTS

SUMMARY:

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

- A. The Investment Summary Report for January 2019. This Investment Summary Report is in conformity with the 2019 Investment Policy and provides sufficient liquidity to meet estimated expenditures during the next six months, as outlined in Exhibit "A".
- B. The Summary of Fixed and Variable Debt as of January 31, 2019, as outlined in Exhibit "B".
- C. The Monthly Interest Rate Swap Summary as of January 31, 2019, as outlined in Exhibit "C".
- D. The January 31, 2019 Disbursement Summary of warrants 394725 through 395759, wire transfers, Workers' Compensation distributions, payroll withholding distributions, and voided checks in the total amount of \$30,438,893 as outlined in Exhibit "D".
- E. The Summary of Payroll ACH payments in the total amount of \$1,924,211 as outlined in Exhibit "E".
- F. The Disclosure Report of Reimbursements to Board Members and Staff for January 2019, detailing payments or reimbursements for individual charges of \$100.00 or more per transaction, as outlined in Exhibit "E".

FISCAL IMPACTS:

As of January 31, 2019, the book value of the investment portfolio was \$369,442,686, with a 1.90% rate of return and a market value of \$368,336,272. Based on the District's December 31, 2018 quarterly real estate investment rate of return of 9.02%, the weighted average return for the fixed income and real estate investments was 3.94%.

As of January 31, 2019, the outstanding principal amount of fixed and variable rate debt was \$672,220,000. The monthly weighted average all-in variable rate was 1.37%. Including the District's weighted average fixed rate bond issues of 3.70% and the previous month's negative cash accruals from fixed payer interest rate swaps, which hedge a portion of the District's variable rate debt, the total average debt rate was 3.47%.

Payroll ACH payments totaled \$1,924,211, and wire transfers, all other ACH payments, and checks issued for debt service, accounts payable, payroll, and water purchases for January totaled \$30,438,893.

ENVIRONMENTAL COMPLIANCE:

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

COMMITTEE STATUS:

This item was not submitted to a Committee; however, the investment and interest rate swap reports are submitted to the Finance and Personnel Committee on a monthly basis.

RECOMMENDATION:

THAT THE BOARD RECEIVE AND FILE THE TREASURER'S INVESTMENT SUMMARY REPORT, THE SUMMARY OF FIXED AND VARIABLE RATE DEBT, AND DISCLOSURE REPORT OF REIMBURSEMENTS TO BOARD MEMBERS AND STAFF; APPROVE THE JANUARY 2019 SUMMARY OF PAYROLL ACH PAYMENTS IN THE TOTAL AMOUNT OF \$1,924,211 AND APPROVE THE JANUARY 2019 ACCOUNTS PAYABLE DISBURSEMENT SUMMARY OF WARRANTS 394725 THROUGH 395759 WORKERS' COMPENSATION DISTRIBUTIONS, WIRE TRANSFERS, PAYROLL WITHHOLDING DISTRIBUTIONS AND VOIDED CHECKS IN THE TOTAL AMOUNT OF \$30,438,893.

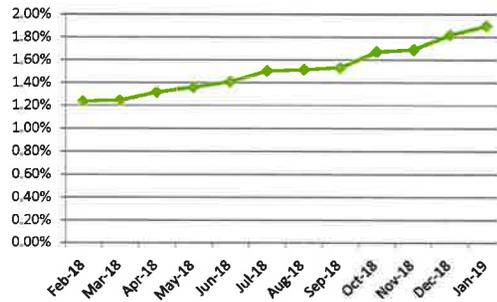
LIST OF EXHIBITS:

- Exhibit "A" – Investment Summary Report
- Exhibit "B" – Summary of Fixed and Variable Debt
- Exhibit "C" – Monthly Interest Rate Swap Summary
- Exhibit "D" – Monthly Summary of District Disbursements
- Exhibit "E" – Monthly Payroll ACH Summary
- Exhibit "F" – Disclosure of Reimbursements to Board Members and Staff

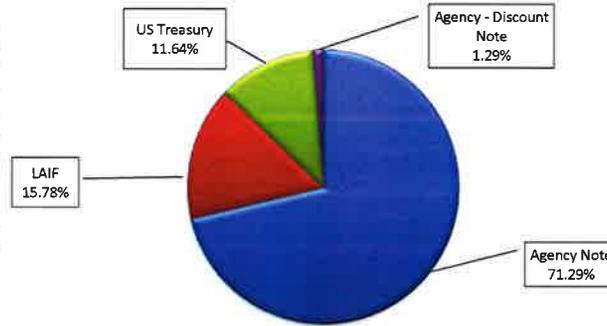
Exhibit "A"

Irvine Ranch Water District Investment Portfolio Summary January 2019

Monthly Fixed Income Yield



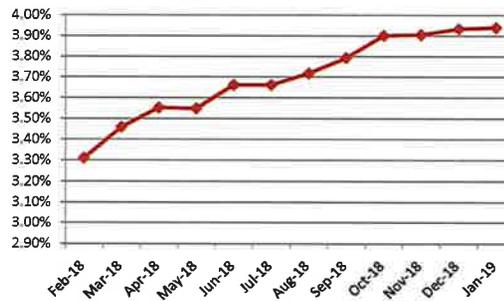
Portfolio Distribution



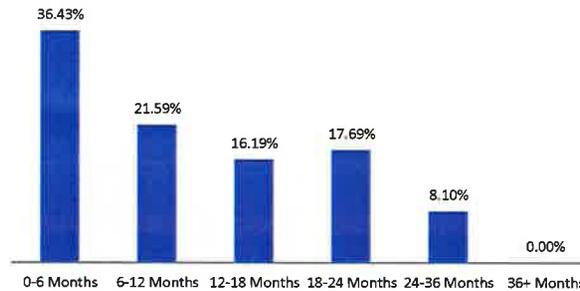
Investment Summary

Type	PAR	Book Value	Market Value
Agency Note	255,550,000	255,205,247	253,912,199
LAIF	65,000,000	65,000,000	64,938,323
US Treasury	45,000,000	44,246,402	44,494,700
Agency Note - Discount Note	5,000,000	4,991,038	4,991,050
Grand Total	370,550,000	369,442,686	368,336,272

**Weighted Average Return
Including Real Estate Portfolio**



Maturity Distribution



Top Issuers

Issuer	PAR	% Portfolio
Fed Home Loan Bank	75,000,000	20.25%
Fed Home Loan Mortgage Corp	70,550,000	19.04%
Fed Natl Mortgage Assoc	65,000,000	17.54%
State of California Treasury - LAIF	60,000,000	16.19%
Fed Farm Credit Bank	55,000,000	14.84%
US Treasury	45,000,000	12.14%
Grand Total	370,550,000	100.00%

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

01/31/19

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 1/31/2019	UNREALIZED ⁽²⁾ GAIN/(LOSS)
08/23/17			02/01/19		LAIF	State of California Tsy.	\$65,000,000		2.210%	\$65,000,000.00	\$65,000,000.00	64,938,323.26	(61,676.75)
10/12/16	Continuous after	02/12/18	02/12/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.050%	1.093%	9,990,000.00	9,999,613.13	9,995,900.00	(3,713.13)
01/14/19	NA	NA	02/28/19	NR	FHLB - Discount Note	Fed Home Loan Bank	5,000,000	2.390%	2.430%	4,985,062.50	4,991,037.50	4,991,050.00	12.50
09/01/16	NA	NA	03/08/19	Aaa/AA+/AAA	FHLB - Note	Fed Home Loan Bank	5,000,000	1.500%	0.964%	5,066,500.00	5,002,535.40	4,995,150.00	(7,385.40)
03/21/18	NA	NA	03/21/19	Aaa/NA/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	2.125%	2.125%	10,000,000.00	10,000,000.00	9,996,200.00	(3,800.00)
10/12/16	N/A	N/A	03/29/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.050%	4,999,950.00	4,999,995.77	4,989,650.00	(10,345.77)
10/12/16	N/A	N/A	04/15/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	10,000,000	1.125%	0.992%	10,032,800.00	10,003,333.77	9,972,800.00	(30,533.77)
10/31/16	N/A	N/A	04/26/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.050%	1.060%	4,998,750.00	4,999,882.86	4,983,600.00	(16,282.86)
09/01/16	N/A	N/A	05/28/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.030%	1.048%	4,997,550.00	4,999,715.52	4,977,450.00	(22,265.52)
04/19/18	N/A	N/A	05/30/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.750%	2.252%	4,972,500.00	4,992,007.39	4,988,500.00	(3,507.39)
09/01/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	0.987%	5,087,400.00	5,011,441.14	4,985,100.00	(26,341.14)
10/12/16	NA	NA	06/14/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.625%	1.103%	5,068,515.88	5,010,751.72	4,985,100.00	(25,651.72)
10/12/16	NA	NA	07/19/19	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	0.875%	1.098%	4,969,652.90	4,994,351.23	4,963,150.00	(31,201.23)
09/01/16	NA	NA	07/26/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.180%	4,995,700.00	4,999,288.75	4,967,050.00	(32,238.75)
09/01/16	N/A	N/A	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.150%	1.160%	4,998,500.00	4,999,714.02	4,961,000.00	(38,714.02)
09/01/16	NA	NA	08/28/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.132%	4,999,000.00	4,999,809.35	4,960,250.00	(39,559.35)
09/28/16	Quarterly	03/09/17	09/09/19	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.125%	1.142%	4,997,500.00	4,999,483.32	4,958,150.00	(41,333.32)
04/10/18	NA	NA	09/13/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	2.375%	2.288%	5,006,000.00	5,002,579.65	4,994,900.00	(7,679.65)
09/28/16	Continuous after	12/27/16	09/27/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.250%	1.189%	5,001,500.00	5,000,326.33	4,958,250.00	(42,076.33)
10/12/16	Continuous after	10/03/17	10/03/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	10,000,000	1.125%	1.160%	9,989,780.00	9,997,515.58	9,905,800.00	(91,715.58)
10/12/16	Continuous after	10/11/17	10/11/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	10,000,000	1.120%	1.205%	9,975,000.00	9,993,784.28	9,904,800.00	(88,984.28)
11/08/16	Quarterly	05/08/17	11/08/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.250%	1.245%	5,000,750.00	5,000,191.78	4,950,450.00	(49,741.78)
11/28/16	NA	NA	11/15/19	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	1.375%	1.440%	4,990,550.00	4,997,493.39	4,953,150.00	(44,343.39)
11/28/16	Quarterly	05/25/17	11/25/19	Aaa/AA+/NR	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.400%	1.503%	4,985,000.00	4,995,920.33	4,953,950.00	(41,970.33)
12/12/16	NA	NA	12/12/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.450%	1.440%	5,001,450.00	5,000,414.85	4,953,050.00	(47,364.85)
12/21/16	NA	NA	12/19/19	Aaa/AA+/NR	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.500%	1.621%	4,982,350.00	4,994,816.42	4,953,950.00	(40,866.42)
12/20/17	NA	NA	01/17/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.500%	1.932%	4,956,250.00	4,973,911.61	4,950,050.00	(23,861.61)
10/16/17	NA	NA	02/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.612%	4,987,025.00	4,994,120.00	4,947,200.00	(46,920.00)
12/19/18	NA	NA	02/29/20	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1.250%	2.672%	9,833,593.76	9,845,398.32	9,862,100.00	16,701.68
12/20/17	NA	NA	03/13/20	Aaa/AA+/NR	FHLB - Note	Fed Home Loan Bank	5,000,000	4.125%	1.940%	5,237,200.00	5,148,031.45	5,087,750.00	(60,281.45)
12/20/18	NA	NA	03/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	2.250%	2.665%	9,948,000.00	9,951,451.82	9,966,400.00	14,948.18
10/03/17	NA	NA	04/20/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1.375%	1.630%	4,968,350.00	4,984,889.68	4,932,450.00	(52,439.68)
06/29/18	NA	NA	04/23/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2.500%	2.544%	4,996,000.00	4,997,347.83	4,999,450.00	2,102.17
06/29/18	NA	NA	05/15/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.566%	4,998,450.00	4,998,940.31	5,002,300.00	3,359.69
11/21/17	Continuous after	02/20/18	05/20/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1.830%	1.930%	4,987,500.00	4,982,642.93	4,956,400.00	(26,242.93)
06/11/18	NA	NA	06/11/20	Aaa/NR/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2.550%	2.570%	4,997,100.00	4,998,032.28	5,002,250.00	4,217.72
11/10/17	NA	NA	06/22/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1.500%	1.750%	4,968,000.00	4,993,647.09	4,930,100.00	(63,547.09)

IRVINE RANCH WATER DISTRICT
INVESTMENT SUMMARY REPORT

01/31/19

SETTLMT	Call Schedule	Initial Call	Maturity Date	Rating	INVESTMENT TYPE	INSTITUTION / ISSUER	PAR Amount	COUPON DISCOUNT	YIELD	ORIGINAL COST	CARRY VALUE	MARKET VALUE ⁽¹⁾ 1/31/2019	UNREALIZED ⁽²⁾ GAIN/(LOSS)
04/19/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1,500%	2.535%	4,886,000.00	4,925,414.17	4,927,500.00	2,085.83
06/08/18	NA	NA	07/30/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1,500%	2.559%	4,890,100.00	4,923,505.11	4,927,500.00	3,994.89
12/20/17	Quarterly	11/10/16	08/10/20	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	1,450%	2.052%	4,923,000.00	4,947,441.91	4,917,450.00	(29,991.91)
09/14/18	NA	NA	08/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2,680%	2.789%	4,989,700.00	4,991,730.99	5,011,950.00	20,219.01
05/21/18	Continuous after	12/01/17	09/01/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1,680%	2.735%	4,884,250.00	4,919,779.98	4,934,800.00	15,020.02
09/14/18	NA	NA	09/04/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	2,690%	2.794%	4,990,050.00	4,991,982.04	5,012,850.00	20,867.96
12/12/17	One Time	09/28/18	09/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	2,000%	2.000%	5,000,000.00	5,000,000.00	4,951,200.00	(48,800.00)
10/31/17	One Time	10/30/18	10/30/20	Aaa/NR/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,550,000	1,850%	1.850%	5,550,000.00	5,550,000.00	5,473,798.50	(76,201.50)
09/28/18	NA	NA	10/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	1,750%	2.847%	4,889,453.13	4,871,221.58	4,936,350.00	65,128.42
12/13/17	Continuous after	08/23/17	11/23/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1,770%	2.060%	4,958,750.00	4,970,480.95	4,932,750.00	(37,730.95)
12/13/17	Quarterly	05/24/18	11/24/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1,900%	2.023%	4,982,500.00	4,987,472.14	4,935,150.00	(52,322.14)
11/30/17	NA	NA	11/24/20	Aaa/AA+/AAA	FFCB - Note	Fed Farm Credit Bank	5,000,000	1,850%	1.964%	4,983,550.00	4,990,009.27	4,939,700.00	(50,309.27)
12/20/17	NA	NA	12/28/20	Aaa/AA+/AAA	FNMA - Note	Fed Natl Mortgage Assoc	5,000,000	1,875%	2.023%	4,978,400.00	4,984,386.96	4,944,150.00	(40,236.96)
11/09/18	NA	NA	12/31/20	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2,375%	2.958%	4,939,843.75	4,946,297.29	4,990,800.00	44,502.71
10/12/18	NA	NA	01/31/21	Aaa/NR/AAA	Treasury - Note	US Treasury	10,000,000	1,375%	2.890%	9,664,843.76	9,709,425.11	9,786,700.00	77,274.89
12/14/18	NA	NA	02/16/21	Aaa/AA+/AAA	FHLMC - Note	Fed Home Loan Mortgage Corp	5,000,000	2,375%	2.806%	4,954,750.00	4,956,514.47	4,988,100.00	31,585.53
12/14/18	NA	NA	02/28/21	Aaa/NR/AAA	Treasury - Note	US Treasury	5,000,000	2,000%	2.755%	4,919,515.95	4,922,607.65	4,952,350.00	29,742.35
TOTAL INVESTMENTS							\$370,550,000			\$369,353,936.63	\$369,442,686.41	\$368,336,271.76	(\$1,106,414.66)

Petty Cash
Ck Balance Bank of America

3,400.00
1,849,167.99
\$371,206,504.62

⁽¹⁾ LAIF market value is as of the most recent quarter-end as reported by LAIF.
Security market values are determined using Bank of New York ("Trading Prices"), Bloomberg and/or broker dealer pricing

⁽²⁾ Gain (loss) calculated against carry value using the trading value provided by Bank of New York/or Brokers

⁽³⁾ Real estate rate of return is based on most recent quarter end return

Outstanding Variable Rate Debt	\$273,300,000
Net Outstanding Variable Rate Debt (Less \$130 million fixed-payer swaps)	\$143,300,000
Investment Balance:	\$371,206,505
Investment to Variable Rate Debt Ratio:	259%
Portfolio - Average Number of Days To Maturity	300

	Investment Portfolio	Real Estate ⁽³⁾ Portfolio	Weighted Avg. Return
January	1.90%	9.02%	3.94%
December	1.82%	9.02%	3.93%
Change	0.08%		0.01%

This Investment Summary Report is in conformity with the 2019 Investment Policy and provides sufficient liquidity to meet the next six months estimated expenditures.

*S - Step up

IRVINE RANCH WATER DISTRICT
SUMMARY OF MATURITIES

01/31/19

DATE	TOTAL	%	LAIF	Agency Notes	Agency Discount Notes	Collateral Deposit	US Treasury
01/19	\$65,000,000	17.54%	\$65,000,000				
02/19	15,000,000	4.05%		10,000,000	5,000,000		
03/19	20,000,000	5.40%		20,000,000			
04/19	15,000,000	4.05%		15,000,000		-	
05/19	10,000,000	2.70%		10,000,000			
06/19	10,000,000	2.70%		10,000,000			
07/19	10,000,000	2.70%		10,000,000			
08/19	10,000,000	2.70%		10,000,000			
09/19	15,000,000	4.05%		15,000,000			
10/19	20,000,000	5.40%		20,000,000			
11/19	15,000,000	4.05%		15,000,000			
12/19	10,000,000	2.70%		10,000,000			

SUB-TOTAL	\$215,000,000	58.02%	\$65,000,000	\$145,000,000	\$5,000,000		
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13 Months - 3 YEARS

1/01/19 - 2/28/2020	20,000,000	5.40%		10,000,000			10,000,000
3/01/2020 - 5/31/2020	40,000,000	10.79%		30,000,000			10,000,000
6/01/2020 - 8/31/2020	25,000,000	6.75%		25,000,000			
9/01/2020 - 11/30/2020	40,550,000	10.94%		35,550,000			5,000,000
12/01/2020 - 2/28/2021	30,000,000	8.10%		10,000,000			20,000,000
	-						
	-						
	-						
	-						

TOTALS	\$370,550,000	100.00%	\$65,000,000	\$255,550,000	\$5,000,000		\$45,000,000
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% OF PORTFOLIO			17.54%	68.97%	1.35%		12.14%
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Irvine Ranch Water District
 Summary of Real Estate - Income Producing Investments
 12/31/2018

	ACQUISITION DATE	PROPERTY TYPE	OWNERSHIP INTEREST	ORIGINAL COST	MARKET VALUE 12/31/2018	ANNUALIZED RATE OF RETURN QUARTER ENDED 12/31/2018
Sycamore Canyon	Dec-92	Apartments	Fee Simple	\$ 43,550,810	\$ 145,000,000	19.22%
Wood Canyon Villas	Jun-91	Apartments	Limited Partner	\$ 6,000,000	\$ 30,670,120	8.69%
ITC (230 Commerce)	Jul-03	Office Building	Fee Simple	\$ 5,739,845	\$ 11,500,000	10.18%
Waterworks Business Pk.	Nov-08	Research & Dev.	Fee Simple	\$ 8,630,577	\$ 9,000,000	5.09%
Sand Canyon Professional Center	Jul-12	Medical Office	Fee Simple	\$ 8,648,594	\$ 11,000,000	8.50%
Total - Income Properties				\$ 72,569,826	\$ 207,170,120	14.68%
OTHER REAL ESTATE						
DESCRIPTION						
Serrano Summit - Promissory Note	Sep-17	NA	NA	\$ 81,600,000	\$ 81,600,000	4.00%
Total - Income Producing Real Estate Investments				\$ 154,169,826	\$ 288,770,120	9.02%

Exhibit "B"

IRVINE RANCH WATER DISTRICT INVESTMENT SUMMARY REPORT INVESTMENT ACTIVITY Jan-19

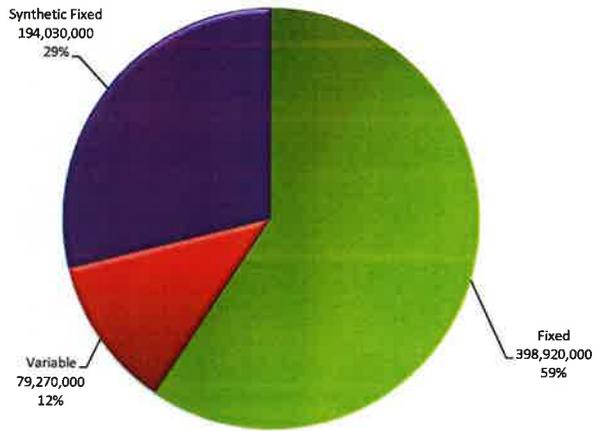
MATURITIES/SALES/CALLS

PURCHASES

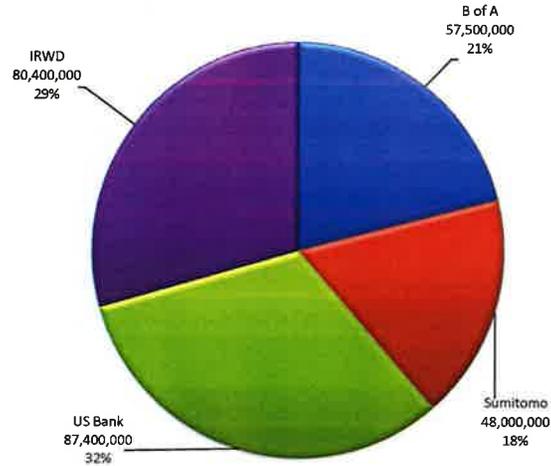
DATE	SECURITY TYPE	PAR	YIELD	Settlement Date	Maturity Date	SECURITY TYPE	PAR	YIELD TO MATURITY
1/25/2019	FHLMC - NOTE	\$5,000,000	3.02%	1/14/2019	2/28/2019	FHLB - Discount Note	\$5,000,000	2.43%
1/30/2019	FHLMC - NOTE	\$5,000,000	1.01%	1/30/2019	1/31/2019	FHLB - Discount Note	\$15,000,000	2.26%
1/30/2019	FHLMC - NOTE	\$5,000,000	1.04%					
1/30/2019	FHLMC - NOTE	\$5,000,000	1.04%					
1/31/2019	FHLB -Discount Note	\$15,000,000	2.26%					

Irvine Ranch Water District Summary of Fixed and Variable Rate Debt January 2019

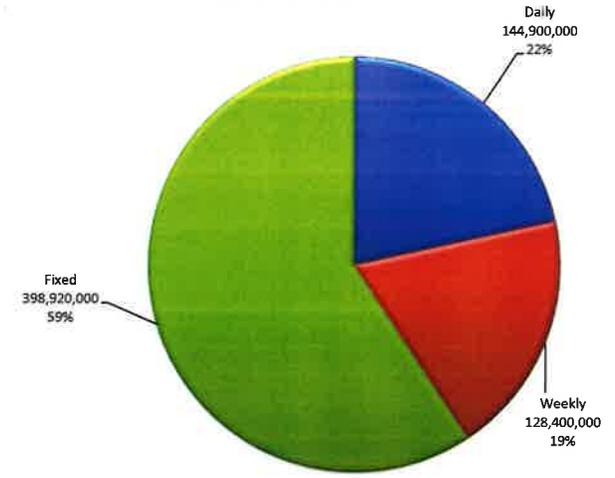
Current Debt Mix By Type



Letters of Credit / Support



Current Debt Rate Reset



Outstanding Par by Series

Series	Issue Date	Maturity Date	Remaining Principal	Percent	Letter of Credit/Support	Rmkt Agent	Mode	Reset
Series 1993	05/19/93	04/01/33	\$29,900,000	4.45%	US Bank	BAML	Variable	Daily
Series 2008-A Refunding	04/24/08	07/01/35	\$48,000,000	7.14%	Sumitomo	BAML	Variable	Weekly
Series 2011-A-1 Refunding	04/15/11	10/01/37	\$48,240,000	7.18%	IRWD	Goldman	Variable	Weekly
Series 2011-A-2 Refunding	04/15/11	10/01/37	\$32,160,000	4.78%	IRWD	Morgan	Variable	Weekly
Series 2009 - A	06/04/09	10/01/41	\$57,500,000	8.55%	US Bank	US Bank	Variable	Daily
Series 2009 - B	06/04/09	10/01/41	\$57,500,000	8.55%	B of A	Goldman	Variable	Daily
2010 Refunding COPS	02/23/10	03/01/20	\$3,775,000	0.56%	N/A	N/A	Fixed	Fixed
2016 COPS	09/01/16	03/01/46	\$116,745,000	17.37%	N/A	N/A	Fixed	Fixed
2010 Build America Taxable Bond	12/16/10	05/01/40	\$175,000,000	26.03%	N/A	N/A	Fixed	Fixed
Series 2016	10/12/16	02/01/46	\$103,400,000	15.38%	N/A	N/A	Fixed	Fixed
Total			\$672,220,000	100.00%				

**IRVINE RANCH WATER DISTRICT
SUMMARY OF FIXED & VARIABLE RATE DEBT**

January-19

ITN
Daily
Weekly

GENERAL BOND INFORMATION							LETTER OF CREDIT INFORMATION							TRUSTEE INFORMATION										
VARIABLE RATE ISSUES	Issue Date	Maturity Date	Principal Payment Date	Payment Date	Original Par Amount	Remaining Principal	Letter of Credit	Reimbursement Agreement Date	L/C Exp. Date	MOODY'S	S&P	FITCH	LOC Stated Amount	LOC Fee	Annual LOC Cost	Rmkt Agent	Reset	Rmkt Fees	Annual Cost	Trustee				
SERIES 1993	05/19/93	04/01/33	APR 1 (2014)	5th Bus. Day	\$38,300,000	\$29,900,000	US BANK	05/07/15	12/15/21	Aa3/VMIG1	AA-/A-1+	N/R	\$30,303,036	0.3300%	\$100,000	BAML	DAILY	0.10%	\$29,900	BANK OF NY				
SERIES 2008-A Refunding	04/24/08	07/01/35	JUL 1	5th Bus. Day	\$60,215,000	\$48,000,000	SUMITOMO	04/01/11	07/21/21	A1/P-1	A/A-1	A/F1	\$48,710,137	0.3150%	\$153,437	BAML	WED	0.07%	\$33,600	BANK OF NY				
SERIES 2011-A-1 Refunding	04/15/11	10/01/37	OCT 1	1st Bus. Day	\$60,545,000	\$48,240,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Goldman	WED	0.13%	\$60,300	BANK OF NY				
SERIES 2011-A-2 Refunding	04/15/11	10/01/37	OCT 1	1st Bus. Day	\$40,370,000	\$32,160,000	N/A	N/A	N/A	Aa1/VMIG1	A-1+	AAA/F1+	N/A	N/A	N/A	Morgan S.	WED	0.13%	\$40,200	BANK OF NY				
SERIES 2009 - A	06/04/09	10/01/41	OCT 1	1st Bus. Day	\$75,000,000	\$57,500,000	US BANK	04/01/11	12/15/21	Aa2/VMIG 1	AA-/A-1+	AA/F1+	\$58,142,740	0.3300%	\$191,871	US Bank	DAILY	0.07%	\$40,250	US BANK				
SERIES 2009 - B	06/04/09	10/01/41	OCT 1	1st Bus. Day	\$75,000,000	\$57,500,000	B of A	04/01/11	07/15/19	A1/VMIG 1	A/A-1	A1/F1+	\$58,142,740	0.4000%	\$232,571	Goldman	DAILY	0.10%	\$57,500	US BANK				
\$349,430,000						\$273,300,000	SUB-TOTAL VARIABLE RATE DEBT							\$195,298,652		0.3471%		\$677,879		0.10%			\$261,750	
														(Wt. Avg)				(Wt. Avg)						
FIXED RATE ISSUES																								
2010 REFUNDING COPS	02/23/10	03/01/20	Mar - 1	MAR/SEPT	\$85,145,000	\$3,775,000	N/A	N/A	N/A	Aa1	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY				
2010 GO Build America Taxable Bonds	12/16/10	05/01/40	MAY (2025)	MAY/NOV	\$175,000,000	\$175,000,000	N/A	N/A	N/A	Aa1	AAA	NR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK				
2016 COPS	09/01/16	03/01/46	Mar - 1	MAR/SEPT	\$116,745,000	\$116,745,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	US BANK				
SERIES 2016	10/12/16	02/01/46	Feb - 1	FEB/AUG	\$103,400,000	\$103,400,000	N/A	N/A	N/A	NR	AAA	AAA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BANK OF NY				
\$480,290,000						\$398,920,000	SUB-TOTAL FIXED RATE DEBT																	
\$829,720,000						\$672,220,000	TOTAL - FIXED & VARIABLE RATE DEBT																	

Remarketing Agents			GO VS COP's		
Goldman	105,740,000	39%	GO:	551,700,000	82%
Morgan Stanley	32,160,000	12%	COPS:	120,520,000	18%
BAML	77,900,000	29%	Total	672,220,000	
US Bank	57,500,000	21%			
	273,300,000				

LOC Banks		Breakdown Between Variable & Fixed Rate Mode	
SUMITOMO	48,000,000	Daily Issues	144,900,000 22%
BANK OF AMERICA	57,500,000	Weekly Issues	48,000,000 7%
US BANK	87,400,000	ITN Issues	80,400,000 12%
	192,900,000	Sub-Total	273,300,000
		Fixed Rate Issues	\$398,920,000 59%
		Sub-Total - Fixed	398,920,000
		TOTAL DEBT	
		FIXED & VAR.	672,220,000 100%

IRVINE RANCH WATER DISTRICT
SUMMARY OF DEBT RATES
Jan-19

Rmkt Agent	GOLDMAN	GOLDMAN	MORGAN STANLEY	MERRILL LYNCH	US BANK	
Mode	DAILY	WEEKLY	WEEKLY	DAILY WEEKLY	DAILY	
Bond Issue	2009 - B	2011 A-1	2011 A-2	1993 2008-A	2009-A	
Par Amount	57,500,000	48,240,000	32,160,000	29,900,000 48,000,000	57,500,000	
Bank	BOFA	(SIFMA -1)	(SIFMA -1)	US BANK Sumitomo	US BANK	
Reset		Wednesday	Wednesday	Wednesday		
1/1/2019	1.40%	1.70%	1.70%	1.40%	1.44%	1.40%
1/2/2019	1.20%	1.70%	1.70%	1.27%	1.44%	1.30%
1/3/2019	0.95%	1.62%	1.62%	1.13%	1.30%	1.15%
1/4/2019	0.90%	1.62%	1.62%	0.97%	1.30%	1.00%
1/5/2019	0.90%	1.62%	1.62%	0.97%	1.30%	1.00%
1/6/2019	0.90%	1.62%	1.62%	0.97%	1.30%	1.00%
1/7/2019	0.80%	1.62%	1.62%	0.77%	1.30%	0.80%
1/8/2019	0.65%	1.62%	1.62%	0.62%	1.30%	0.70%
1/9/2019	0.60%	1.62%	1.62%	0.53%	1.30%	0.60%
1/10/2019	0.50%	1.38%	1.38%	0.49%	1.06%	0.55%
1/11/2019	0.50%	1.38%	1.38%	0.51%	1.06%	0.55%
1/12/2019	0.50%	1.38%	1.38%	0.51%	1.06%	0.55%
1/13/2019	0.50%	1.38%	1.38%	0.51%	1.06%	0.55%
1/14/2019	0.52%	1.38%	1.38%	0.56%	1.06%	0.55%
1/15/2019	0.55%	1.38%	1.38%	0.56%	1.06%	0.55%
1/16/2019	0.55%	1.38%	1.38%	0.56%	1.06%	0.55%
1/17/2019	0.60%	1.27%	1.27%	0.61%	0.85%	0.55%
1/18/2019	0.66%	1.27%	1.27%	0.66%	0.85%	0.60%
1/19/2019	0.66%	1.27%	1.27%	0.66%	0.85%	0.60%
1/20/2019	0.66%	1.27%	1.27%	0.66%	0.85%	0.60%
1/21/2019	0.66%	1.27%	1.27%	0.66%	0.85%	0.60%
1/22/2019	0.66%	1.27%	1.27%	0.73%	0.85%	0.63%
1/23/2019	0.72%	1.27%	1.27%	0.76%	0.85%	0.68%
1/24/2019	0.77%	1.28%	1.28%	0.86%	0.91%	0.80%
1/25/2019	1.02%	1.28%	1.28%	0.97%	0.91%	0.95%
1/26/2019	1.02%	1.28%	1.28%	0.97%	0.91%	0.95%
1/27/2019	1.02%	1.28%	1.28%	0.97%	0.91%	0.95%
1/28/2019	1.10%	1.28%	1.28%	1.06%	0.91%	1.12%
1/29/2019	1.26%	1.28%	1.28%	1.13%	0.91%	1.20%
1/30/2019	1.30%	1.28%	1.28%	1.28%	0.91%	1.25%
1/31/2019	1.30%	1.42%	1.42%	1.34%	1.14%	1.30%
Avg Interest Rates	0.82%	1.40%	1.40%	0.83%	1.06%	0.83%
Rmkt Fee	0.10%	0.13%	0.13%	0.10%	0.07%	0.07%
LOC Fee	0.40%			0.33%	0.32%	0.33%
All-In Rate	1.32%	1.52%	1.52%	1.26%	1.45%	1.23%
Par Amount	105,740,000		32,160,000	77,900,000		57,500,000

Interest Rate Mode	Percent of Total Variable Rate Debt	Par Outstanding	Weighted All-In Average Rate	Base Rate Average
Daily	53.02%	144,900,000	1.27%	0.82%
Weekly	46.98%	128,400,000	1.49%	1.27%
	100.00%	\$ 273,300,000	1.37%	1.03%
Fixed				
COPS 2010	0.95%	3,775,000	3.82%	
COPS 2016	29.27%	116,745,000	2.90%	
BABS 2010	43.87%	175,000,000	4.45%	(1)
SERIES 2016	25.92%	103,400,000	3.32%	
	100.00%	\$ 398,920,000	3.70%	
All-In Debt Rate Including \$130 Million Notional Amount of Swaps				3.47%

(1) Rate adjusted up from 4.35% as a result of sequestration reducing BAB's subsidy by 6.2%

IRVINE RANCH WATER DISTRICT
INTEREST RATE SWAP MONTHLY SUMMARY REPORT - DETAIL
 January 31, 2019

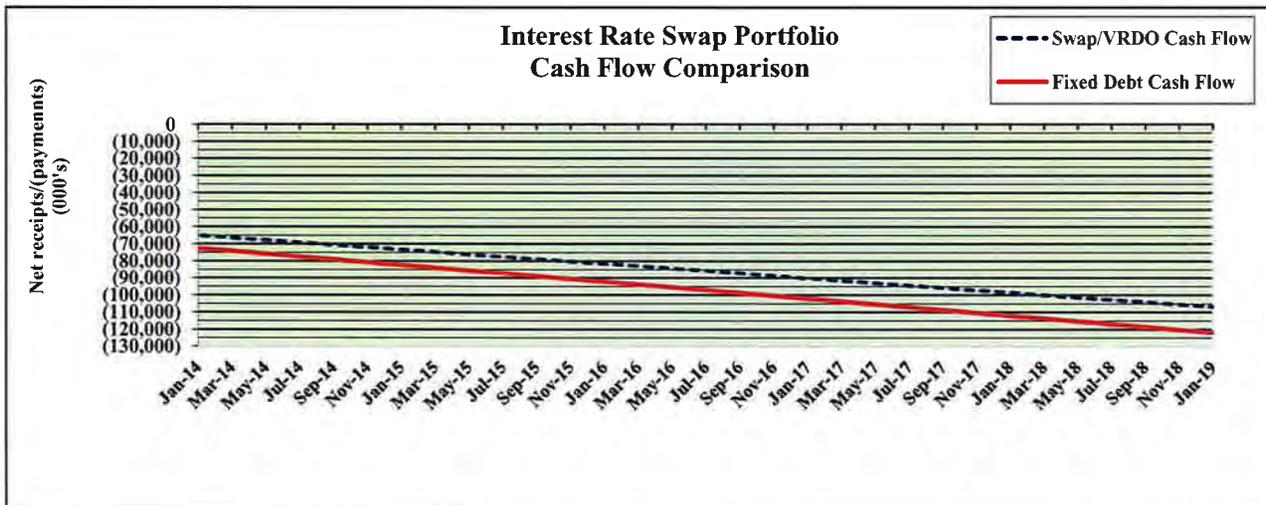
Exhibit "C"

LIBOR Avg %	Prior Mo.	Current Mo.	12-Mo Avg
	2.45%	2.51%	2.10%

Current Fiscal Year Active Swaps								Cash Flow				Mark to Market	
Effective Date	Maturity Date	Years to Maturity	Counter Party	Notional Amt	Type	Base Index	Fixed Rate	Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference
Fixed Payer Swaps - By Effective Date													
6/4/2006	6/4/2019	0.3	ML	\$ 20,000,000	FXP	LIBOR	6.200%	(66,432)	(60,511)	\$ (461,697)	\$ (12,318,089)	\$ 19,752,035	\$ (247,965)
6/4/2006	6/4/2019	0.3	CG	20,000,000	FXP	LIBOR	6.200%	(66,432)	(60,511)	(461,697)	(12,318,089)	19,752,212	(247,788)
6/17/2006	6/17/2019	0.4	CG	30,000,000	FXP	LIBOR	6.140%	(97,355)	(89,465)	(683,336)	(18,267,044)	29,595,218	(404,782)
3/10/2007	3/10/2029	10.1	ML	30,000,000	FXP	LIBOR	5.687%	(85,822)	(78,263)	(602,780)	(16,454,688)	21,546,294	(8,453,706)
3/10/2007	3/10/2029	10.1	CG	30,000,000	FXP	LIBOR	5.687%	(85,822)	(78,263)	(602,780)	(16,454,688)	21,546,098	(8,453,902)
Totals/Weighted Avgs		4.9		\$ 130,000,000			5.949%	\$ (401,863)	\$ (367,013)	\$ (2,812,290)	\$ (75,812,596)	\$ 112,191,857	\$ (17,808,143)
Total Current Year Active Swaps				\$ 130,000,000				\$ (401,863)	\$ (367,013)	\$ (2,812,290)	\$ (75,812,596)	\$ 112,191,857	\$ (17,808,143)

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

Current Fiscal Year - Total Swaps								Cash Flow				Mark to Market		
								Prior Month	Current Month	Fiscal YTD	Cumulative Cash Flow	Current Mark to Market	Notional Difference	
Total Current Year Active & Terminated Swaps								\$ 130,000,000	\$ (401,863)	\$ (367,013)	\$ (2,812,290)	\$ (75,812,596)	\$ 112,191,857	\$ (17,808,143)



Cash Flow Comparison	
Synthetic Fixed vs. Fixed Rate Debt	
	<u>Cash Flow to Date</u>
Synthetic Fixed =	\$106,678,254
Fixed Rate =	\$125,090,937
<u>Assumptions:</u>	
- Fixed rate debt issued at 5.10% in Jun-06, and 4.93% in Mar-07 (estimated TE rates - Bloomberg)	
- 'Synthetic' includes swap cash flow + interest + fees to date	

Exhibit "D"

>

IRWD Ledger Upgrade

Void Payment Register

Report Date: 31-JAN-2019 22:07

Include Zero Amount Payments: No
Display Payee Address: No

Period From: 01-JAN-19

Page: 1
To: 31-JAN-19
Date: Void Date

Bank: Bank of America N.A.

Branch: Los Angeles

Account: Checking AP and PR

Bank Account Currency: USD

Payment Currency: USD (US Dollar)

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD CHECK						
390272	02-AUG-18	GREEN, JAMES	PAY		29.10	16-JAN-19
390394	02-AUG-18	YANG, HSIAO YUEU	PAY		42.48	16-JAN-19
391389	05-SEP-18	TEMPLIN, PAM	PAY		100.00	16-JAN-19
391994	27-SEP-18	LIU, PING	IRVINE		56.37	16-JAN-19
393032	01-NOV-18	BAY, TRENISE	PAY		35.00	03-JAN-19
393251	08-NOV-18	CHORI, YOUNG JUN	PAY		53.64	15-JAN-19
394558	20-DEC-18	NASH, LINDA	PAY		27.67	15-JAN-19
394770	03-JAN-19	EQUITY OFFICE-BU24951	PAY		24.84	04-JAN-19
395039	10-JAN-19	SOUTHERN CALIFORNIA EDISON	PURCHASE		191,087.12	23-JAN-19
395268	17-JAN-19	SUKLE ADVERTISING INC.	PURCHASE		44,241.45	17-JAN-19
395343	24-JAN-19	BAY, TRENISE	PAY		84.27	29-JAN-19
395687	30-JAN-19	MAP COMMUNICATIONS, INC.	CINCINNATI		1,337.07	31-JAN-19

Payment Document Subtotal 237,119.01

Payment Number	Date	Payee Name	Site	Address	Payment Amount	Void Date
Payment Document: IRWD Wire						
12922	21-DEC-18	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR		324.50	30-JAN-19
12930	21-DEC-18	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR		324.50	30-JAN-19
12943	07-JAN-19	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR		324.50	30-JAN-19

Payment Document Subtotal 973.50

Bank Account Subtotal 238,092.51 voids

Report Count: 15
IRWD Ledger Upgrade

Report Total 238,092.51

Include Zero Amount Payments: No
Display Payee Address: No

Void Payment Register

Report Date: 31-JAN-2019 22:07

Period From: 01-JAN-19

Page: 2
To: 31-JAN-19
Date: Void Date

*** End of Report ***

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IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 1
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394725		03-JAN-19	Jacobson, Robert C (Rob)		15.75			Negotiable
394726		03-JAN-19	Nicholson, Darin		91.79	14-JAN-19	91.79	Reconciled
394727		03-JAN-19	ACCESS TECHNOLOGIES, INC.		321.36	09-JAN-19	321.36	Reconciled
394728		03-JAN-19	ADAM'S FALCONRY SERVICE, LLC		1,680.00	07-JAN-19	1,680.00	Reconciled
394729		03-JAN-19	AEGIS ENGINEERING MANAGEMENT, INC.		20,856.00	09-JAN-19	20,856.00	Reconciled
394730		03-JAN-19	AGILENT TECHNOLOGIES, INC.		68.70	08-JAN-19	68.70	Reconciled
394731		03-JAN-19	AIRGAS, INC.		775.80	07-JAN-19	775.80	Reconciled
394732		03-JAN-19	AM CONSERVATION GROUP, INC.		74.55	08-JAN-19	74.55	Reconciled
394733		03-JAN-19	AMAZON CAPITAL SERVICES, INC.		1,140.23	08-JAN-19	1,140.23	Reconciled
394734		03-JAN-19	APEX LIFE SCIENCES, LLC		1,190.00	08-JAN-19	1,190.00	Reconciled
394735		03-JAN-19	APPLIED ENGINEERING CONCEPTS		3,200.00	07-JAN-19	3,200.00	Reconciled
394736		03-JAN-19	AQUA BEN CORPORATION		3,172.34	10-JAN-19	3,172.34	Reconciled
394737		03-JAN-19	AQUA-METRIC SALES COMPANY		30,244.95	14-JAN-19	30,244.95	Reconciled
394738		03-JAN-19	AT&T		54.06	11-JAN-19	54.06	Reconciled
394739		03-JAN-19	AT&T		4,278.24	09-JAN-19	4,278.24	Reconciled
394740		03-JAN-19	AT&T		11.63	10-JAN-19	11.63	Reconciled
394741		03-JAN-19	AUTOZONE PARTS, INC.		221.29	08-JAN-19	221.29	Reconciled
394742		03-JAN-19	B & H PHOTO & VIDEO		64.99	07-JAN-19	64.99	Reconciled
394743		03-JAN-19	BAGAHY, KEN		46.48	10-JAN-19	46.48	Reconciled
394744		03-JAN-19	BILL'S SWEEPING SERVICE INC		918.75	09-JAN-19	918.75	Reconciled
394745		03-JAN-19	BIOMERIEUX INC		508.18	10-JAN-19	508.18	Reconciled
394746		03-JAN-19	BRIAN HOMSEY		345.60	07-JAN-19	345.60	Reconciled
394747		03-JAN-19	CDB INVESTMENTS, L.P.		46.17	08-JAN-19	46.17	Reconciled
394748		03-JAN-19	CDW GOVERNMENT LLC		1,398.49	08-JAN-19	1,398.49	Reconciled
394749		03-JAN-19	CHANG, THOMAS		53.37	09-JAN-19	53.37	Reconciled
394750		03-JAN-19	CITY OF NEWPORT BEACH		1,220.49	10-JAN-19	1,220.49	Reconciled
394751		03-JAN-19	CLIFFORD MORIYAMA		4,000.00	08-JAN-19	4,000.00	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 2
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394752		03-JAN-19	CONSOLIDATED CONTRACTING SERVICES, INC.		1,068.48			Negotiable
394753		03-JAN-19	CORE & MAIN LP		1,352.27	08-JAN-19	1,352.27	Reconciled
394754		03-JAN-19	COX COMMUNICATIONS, INC.		538.74	09-JAN-19	538.74	Reconciled
394755		03-JAN-19	CULLIGAN OF SANTA ANA		2,000.00	08-JAN-19	2,000.00	Reconciled
394756		03-JAN-19	DEALERS SERVICE, INC		1,800.00	22-JAN-19	1,800.00	Reconciled
394757		03-JAN-19	DIBRELL, CAROLYN		36.74	08-JAN-19	36.74	Reconciled
394758		03-JAN-19	DILYTICS INC		46,920.00	14-JAN-19	46,920.00	Reconciled
394759		03-JAN-19	DIRECTV INC		125.53	14-JAN-19	125.53	Reconciled
394760		03-JAN-19	DISCOUNT COURIER SERVICE INC.		67.47	07-JAN-19	67.47	Reconciled
394761		03-JAN-19	DOUGLAS ENVIRONMENTAL GROUP INC		1,225.00	10-JAN-19	1,225.00	Reconciled
394762		03-JAN-19	DUKE'S ROOT CONTROL INC		75,000.00	11-JAN-19	75,000.00	Reconciled
394763		03-JAN-19	DWYER INSTRUMENTS INC		139.54	10-JAN-19	139.54	Reconciled
394764		03-JAN-19	EAST ORANGE COUNTY WATER DISTRICT		70,420.92	16-JAN-19	70,420.92	Reconciled
394765		03-JAN-19	ELLIS, ZACKRY		211.93	08-JAN-19	211.93	Reconciled
394766		03-JAN-19	ENTERPRISE		890.00	08-JAN-19	890.00	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
394767	03-JAN-19		SECURITY, INC ENVIRONMENTAL ENGINEERING AND CONTRACTING, INC.		5,505.00	07-JAN-19	5,505.00	Reconciled
394768	03-JAN-19		ENVIRONMENTAL SCIENCE ASSOCIATES		23,989.93	10-JAN-19	23,989.93	Reconciled
394769	03-JAN-19		EQUIPMENT DIRECT INC		334.32	22-JAN-19	334.32	Reconciled
394770	03-JAN-19		EQUITY OFFICE-BUZ4951		24.84			Voided
394771	03-JAN-19		ESRI		26,076.52	09-JAN-19	26,076.52	Reconciled
394772	03-JAN-19		EVANS-HYDRO INC		42,292.85	28-JAN-19	42,292.85	Reconciled
394773	03-JAN-19		EXCEL PAVING CO.		601.51	10-JAN-19	601.51	Reconciled
394774	03-JAN-19		FEDEX		242.36	08-JAN-19	242.36	Reconciled
394775	03-JAN-19		FIRE EXTINGUISHING SAFETY & SERVICE		670.50	10-JAN-19	670.50	Reconciled
394776	03-JAN-19		FISERV		297.30	07-JAN-19	297.30	Reconciled
394777	03-JAN-19		FISHER SCIENTIFIC COMPANY LLC		20,536.02	09-JAN-19	20,536.02	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 3
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394778	03-JAN-19		FRANCHISE TAX BOARD		100.00	18-JAN-19	100.00	Reconciled
394779	03-JAN-19		FRONTIER CALIFORNIA INC.		273.38	18-JAN-19	273.38	Reconciled
394780	03-JAN-19		GANAHL LUMBER CO.		1,878.17	09-JAN-19	1,878.17	Reconciled
394781	03-JAN-19		GATES, RICK		25.00	15-JAN-19	25.00	Reconciled
394782	03-JAN-19		GCI CONSTRUCTION, INC.		1,519.41	16-JAN-19	1,519.41	Reconciled
394783	03-JAN-19		GM SAGER CONSTRUCTION CO, INC.		21,250.00	11-JAN-19	21,250.00	Reconciled
394784	03-JAN-19		GRAINGER		2,741.07	08-JAN-19	2,741.07	Reconciled
394785	03-JAN-19		GRAYBAR ELECTRIC COMPANY		9,108.73	07-JAN-19	9,108.73	Reconciled
394786	03-JAN-19		HACH COMPANY		2,818.15	08-JAN-19	2,818.15	Reconciled
394787	03-JAN-19		HDR ENGINEERING INC		52,869.13	10-JAN-19	52,869.13	Reconciled
394788	03-JAN-19		HELPMATE'S STAFFING SERVICES		22,578.85	09-JAN-19	22,578.85	Reconciled
394789	03-JAN-19		HILL BROTHERS CHEMICAL COMPANY		18,198.21	10-JAN-19	18,198.21	Reconciled
394790	03-JAN-19		HILTS CONSULTING GROUP, INC.		22,600.00	10-JAN-19	22,600.00	Reconciled
394791	03-JAN-19		INFOSYS LIMITED		25,440.00	10-JAN-19	25,440.00	Reconciled
394792	03-JAN-19		INTEGRITY IT SOLUTIONS INC.		6,787.50	10-JAN-19	6,787.50	Reconciled
394793	03-JAN-19		INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47		1,355.00	08-JAN-19	1,355.00	Reconciled
394794	03-JAN-19		IRVINE PIPE & SUPPLY INC		1,902.22	07-JAN-19	1,902.22	Reconciled
394795	03-JAN-19		JL, XIAOJING		85.15	14-JAN-19	85.15	Reconciled
394796	03-JAN-19		KENT & AMY DAHLBERG		2,380.00	11-JAN-19	2,380.00	Reconciled
394797	03-JAN-19		KO, JAMYUEN		44.77	14-JAN-19	44.77	Reconciled
394798	03-JAN-19		KPRS CONSTRUCTION SERVICES, INC		1,698.33	10-JAN-19	1,698.33	Reconciled
394799	03-JAN-19		KREILMANN, BERNARD		23.61	14-JAN-19	23.61	Reconciled
394800	03-JAN-19		LA HABRA FENCE COMPANY INC		7,836.00	09-JAN-19	7,836.00	Reconciled
394801	03-JAN-19		LANDCARE HOLDINGS, INC.		10,974.06	10-JAN-19	10,974.06	Reconciled
394802	03-JAN-19		LENNAR HOMES		35.84	08-JAN-19	35.84	Reconciled
394803	03-JAN-19		LUBRICATION ENGINEERS, INC.		7,441.05	10-JAN-19	7,441.05	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 4
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394804	03-JAN-19		MC FADDEN-DALE INDUSTRIAL		48.66	08-JAN-19	48.66	Reconciled
394805	03-JAN-19		MERCER (US) INC.		2,534.54	07-JAN-19	2,534.54	Reconciled
394806	03-JAN-19		MICHAEL BAKER INTERNATIONAL, INC.		16,720.43	10-JAN-19	16,720.43	Reconciled
394807	03-JAN-19		MICHAELS, ROSS & COLE, LTD.		3,200.00	07-JAN-19	3,200.00	Reconciled

394808	03-JAN-19	MOBILE MODULAR MANAGEMENT CORPORATION	1,212.19	07-JAN-19	1,212.19	Reconciled
394809	03-JAN-19	MR CRANE INC	2,956.50	11-JAN-19	2,956.50	Reconciled
394810	03-JAN-19	NINYO & MOORE	2,327.25	07-JAN-19	2,327.25	Reconciled
394811	03-JAN-19	NOVACOAST INC	1,122.50	08-JAN-19	1,122.50	Reconciled
394812	03-JAN-19	O.C. SUPERIOR CUSTOM CLEANING SERVICES	752.00	07-JAN-19	752.00	Reconciled
394813	03-JAN-19	OLIN CORPORATION	11,144.19	15-JAN-19	11,144.19	Reconciled
394814	03-JAN-19	OLTMANS CONSTRUCTION CO.	1,429.67	10-JAN-19	1,429.67	Reconciled
394815	03-JAN-19	ONESOURCE DISTRIBUTORS LLC	7,395.28	07-JAN-19	7,395.28	Reconciled
394816	03-JAN-19	ORANGE COUNTY AUTO PARTS CO	2,957.12	07-JAN-19	2,957.12	Reconciled
394817	03-JAN-19	ORANGE COUNTY FIRE PROTECTION	870.00	08-JAN-19	870.00	Reconciled
394818	03-JAN-19	ORANGE COUNTY SHERIFF'S OFFICE	224.50	14-JAN-19	224.50	Reconciled
394819	03-JAN-19	ORANGE LINE OIL COMPANY	2,417.97	07-JAN-19	2,417.97	Reconciled
394820	03-JAN-19	PALL ADVANCED SEPARATIONS SYSTEMS	22,030.00	10-JAN-19	22,030.00	Reconciled
394821	03-JAN-19	PERS LONG TERM CARE	538.89	08-JAN-19	538.89	Reconciled
394822	03-JAN-19	PINNACLE TOWERS LLC	749.21	09-JAN-19	749.21	Reconciled
394823	03-JAN-19	PRAXAIR DISTRIBUTION INC	1,552.30	08-JAN-19	1,552.30	Reconciled
394824	03-JAN-19	PULTE GROUP	77.53	30-JAN-19	77.53	Reconciled
394825	03-JAN-19	RANCHO MADERAS APTS	36.21	24-JAN-19	36.21	Reconciled
394826	03-JAN-19	RANCHO TIERRA APTS	16.85	24-JAN-19	16.85	Reconciled
394827	03-JAN-19	REAL WATER CONSULTANTS INC.	18,426.75	16-JAN-19	18,426.75	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 5
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394828		03-JAN-19	RED WING SHOE STORE		116.36	08-JAN-19	116.36	Reconciled
394829		03-JAN-19	REPUBLIC PAVEMENT MAINTENANCE		1,374.22	14-JAN-19	1,374.22	Reconciled
394830		03-JAN-19	RICHARD C. SLADE & ASSOCIATES LLC		2,304.20	23-JAN-19	2,304.20	Reconciled
394831		03-JAN-19	RS HUGHES COMPANY, INC.		2,887.16	08-JAN-19	2,887.16	Reconciled
394832		03-JAN-19	SANDHU, MOHINDAR S		1,187.35	07-JAN-19	1,187.35	Reconciled
394833		03-JAN-19	SANTA ANA BLUE PRINT		601.85	11-JAN-19	601.85	Reconciled
394834		03-JAN-19	SCHINDLER ELEVATOR CORPORATION		214.92	09-JAN-19	214.92	Reconciled
394835		03-JAN-19	SIGMA-ALDRICH INC		128.64	08-JAN-19	128.64	Reconciled
394836		03-JAN-19	SOFTWAREONE INC		168,539.85	11-JAN-19	168,539.85	Reconciled
394837		03-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY		206,140.23	07-JAN-19	206,140.23	Reconciled
394838		03-JAN-19	SOUTHERN COUNTIES LUBRICANTS LLC		3,020.75	08-JAN-19	3,020.75	Reconciled
394839		03-JAN-19	STANFORD COURT APARTMENTS		1,306.44	24-JAN-19	1,306.44	Reconciled
394840		03-JAN-19	STANTEC CONSULTING SERVICES INC.		4,680.00	08-JAN-19	4,680.00	Reconciled
394841		03-JAN-19	STETSON ENGINEERS INC.		1,554.25	08-JAN-19	1,554.25	Reconciled
394842		03-JAN-19	TEKDRAULICS		27,623.85	10-JAN-19	27,623.85	Reconciled
394843		03-JAN-19	TETRA TECH, INC		16,593.00	10-JAN-19	16,593.00	Reconciled
394844		03-JAN-19	THOMPSON INDUSTRIAL SUPPLY		9,390.83	08-JAN-19	9,390.83	Reconciled
394845		03-JAN-19	THYSSENKRUPP ELEVATOR CORPORATION		396.46	07-JAN-19	396.46	Reconciled
394846		03-JAN-19	TIC-OFFICE PROPERTIES		249.70	11-JAN-19	249.70	Reconciled
394847		03-JAN-19	TOLL BROS., INC.		191.56	11-JAN-19	191.56	Reconciled
394848		03-JAN-19	TRI COUNTY PUMP COMPANY		10,549.00	09-JAN-19	10,549.00	Reconciled
394849		03-JAN-19	TRI POINTE HOMES, INC.		189.19	17-JAN-19	189.19	Reconciled
394850		03-JAN-19	TROPICAL PLAZA NURSERY INC		12,617.55	09-JAN-19	12,617.55	Reconciled
394851		03-JAN-19	UNITED PARCEL SERVICE INC		186.77	08-JAN-19	186.77	Reconciled
394852		03-JAN-19	VERIZON WIRELESS SERVICES LLC		9,908.21	09-JAN-19	9,908.21	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06

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

Account: Checking AP and PR Page: 6
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394853		03-JAN-19	VILLA CORONADO APTS		1,529.00	24-JAN-19	1,529.00	Reconciled
394854		03-JAN-19	WALTON MOTORS & CONTROLS INC		2,726.61	07-JAN-19	2,726.61	Reconciled
394855		03-JAN-19	WARD, WILLIAM P JR.		1,367.96	07-JAN-19	1,367.96	Reconciled
394856		03-JAN-19	WAXIE'S ENTERPRISES, INC		1,145.21	07-JAN-19	1,145.21	Reconciled
394857		03-JAN-19	WECK LABORATORIES INC		415.00	11-JAN-19	415.00	Reconciled
394858		03-JAN-19	WINDWOOD GLEN		10.84	24-JAN-19	10.84	Reconciled
394859		03-JAN-19	WOODARD & CURRAN INC		31,468.04	10-JAN-19	31,468.04	Reconciled
394860		03-JAN-19	XYLEM WATER SOLUTIONS USA, INC.		3,544.09	09-JAN-19	3,544.09	Reconciled
394861		03-JAN-19	ZEBRON CONTRACTING INC		44,032.33	11-JAN-19	44,032.33	Reconciled
394862		03-JAN-19	ZHANG, MIN		24.07			Negotiable
394863		04-JAN-19	Corral, Edward Jr HOME (Ed)		984.52	07-JAN-19	984.52	Reconciled
394864		10-JAN-19	Cervantes, Angel		587.24	11-JAN-19	587.24	Reconciled
394865		10-JAN-19	Compton, Christine A		117.67			Negotiable
394866		10-JAN-19	Cortez, Malcolm A (Malcolm)		52.32			Negotiable
394867		10-JAN-19	Dillman, Tyler		90.00	15-JAN-19	90.00	Reconciled
394868		10-JAN-19	Hall, William P (William)		135.00	15-JAN-19	135.00	Reconciled
394869		10-JAN-19	Hatch, Lauren		2.50	22-JAN-19	2.50	Reconciled
394870		10-JAN-19	Ho, Connie		34.93	22-JAN-19	34.93	Reconciled
394871		10-JAN-19	Hufana, Eugenio D		45.78	11-JAN-19	45.78	Reconciled
394872		10-JAN-19	Lao, Richard S		60.00	14-JAN-19	60.00	Reconciled
394873		10-JAN-19	Martinez, Diego		105.00	17-JAN-19	105.00	Reconciled
394874		10-JAN-19	Martinez, Jose A III (Jose)		77.57	28-JAN-19	77.57	Reconciled
394875		10-JAN-19	Midstokke, Paige		179.60			Negotiable
394876		10-JAN-19	Montejano, Graciela		88.30	22-JAN-19	88.30	Reconciled
394877		10-JAN-19	Mwe, Nang		30.00	15-JAN-19	30.00	Reconciled
394878		10-JAN-19	Oldewage, Lars D (Lars)		702.91	14-JAN-19	702.91	Reconciled
394879		10-JAN-19	Saini, Mohit		207.79	10-JAN-19	207.79	Reconciled
394880		10-JAN-19	Smyth, Jeffrey S (Jeff)		96.90	22-JAN-19	96.90	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 7
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394881		10-JAN-19	Spangenberg, Carl W (Carl)		115.00	17-JAN-19	115.00	Reconciled
394882		10-JAN-19	Tobias, Reynaldo		13.51	14-JAN-19	13.51	Reconciled
394883		10-JAN-19	Welch, Kelly A (Kellie)		103.04	14-JAN-19	103.04	Reconciled
394884		10-JAN-19	AAF INTERNATIONAL		1,246.68	15-JAN-19	1,246.68	Reconciled
394885		10-JAN-19	ADAM'S FALCONRY SERVICE, LLC		1,680.00	22-JAN-19	1,680.00	Reconciled
394886		10-JAN-19	AFLAC		6,913.16	22-JAN-19	6,913.16	Reconciled
394887		10-JAN-19	AFLAC		148.74	22-JAN-19	148.74	Reconciled
394888		10-JAN-19	AGILENT TECHNOLOGIES, INC.		330.17	15-JAN-19	330.17	Reconciled
394889		10-JAN-19	AIRGAS, INC.		447.36	14-JAN-19	447.36	Reconciled
394890		10-JAN-19	ALEXANDER'S CONTRACT SERVICES, INC.		119,668.41	16-JAN-19	119,668.41	Reconciled
394891		10-JAN-19	ALLIANT INSURANCE SERVICES, INC		1,880.00	14-JAN-19	1,880.00	Reconciled
394892		10-JAN-19	AMAZON CAPITAL SERVICES, INC.		332.09	14-JAN-19	332.09	Reconciled
394893		10-JAN-19	AMERICAN GEOTECHNICAL, INC.		5,350.00	17-JAN-19	5,350.00	Reconciled
394894		10-JAN-19	AMERICAN WATER CHEMICALS, INC.		5,112.74	14-JAN-19	5,112.74	Reconciled
394895		10-JAN-19	ANTHONY N. LARSEN		675.00	15-JAN-19	675.00	Reconciled
394896		10-JAN-19	APEX LIFE SCIENCES, LLC		4,254.26	15-JAN-19	4,254.26	Reconciled
394897		10-JAN-19	ASSOCIATION OF CALIFORNIA WATER		38,089.09	18-JAN-19	38,089.09	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
394898		10-JAN-19	AGENCIES/JPIA		2,731.23	17-JAN-19	2,731.23	Reconciled
394899		10-JAN-19	AT&T		200.97	16-JAN-19	200.97	Reconciled
394900		10-JAN-19	AUSTIN HARDWOODS, INC		943.35	15-JAN-19	943.35	Reconciled
394901		10-JAN-19	AUTOZONE PARTS, INC.		115.00	15-JAN-19	115.00	Reconciled
394902		10-JAN-19	BAVCO BACKFLOW APPARATUS & VALVE COMPANY		372.00	17-JAN-19	372.00	Reconciled
394903		10-JAN-19	BDC SPECIAL WASTE		474.06	18-JAN-19	474.06	Reconciled
394904		10-JAN-19	BELL TOWER FLORIST & GIFTS		434.47	24-JAN-19	434.47	Reconciled
394905		10-JAN-19	BENECCI, CORP		750.00			Negotiable
394906		10-JAN-19	BIGWIG MONSTER, LLC		108.00	16-JAN-19	108.00	Reconciled
394907		10-JAN-19	BLAIRS TOWING INC		651.00	15-JAN-19	651.00	Reconciled
			BOYD & ASSOCIATES					

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 8
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394908		10-JAN-19	BRUCE NEWELL		2,500.00	24-JAN-19	2,500.00	Reconciled
394909		10-JAN-19	BURKE, WILLIAMS & SORENSEN, LLP		1,007.50	15-JAN-19	1,007.50	Reconciled
394910		10-JAN-19	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		1,383.33	14-JAN-19	1,383.33	Reconciled
394911		10-JAN-19	C WELLS PIPELINE MATERIALS INC		49,442.66	22-JAN-19	49,442.66	Reconciled
394912		10-JAN-19	CALIFORNIA BARRICADE RENTAL, INC.		10,480.00	15-JAN-19	10,480.00	Reconciled
394913		10-JAN-19	CANON FINANCIAL SERVICES, INC		910.49	16-JAN-19	910.49	Reconciled
394914		10-JAN-19	CANON SOLUTIONS AMERICA, INC.		13,936.54	18-JAN-19	13,936.54	Reconciled
394915		10-JAN-19	CDW GOVERNMENT LLC		704.83	16-JAN-19	704.83	Reconciled
394916		10-JAN-19	CENTRAL COAST POWER SERVICES, LLC		34,077.76	22-JAN-19	34,077.76	Reconciled
394917		10-JAN-19	CEPA OPERATIONS, INC		330.00	14-JAN-19	330.00	Reconciled
394918		10-JAN-19	CHAIREL CUSTOM HAY, INC.		9,027.25	16-JAN-19	9,027.25	Reconciled
394919		10-JAN-19	CHO DESIGN ASSOCIATES, INC		9,600.00	14-JAN-19	9,600.00	Reconciled
394920		10-JAN-19	CITY CIRCUIT BREAKERS		48.49	16-JAN-19	48.49	Reconciled
394921		10-JAN-19	CITY OF IRVINE		120.00	14-JAN-19	120.00	Reconciled
394922		10-JAN-19	CITY OF LAKE FOREST		82,896.51	28-JAN-19	82,896.51	Reconciled
394923		10-JAN-19	CITY OF ORANGE		164.75	15-JAN-19	164.75	Reconciled
394924		10-JAN-19	CITY OF TUSTIN		242.20	14-JAN-19	242.20	Reconciled
394925		10-JAN-19	CLA-VAL COMPANY		4,106.78	15-JAN-19	4,106.78	Reconciled
394926		10-JAN-19	COLONIAL LIFE & ACCIDENT INSURANCE CO.		1,103.26	18-JAN-19	1,103.26	Reconciled
394927		10-JAN-19	CONSTELLATION NEWENERGY, INC.		36,711.39	16-JAN-19	36,711.39	Reconciled
394928		10-JAN-19	D & G SIGNS		8,710.18	22-JAN-19	8,710.18	Reconciled
394929		10-JAN-19	D & H WATER SYSTEMS INC.		484.81	17-JAN-19	484.81	Reconciled
394930		10-JAN-19	DEALERS SERVICE, INC		700.00	22-JAN-19	700.00	Reconciled
394931		10-JAN-19	DELL MARKETING LP		2,949.26	14-JAN-19	2,949.26	Reconciled
394932		10-JAN-19	E&M ELECTRIC AND MACHINERY, INC.		78,522.83	16-JAN-19	78,522.83	Reconciled

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 9
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394933		10-JAN-19	E.J. MEYER COMPANY, INC.		16,340.00	16-JAN-19	16,340.00	Reconciled
394934		10-JAN-19	EAGLE PRINT DYNAMICS		2,641.99	14-JAN-19	2,641.99	Reconciled
394935		10-JAN-19	EBS UTILITIES ADJUSTING, INC		3,050.00	17-JAN-19	3,050.00	Reconciled
394936		10-JAN-19	EI&C ENGINEERING INC		46,030.00	18-JAN-19	46,030.00	Reconciled
394937		10-JAN-19	ELEMENT MATERIALS TECHNOLOGY		1,450.00	14-JAN-19	1,450.00	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
394938		10-JAN-19	HUNTINGTON BEACH INC ELITE AUTOMOTIVE SERVICE, LLC		550.00	14-JAN-19	550.00	Reconciled
394939		10-JAN-19	EMEDCO		1,378.43	16-JAN-19	1,378.43	Reconciled
394940		10-JAN-19	ENTERPRISE SECURITY, INC		3,786.20	14-JAN-19	3,786.20	Reconciled
394941		10-JAN-19	ENVIRONMENTAL EXPRESS INC		8,114.43	16-JAN-19	8,114.43	Reconciled
394942		10-JAN-19	ENVIRONMENTAL RESOURCE ASSOCIATES		136.89	16-JAN-19	136.89	Reconciled
394943		10-JAN-19	ENVIRONMENTAL SCIENCE ASSOCIATES		26,609.69	23-JAN-19	26,609.69	Reconciled
394944		10-JAN-19	ESRI		2,000.00	14-JAN-19	2,000.00	Reconciled
394945		10-JAN-19	EXECUTIVE LIGHTING & ELECTRIC		16,254.32	17-JAN-19	16,254.32	Reconciled
394946		10-JAN-19	FEDEX		229.19	16-JAN-19	229.19	Reconciled
394947		10-JAN-19	FIDELITY SECURITY LIFE INSURANCE COMPANY		7,117.97	17-JAN-19	7,117.97	Reconciled
394948		10-JAN-19	FIRST CHOICE SERVICES		1,155.13	16-JAN-19	1,155.13	Reconciled
394949		10-JAN-19	FISHER SCIENTIFIC COMPANY LLC		7,149.14	14-JAN-19	7,149.14	Reconciled
394950		10-JAN-19	FLUID CONSERVATION SYSTEMS INC		477.55	18-JAN-19	477.55	Reconciled
394951		10-JAN-19	FOUGHT, CYNTHIA J.		2,689.20	15-JAN-19	2,689.20	Reconciled
394952		10-JAN-19	FUSCOE ENGINEERING, INC.		2,975.00	14-JAN-19	2,975.00	Reconciled
394953		10-JAN-19	GANAHL LUMBER CO.		320.45	17-JAN-19	320.45	Reconciled
394954		10-JAN-19	GARZA INDUSTRIES, INC		1,421.44	14-JAN-19	1,421.44	Reconciled
394955		10-JAN-19	GCI CONSTRUCTION, INC.		9,777.91	16-JAN-19	9,777.91	Reconciled
394956		10-JAN-19	GEOCON WEST, INC.		1,540.00	17-JAN-19	1,540.00	Reconciled

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 10
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394957		10-JAN-19	GJ AUTOMOTIVE EQUIPMENT CO INC		5,587.50	22-JAN-19	5,587.50	Reconciled
394958		10-JAN-19	GRAINGER		2,215.75	16-JAN-19	2,215.75	Reconciled
394959		10-JAN-19	GRAYBAR ELECTRIC COMPANY		1,185.91	14-JAN-19	1,185.91	Reconciled
394960		10-JAN-19	HACH COMPANY		9,684.16	15-JAN-19	9,684.16	Reconciled
394961		10-JAN-19	HARMSWORTH ASSOCIATES		2,503.00	18-JAN-19	2,503.00	Reconciled
394962		10-JAN-19	HARRINGTON INDUSTRIAL PLASTICS LLC		2,947.82	14-JAN-19	2,947.82	Reconciled
394963		10-JAN-19	HARTFORD LIFE AND ACCIDENT INSURANCE COMPANY		72.30	17-JAN-19	72.30	Reconciled
394964		10-JAN-19	HDR ENGINEERING INC		19,672.58	18-JAN-19	19,672.58	Reconciled
394965		10-JAN-19	HELPMATES STAFFING SERVICES		20,891.70	16-JAN-19	20,891.70	Reconciled
394966		10-JAN-19	HILL BROTHERS CHEMICAL COMPANY		12,324.66	17-JAN-19	12,324.66	Reconciled
394967		10-JAN-19	HILTS CONSULTING GROUP, INC.		10,155.00	18-JAN-19	10,155.00	Reconciled
394968		10-JAN-19	HINSILBLON LTD		2,497.00			Negotiable
394969		10-JAN-19	HOME DEPOT USA INC		2,026.59	16-JAN-19	2,026.59	Reconciled
394970		10-JAN-19	HORIZON TECHNOLOGY INC		311.80	18-JAN-19	311.80	Reconciled
394971		10-JAN-19	HUMANA INSURANCE COMPANY		73.80	18-JAN-19	73.80	Reconciled
394972		10-JAN-19	IDEXX DISTRIBUTION, INC		1,906.96	14-JAN-19	1,906.96	Reconciled
394973		10-JAN-19	IRVINE PIPE & SUPPLY INC		1,758.10	14-JAN-19	1,758.10	Reconciled
394974		10-JAN-19	IRWD-PETTY CASH CUSTODIAN		1,049.31	14-JAN-19	1,049.31	Reconciled
394975		10-JAN-19	JCI JONES CHEMICALS INC		5,255.25	16-JAN-19	5,255.25	Reconciled
394976		10-JAN-19	JIG CONSULTANTS		4,558.90	17-JAN-19	4,558.90	Reconciled
394977		10-JAN-19	JOE RHODES MAINT SERVICE INC		1,603.08	16-JAN-19	1,603.08	Reconciled
394978		10-JAN-19	JOHN MICHAEL COVAS		173.20	24-JAN-19	173.20	Reconciled
394979		10-JAN-19	KAYUGA SOLUTION INC		9,566.47	15-JAN-19	9,566.47	Reconciled
394980		10-JAN-19	KENT & AMY DAHLBERG		92,683.30	18-JAN-19	92,683.30	Reconciled
394981		10-JAN-19	KLEINFELDER, INC.		2,081.00	15-JAN-19	2,081.00	Reconciled

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 11
 Payment Currency: USD (US Dollar)

Payment Type: All

Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
394982		10-JAN-19	LAGUNA BEACH COUNTY WATER DISTRICT		6,536.69			Negotiable
394983		10-JAN-19	LANDCARE HOLDINGS, INC.		30,091.13	18-JAN-19	30,091.13	Reconciled
394984		10-JAN-19	LEWIS BRISBOIS BISGAARD AND SMITH, LLP		61,371.37	17-JAN-19	61,371.37	Reconciled
394985		10-JAN-19	LILLESTRAND LEADERSHIP CONSULTING, INC.		3,736.78	22-JAN-19	3,736.78	Reconciled
394986		10-JAN-19	LU'S LIGHTHOUSE, INC.		221.18	15-JAN-19	221.18	Reconciled
394987		10-JAN-19	MARK KADESH		10,000.00	22-JAN-19	10,000.00	Reconciled
394988		10-JAN-19	MC MASTER CARR SUPPLY CO		667.12	15-JAN-19	667.12	Reconciled
394989		10-JAN-19	MCR TECHNOLOGIES INC		29,739.79	16-JAN-19	29,739.79	Reconciled
394990		10-JAN-19	MISSION COMMUNICATIONS, LLC		563.40	16-JAN-19	563.40	Reconciled
394991		10-JAN-19	MITECH CONTROLS		880.39	18-JAN-19	880.39	Reconciled
394992		10-JAN-19	MORRISROE, EDWARD		238.62	22-JAN-19	238.62	Reconciled
394993		10-JAN-19	MPULSE MOBILE, INC		145.68	15-JAN-19	145.68	Reconciled
394994		10-JAN-19	MSC INDUSTRIAL SUPPLY CO		1,576.63	16-JAN-19	1,576.63	Reconciled
394995		10-JAN-19	MULVIHILL, BARNEY		33.85	22-JAN-19	33.85	Reconciled
394996		10-JAN-19	NATIONAL WATER RESEARCH INSTITUTE		2,500.00	23-JAN-19	2,500.00	Reconciled
394997		10-JAN-19	NATURALWELL, LLC		990.00	14-JAN-19	990.00	Reconciled
394998		10-JAN-19	NINYO & MOORE		14,290.25	16-JAN-19	14,290.25	Reconciled
394999		10-JAN-19	NMG GEOTECHNICAL INC		18,011.40	17-JAN-19	18,011.40	Reconciled
395000		10-JAN-19	NOVACOAST INC		165.00	14-JAN-19	165.00	Reconciled
395001		10-JAN-19	O.C. SUPERIOR CUSTOM CLEANING SERVICES		3,600.00	18-JAN-19	3,600.00	Reconciled
395002		10-JAN-19	OLIN CORPORATION		30,983.63	18-JAN-19	30,983.63	Reconciled
395003		10-JAN-19	OMAR DANDASHI		1,948.85	22-JAN-19	1,948.85	Reconciled
395004		10-JAN-19	ONESOURCE DISTRIBUTORS LLC		10,403.41	15-JAN-19	10,403.41	Reconciled
395005		10-JAN-19	ORANGE COUNTY AUTO PARTS CO		4,140.25	14-JAN-19	4,140.25	Reconciled
395006		10-JAN-19	ORANGE COUNTY FIRE AUTHORITY		2,815.00	15-JAN-19	2,815.00	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 12
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395007		10-JAN-19	ORANGE COUNTY SANITATION DISTRICT		75,042.99	15-JAN-19	75,042.99	Reconciled
395008		10-JAN-19	PACIFIC HYDROTECH CORPORATION		401,414.73	17-JAN-19	401,414.73	Reconciled
395009		10-JAN-19	PACIFIC HYDROTECH CORPORATION		7,552.48	15-JAN-19	7,552.48	Reconciled
395010		10-JAN-19	PACIFIC HYDROTECH CORPORATION		13,574.61	18-JAN-19	13,574.61	Reconciled
395011		10-JAN-19	PACRIM ENGINEERING INC.		3,240.00	24-JAN-19	3,240.00	Reconciled
395012		10-JAN-19	PAPER DEPOT DOCUMENT DESTRUCTION LLC		454.00	22-JAN-19	454.00	Reconciled
395013		10-JAN-19	PASCAL & LUDWIG CONSTRUCTORS		641,129.84	16-JAN-19	641,129.84	Reconciled
395014		10-JAN-19	PASCAL & LUDWIG CONSTRUCTORS		14,501.55	17-JAN-19	14,501.55	Reconciled
395015		10-JAN-19	PASCAL & LUDWIG CONSTRUCTORS		19,242.12	17-JAN-19	19,242.12	Reconciled
395016		10-JAN-19	PAULUS ENGINEERING, INC.		11,607.57	16-JAN-19	11,607.57	Reconciled
395017		10-JAN-19	PAYNE & FEARS LLP		6,660.00	14-JAN-19	6,660.00	Reconciled
395018		10-JAN-19	PRE-PAID LEGAL SERVICES INC		1,188.10	18-JAN-19	1,188.10	Reconciled
395019		10-JAN-19	PROCARE WORK INJURY CENTER		1,950.00	18-JAN-19	1,950.00	Reconciled
395020		10-JAN-19	PRODATA COMPUTER SERVICES INC		870.00	14-JAN-19	870.00	Reconciled
395021		10-JAN-19	PRUDENTIAL OVERALL SUPPLY		6,442.65	14-JAN-19	6,442.65	Reconciled

395022	10-JAN-19	FTI SAND & GRAVEL INC		1,128.75	15-JAN-19	1,128.75	Reconciled
395023	10-JAN-19	QUICKEL PAVING INC		9,995.00	16-JAN-19	9,995.00	Reconciled
395024	10-JAN-19	QUINCY COMPRESSOR LLC		872.29	16-JAN-19	872.29	Reconciled
395025	10-JAN-19	R&B AUTOMATION, INC.		2,000.00	23-JAN-19	2,000.00	Reconciled
395026	10-JAN-19	RAM AIR ENGINEERING INC		23,794.23	16-JAN-19	23,794.23	Reconciled
395027	10-JAN-19	REACH EMPLOYEE ASSISTANCE INC		1,041.60	22-JAN-19	1,041.60	Reconciled
395028	10-JAN-19	REFRIGERATION SUPPLIES DISTRIBUTOR		54.43	14-JAN-19	54.43	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 13
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395029		10-JAN-19	RLG ENTERPRISES, INC		736.06	14-JAN-19	736.06	Reconciled
395030		10-JAN-19	ROCHESTER MIDLAND CORPORATION		686.84	14-JAN-19	686.84	Reconciled
395031		10-JAN-19	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT		137,344.13	18-JAN-19	137,344.13	Reconciled
395032		10-JAN-19	SAFETY-KLEEN SYSTEMS, INC		1,205.37	15-JAN-19	1,205.37	Reconciled
395033		10-JAN-19	SANTA ANA BLUE PRINT		3,401.65	17-JAN-19	3,401.65	Reconciled
395034		10-JAN-19	SANTA MARGARITA FORD		2,241.85	23-JAN-19	2,241.85	Reconciled
395035		10-JAN-19	SCHINDLER ELEVATOR CORPORATION		4,401.00	17-JAN-19	4,401.00	Reconciled
395036		10-JAN-19	SCHULER CONSTRUCTORS, INC.		192,008.74	16-JAN-19	192,008.74	Reconciled
395037		10-JAN-19	SNAP-ON INCORPORATED		242.23	17-JAN-19	242.23	Reconciled
395038		10-JAN-19	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		2,429.32	18-JAN-19	2,429.32	Reconciled
395039		10-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY		191,087.12			Voided
395040		10-JAN-19	SOUTHERN CALIFORNIA GAS COMPANY		50.00	16-JAN-19	50.00	Reconciled
395041		10-JAN-19	SPARKLETTTS		110.98	17-JAN-19	110.98	Reconciled
395042		10-JAN-19	SS MECHANICAL CONSTRUCTION CORP		62,673.64	15-JAN-19	62,673.64	Reconciled
395043		10-JAN-19	STANTEC CONSULTING SERVICES INC.		7,336.00	15-JAN-19	7,336.00	Reconciled
395044		10-JAN-19	STREAKWAVE WIRELESS, INC.		561.66	14-JAN-19	561.66	Reconciled
395045		10-JAN-19	SUEZ TREATMENT SOLUTIONS INC.		3,570.45	16-JAN-19	3,570.45	Reconciled
395046		10-JAN-19	T.E. ROBERTS, INC.		36,999.60	17-JAN-19	36,999.60	Reconciled
395047		10-JAN-19	TALLEY INC		2,218.19	15-JAN-19	2,218.19	Reconciled
395048		10-JAN-19	TETRA TECH, INC		12,530.00	17-JAN-19	12,530.00	Reconciled
395049		10-JAN-19	THOMPSON INDUSTRIAL SUPPLY		3,123.34	15-JAN-19	3,123.34	Reconciled
395050		10-JAN-19	TIC-OFFICE PROPERTIES		76.64	18-JAN-19	76.64	Reconciled
395051		10-JAN-19	TIC-SPECTRUM OFFICE		119.73	18-JAN-19	119.73	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 14
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395052		10-JAN-19	TRI COUNTY PUMP COMPANY		40,797.33	16-JAN-19	40,797.33	Reconciled
395053		10-JAN-19	TROPICAL PLAZA NURSERY INC		251.04	15-JAN-19	251.04	Reconciled
395054		10-JAN-19	TRUCPARCO		1,197.86	16-JAN-19	1,197.86	Reconciled
395055		10-JAN-19	TYCO FIRE & SECURITY (US) MANAGEMENT INC		4,563.52	16-JAN-19	4,563.52	Reconciled
395056		10-JAN-19	UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA		1,067.65	16-JAN-19	1,067.65	Reconciled
395057		10-JAN-19	UNITED HEALTHCARE		264.27	22-JAN-19	264.27	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
395058		10-JAN-19	INSURANCE COMPANY UNITED PARCEL SERVICE INC		125.36	15-JAN-19	125.36	Reconciled
395059		10-JAN-19	UNITED SITE SERVICES OF CALIFORNIA INC		504.16	28-JAN-19	504.16	Reconciled
395060		10-JAN-19	VAUGHAN'S INDUSTRIAL REPAIR CO INC		47,802.30	16-JAN-19	47,802.30	Reconciled
395061		10-JAN-19	VERIZON WIRELESS SERVICES LLC		4,384.82	14-JAN-19	4,384.82	Reconciled
395062		10-JAN-19	VHG LABS, INC		135.00	15-JAN-19	135.00	Reconciled
395063		10-JAN-19	VULCAN MATERIALS COMPANY		1,430.35	14-JAN-19	1,430.35	Reconciled
395064		10-JAN-19	WALTERS WHOLESALE ELECTRIC		993.00	14-JAN-19	993.00	Reconciled
395065		10-JAN-19	WARE MALCOMB		2,890.25	22-JAN-19	2,890.25	Reconciled
395066		10-JAN-19	WASTE MANAGEMENT OF ORANGE COUNTY		5,019.06	17-JAN-19	5,019.06	Reconciled
395067		10-JAN-19	WATERSMART SOFTWARE, INC		13,597.50	16-JAN-19	13,597.50	Reconciled
395068		10-JAN-19	WAXIE'S ENTERPRISES, INC		123.13	14-JAN-19	123.13	Reconciled
395069		10-JAN-19	WECK LABORATORIES INC		326.00	16-JAN-19	326.00	Reconciled
395070		10-JAN-19	WESTAMERICA COMMUNICATIONS, INC.		7,670.00	14-JAN-19	7,670.00	Reconciled
395071		10-JAN-19	YORKE ENGINEERING LLC		1,037.00	16-JAN-19	1,037.00	Reconciled
395072		10-JAN-19	YP LLC		91.00	16-JAN-19	91.00	Reconciled
395073		17-JAN-19	Garcia, Jose (Joe)		53.86	30-JAN-19	53.86	Reconciled
395074		17-JAN-19	LaMar, Steven E		843.31	22-JAN-19	843.31	Reconciled

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 15
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395075		17-JAN-19	Matheis, Mary		360.62	18-JAN-19	360.62	Reconciled
395076		17-JAN-19	Aileen Roberts, Thomas (Tom)		775.00	22-JAN-19	775.00	Reconciled
395077		17-JAN-19	Swan, Peer		272.76	18-JAN-19	272.76	Reconciled
395078		17-JAN-19	Torres, Richard P (Richard)		200.00	28-JAN-19	200.00	Reconciled
395079		17-JAN-19	Weghorst, Paul A (Paul)		90.00			Negotiable
395080		17-JAN-19	Withers, John B		595.19	22-JAN-19	595.19	Reconciled
395081		17-JAN-19	ADS LLC		2,160.00			Negotiable
395082		17-JAN-19	AGILENT TECHNOLOGIES, INC.		207,442.90	24-JAN-19	207,442.90	Reconciled
395083		17-JAN-19	AIR TECHNOLOGY LABORATORIES		289.00			Negotiable
395084		17-JAN-19	AIRGAS, INC.		5,213.38	22-JAN-19	5,213.38	Reconciled
395085		17-JAN-19	ALLIANCE RESOURCE CONSULTING LLC		6,250.00	25-JAN-19	6,250.00	Reconciled
395086		17-JAN-19	AMAZON CAPITAL SERVICES, INC.		888.91	22-JAN-19	888.91	Reconciled
395087		17-JAN-19	AMERICAN WATER CHEMICALS, INC.		5,700.00	24-JAN-19	5,700.00	Reconciled
395088		17-JAN-19	ANDERSONPENNA PARTNERS, INC		40,581.25	29-JAN-19	40,581.25	Reconciled
395089		17-JAN-19	ANTHEM BLUE CROSS		546.33	22-JAN-19	546.33	Reconciled
395090		17-JAN-19	ANTHEM BLUE CROSS		290.43	22-JAN-19	290.43	Reconciled
395091		17-JAN-19	ANTHEM BLUE CROSS		214.68	22-JAN-19	214.68	Reconciled
395092		17-JAN-19	ANTHEM BLUE CROSS		546.33	22-JAN-19	546.33	Reconciled
395093		17-JAN-19	APEX LIFE SCIENCES, LLC		4,194.75	22-JAN-19	4,194.75	Reconciled
395094		17-JAN-19	ARAMAYO, SIDNEY		40.99	23-JAN-19	40.99	Reconciled
395095		17-JAN-19	ARCADIS U.S., INC.		76,504.96	25-JAN-19	76,504.96	Reconciled
395096		17-JAN-19	ASHFORD, WALT		185.24	24-JAN-19	185.24	Reconciled
395097		17-JAN-19	ASSOCIATION OF CALIFORNIA WATER AGENCIES/JPIA		1,659.65	23-JAN-19	1,659.65	Reconciled
395098		17-JAN-19	AT&T		5,864.10	23-JAN-19	5,864.10	Reconciled
395099		17-JAN-19	AT&T		1,665.91	22-JAN-19	1,665.91	Reconciled
395100		17-JAN-19	ATHENS SERVICES		10,619.03	29-JAN-19	10,619.03	Reconciled
395101		17-JAN-19	AUTOZONE PARTS, INC.		94.81	22-JAN-19	94.81	Reconciled
395102		17-JAN-19	BARBERY, JENNY		18.19	29-JAN-19	18.19	Reconciled
395103		17-JAN-19	BAVCO BACKFLOW APPARATUS & VALVE COMPANY		115.00	22-JAN-19	115.00	Reconciled
395104		17-JAN-19	BECK, RICHARD		21.01			Negotiable

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 16
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395105		17-JAN-19	BECKHOFF AUTOMATION LLC		1,001.99	22-JAN-19	1,001.99	Reconciled
395106		17-JAN-19	BERK, SUSAN		20,000.00	28-JAN-19	20,000.00	Reconciled
395107		17-JAN-19	BEST DRILLING AND PUMP, INC.		86,773.95	24-JAN-19	86,773.95	Reconciled
395108		17-JAN-19	BILL, RENEE M		34.21	30-JAN-19	34.21	Reconciled
395109		17-JAN-19	BIOMAGIC INC		14,283.44	23-JAN-19	14,283.44	Reconciled
395110		17-JAN-19	BORCHARD SURVEYING & MAPPING, INC.		1,800.00	22-JAN-19	1,800.00	Reconciled
395111		17-JAN-19	BTF PRECISE MICROBIOLOGY INC.		571.81	22-JAN-19	571.81	Reconciled
395112		17-JAN-19	BUCCOLA LANDSCAPE SERVICES, INC.		385.27			Negotiable
395113		17-JAN-19	BURKE, WILLIAMS & SORENSEN, LLP		1,105.00	23-JAN-19	1,105.00	Reconciled
395114		17-JAN-19	BURRELL, DON		70.08	24-JAN-19	70.08	Reconciled
395115		17-JAN-19	C WELLS PIPELINE MATERIALS INC		1,018.24	29-JAN-19	1,018.24	Reconciled
395116		17-JAN-19	CALIFORNIA BARRICADE RENTAL, INC.		1,530.00	18-JAN-19	1,530.00	Reconciled
395117		17-JAN-19	CALIFORNIA DEPARTMENT OF TAX AND FEE		1,519.00	23-JAN-19	1,519.00	Reconciled
395118		17-JAN-19	ADMINISTRATON CALIFORNIA MUNICIPAL STATISTICS INC		50.00			Negotiable
395119		17-JAN-19	CAMPBELL SCIENTIFIC INC		4,145.00	25-JAN-19	4,145.00	Reconciled
395120		17-JAN-19	CANON FINANCIAL SERVICES, INC		401.91	22-JAN-19	401.91	Reconciled
395121		17-JAN-19	CANON FINANCIAL SERVICES, INC		1,870.99	22-JAN-19	1,870.99	Reconciled
395122		17-JAN-19	CAPTIVE AUDIENCE MARKETING INC.		79.00	23-JAN-19	79.00	Reconciled
395123		17-JAN-19	CHANG, CONNIE		41.70	28-JAN-19	41.70	Reconciled
395124		17-JAN-19	CHASE, ERIC		793.08			Negotiable
395125		17-JAN-19	CHENG, JUNRU		19.99	23-JAN-19	19.99	Reconciled
395126		17-JAN-19	CITY OF IRVINE		3,018.00	22-JAN-19	3,018.00	Reconciled
395127		17-JAN-19	CLARIS STRATEGY INC.		1,730.00	30-JAN-19	1,730.00	Reconciled
395128		17-JAN-19	CLEAN ENERGY		4,302.54	28-JAN-19	4,302.54	Reconciled
395129		17-JAN-19	CNC ENGINEERING		2,220.00	22-JAN-19	2,220.00	Reconciled
395130		17-JAN-19	CONSTELLATION NEWENERGY, INC.		27,881.08	25-JAN-19	27,881.08	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 17
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395131		17-JAN-19	CR & R INCORPORATED		389.96	22-JAN-19	389.96	Reconciled
395132		17-JAN-19	CULLIGAN OF SANTA ANA		9,000.00	24-JAN-19	9,000.00	Reconciled
395133		17-JAN-19	D & H WATER SYSTEMS INC.		1,585.75	23-JAN-19	1,585.75	Reconciled
395134		17-JAN-19	DE JESUS, ERIC		118.15	22-JAN-19	118.15	Reconciled
395135		17-JAN-19	DE LOS SANTOS, THERESA		62.77	24-JAN-19	62.77	Reconciled
395136		17-JAN-19	DECUNHA, MARK		18.34	22-JAN-19	18.34	Reconciled
395137		17-JAN-19	DEE JASPAR & ASSOCIATES, INC.		147.00			Negotiable
395138		17-JAN-19	DISCOVERY SCIENCE CENTER OF ORANGE COUNTY		3,624.66	28-JAN-19	3,624.66	Reconciled
395139		17-JAN-19	DLT SOLUTIONS LLC		23,325.30	28-JAN-19	23,325.30	Reconciled
395140		17-JAN-19	DRIVELINES UNLIMITED		449.34	22-JAN-19	449.34	Reconciled
395141		17-JAN-19	DUDEK		6,037.13	28-JAN-19	6,037.13	Reconciled
395142		17-JAN-19	E&M ELECTRIC AND MACHINERY, INC.		49,472.91	24-JAN-19	49,472.91	Reconciled
395143		17-JAN-19	ENVIRONMENTAL RESOURCE ASSOCIATES		173.31	24-JAN-19	173.31	Reconciled
395144		17-JAN-19	ENVIRONMENTAL SCIENCE ASSOCIATES		13,108.35	25-JAN-19	13,108.35	Reconciled
395145		17-JAN-19	EVANS-HYDRO INC		51,072.20	28-JAN-19	51,072.20	Reconciled
395146		17-JAN-19	EVANTEC CORPORATION		2,821.50	24-JAN-19	2,821.50	Reconciled
395147		17-JAN-19	EVERETT DOREY LLP		509.24	25-JAN-19	509.24	Reconciled
395148		17-JAN-19	FALCONE, IRENE		85.73	23-JAN-19	85.73	Reconciled
395149		17-JAN-19	FEDEX		123.33	22-JAN-19	123.33	Reconciled

395150	17-JAN-19	FIDELITY SECURITY LIFE INSURANCE COMPANY		240.59	22-JAN-19	240.59	Reconciled
395151	17-JAN-19	FIRST CHOICE SERVICES		507.70	23-JAN-19	507.70	Reconciled
395152	17-JAN-19	FLEET SOLUTIONS LLC		4,709.62	22-JAN-19	4,709.62	Reconciled
395153	17-JAN-19	FRONTIER CALIFORNIA INC.		320.34	25-JAN-19	320.34	Reconciled
395154	17-JAN-19	GARZA INDUSTRIES, INC		1,421.01	22-JAN-19	1,421.01	Reconciled
395155	17-JAN-19	GCI CONSTRUCTION, INC.		88,887.14	24-JAN-19	88,887.14	Reconciled
395156	17-JAN-19	GHOLIZADEH, ABBAS		40.37	23-JAN-19	40.37	Reconciled

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 18
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395157		17-JAN-19	GIBSON, BENJAMIN D		600.00	18-JAN-19	600.00	Reconciled
395158		17-JAN-19	GRAINGER		8,774.40	22-JAN-19	8,774.40	Reconciled
395159		17-JAN-19	GRAYBAR ELECTRIC COMPANY		7,034.49	22-JAN-19	7,034.49	Reconciled
395160		17-JAN-19	HAHN, STEVE		169.31			Negotiable
395161		17-JAN-19	HALLIDAY, BARBARA		32.44			Negotiable
395162		17-JAN-19	HARRINGTON INDUSTRIAL PLASTICS LLC		8,767.59	22-JAN-19	8,767.59	Reconciled
395163		17-JAN-19	HATCH, BRIDIE		14.76			Negotiable
395164		17-JAN-19	HELPMATES STAFFING SERVICES		3,302.28	24-JAN-19	3,302.28	Reconciled
395165		17-JAN-19	HERNANDEZ, OLIVA		15.91	25-JAN-19	15.91	Reconciled
395166		17-JAN-19	HILL BROTHERS CHEMICAL COMPANY		5,874.56	23-JAN-19	5,874.56	Reconciled
395167		17-JAN-19	HILLEBRECHT, WARREN K		230.73	22-JAN-19	230.73	Reconciled
395168		17-JAN-19	HOGAN, SANDRA		131.59	28-JAN-19	131.59	Reconciled
395169		17-JAN-19	HOME DEPOT USA INC		1,280.03	28-JAN-19	1,280.03	Reconciled
395170		17-JAN-19	HOWE, JAMES		200.00			Negotiable
395171		17-JAN-19	HOWELL, JEFFREY		119.72	25-JAN-19	119.72	Reconciled
395172		17-JAN-19	HUOTARI, ROBERT		54.15			Negotiable
395173		17-JAN-19	IDEA HALL		7,934.29	24-JAN-19	7,934.29	Reconciled
395174		17-JAN-19	INDUSTRIAL METAL SUPPLY CO		81.39	23-JAN-19	81.39	Reconciled
395175		17-JAN-19	INORGANIC VENTURES INC		492.06	22-JAN-19	492.06	Reconciled
395176		17-JAN-19	IRON MOUNTAIN INFORMATION MANAGEMENT INC		1,508.57	18-JAN-19	1,508.57	Reconciled
395177		17-JAN-19	IRVINE PACIFIC		422.75			Negotiable
395178		17-JAN-19	IRVINE PIPE & SUPPLY INC		597.62	18-JAN-19	597.62	Reconciled
395179		17-JAN-19	JING, FENG		29.14			Negotiable
395180		17-JAN-19	JOHNSTONE SUPPLY		402.21	23-JAN-19	402.21	Reconciled
395181		17-JAN-19	JOIMAX INC		62.82	22-JAN-19	62.82	Reconciled
395182		17-JAN-19	KAO, ITZU		37.31			Negotiable
395183		17-JAN-19	KAUFMAN, BRET		32.44	28-JAN-19	32.44	Reconciled
395184		17-JAN-19	KENNY THE PRINTER		171.33	22-JAN-19	171.33	Reconciled
395185		17-JAN-19	KHALILI, VAHID		357.22	22-JAN-19	357.22	Reconciled
395186		17-JAN-19	KIM, EUNICE		39.15	28-JAN-19	39.15	Reconciled
395187		17-JAN-19	KIM, SOJUNG		56.95			Negotiable
395188		17-JAN-19	KOELLER NEBEKER CARLSON & HALUCK, LLP		407.50	22-JAN-19	407.50	Reconciled
395189		17-JAN-19	KONG, HYUN JIN		752.87	24-JAN-19	752.87	Reconciled

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 19
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395190		17-JAN-19	KPRS CONSTRUCTION SERVICES, INC.		408,301.79	24-JAN-19	408,301.79	Reconciled
395191		17-JAN-19	KRISHNAN, SHEELA		100.20	29-JAN-19	100.20	Reconciled
395192		17-JAN-19	KRONICK MOSKOVITZ TIEDEMANN & GIRARD		7,836.95	22-JAN-19	7,836.95	Reconciled
395193		17-JAN-19	LAVERY, CHRIS		34.17			Negotiable
395194		17-JAN-19	LAW OFFICE OF ATOOSA VAKILI		2,000.00	24-JAN-19	2,000.00	Reconciled
395195		17-JAN-19	LCS TECHNOLOGIES, INC.		3,240.00	22-JAN-19	3,240.00	Reconciled
395196		17-JAN-19	LEE, SANGHYEON		263.00	22-JAN-19	263.00	Reconciled
395197		17-JAN-19	LEVALLEY, JEFFREY		279.25			Negotiable
395198		17-JAN-19	LI, GUOZHEN		13.84			Negotiable

395199	17-JAN-19	LIGHT COMMUNICATIONS, INC.	9,817.71				Negotiable
395200	17-JAN-19	LING, KEGE	89.84	18-JAN-19	89.84		Reconciled
395201	17-JAN-19	LINKEDIN CORPORATION	6,756.25	22-JAN-19	6,756.25		Reconciled
395202	17-JAN-19	LUSTRE-CAL NAMEPLATE CORPORATION	2,368.95	22-JAN-19	2,368.95		Reconciled
395203	17-JAN-19	MALLFINANCE INC	3,216.34	23-JAN-19	3,216.34		Reconciled
395204	17-JAN-19	MANTEGHI, SHAHNAZ	38.61				Negotiable
395205	17-JAN-19	MANWARREN, WILLIAM A	31.47				Negotiable
395206	17-JAN-19	MBC AQUATIC SCIENCES, INC.	1,350.00	18-JAN-19	1,350.00		Reconciled
395207	17-JAN-19	MC FADDEN-DALE INDUSTRIAL	281.34	23-JAN-19	281.34		Reconciled
395208	17-JAN-19	MC MASTER CARR SUPPLY CO	430.12	22-JAN-19	430.12		Reconciled
395209	17-JAN-19	MCCOY, IRA JOHN	676.37	29-JAN-19	676.37		Reconciled
395210	17-JAN-19	MCLAUGHLIN, VICKIE	48.22	28-JAN-19	48.22		Reconciled
395211	17-JAN-19	MCR TECHNOLOGIES INC	3,357.94	22-JAN-19	3,357.94		Reconciled
395212	17-JAN-19	MERCHANT, FIROZ	53.29				Negotiable
395213	17-JAN-19	MERRIMAC PETROLEUM, INC.	22,137.94	22-JAN-19	22,137.94		Reconciled
395214	17-JAN-19	MESA PRODUCTS, INC	65.56	22-JAN-19	65.56		Reconciled
395215	17-JAN-19	MITECH CONTROLS	1,304.32	24-JAN-19	1,304.32		Reconciled
395216	17-JAN-19	MRO ELECTRIC & SUPPLY CO.	1,050.00	23-JAN-19	1,050.00		Reconciled
395217	17-JAN-19	MUNICIPAL MAINTENANCE EQUIPMENT INC	309.80	22-JAN-19	309.80		Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 20
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395218		17-JAN-19	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		9,993.36	18-JAN-19	9,993.36	Reconciled
395219		17-JAN-19	NAGUIT, CHRIS		38.22	24-JAN-19	38.22	Reconciled
395220		17-JAN-19	NALCO US 2 INC		266.36	22-JAN-19	266.36	Reconciled
395221		17-JAN-19	NATIONAL READY MIXED CONCRETE CO.		2,431.26	22-JAN-19	2,431.26	Reconciled
395222		17-JAN-19	NMG GEOTECHNICAL INC		3,864.40	23-JAN-19	3,864.40	Reconciled
395223		17-JAN-19	OC WELDING SERVICES		200.00	30-JAN-19	200.00	Reconciled
395224		17-JAN-19	OCEAN BLUE ENVIRONMENTAL SERVICES INC		5,499.56	25-JAN-19	5,499.56	Reconciled
395225		17-JAN-19	OLIN CORPORATION		15,060.08	25-JAN-19	15,060.08	Reconciled
395226		17-JAN-19	OMAR DANDASHI		1,048.85	22-JAN-19	1,048.85	Reconciled
395227		17-JAN-19	ORANGE COUNTY AUTO PARTS CO		2,589.01	22-JAN-19	2,589.01	Reconciled
395228		17-JAN-19	ORANGE COUNTY SANITATION DISTRICT		56,969.60	24-JAN-19	56,969.60	Reconciled
395229		17-JAN-19	ORANGE COUNTY TREASURER		61.69	18-JAN-19	61.69	Reconciled
395230		17-JAN-19	PACIFIC HYDROTECH CORPORATION		453,505.15	25-JAN-19	453,505.15	Reconciled
395231		17-JAN-19	PACIFIC HYDROTECH CORPORATION		23,868.69	28-JAN-19	23,868.69	Reconciled
395232		17-JAN-19	PACIFIC PIPELINE SUPPLY, INC.		3,677.76	23-JAN-19	3,677.76	Reconciled
395233		17-JAN-19	PACIFIC SURVEYS, LLC		1,195.00	24-JAN-19	1,195.00	Reconciled
395234		17-JAN-19	PARKHOUSE TIRE INC		3,034.95	23-JAN-19	3,034.95	Reconciled
395235		17-JAN-19	PILLSBURY WINTHROP SHAW PITTMAN LLP		5,875.62	18-JAN-19	5,875.62	Reconciled
395236		17-JAN-19	PILZ, COLLEEN		61.16	22-JAN-19	61.16	Reconciled
395237		17-JAN-19	PINNACLE TOWERS LLC		749.21	22-JAN-19	749.21	Reconciled
395238		17-JAN-19	PLANETBIDS, INC.		12,375.00			Negotiable
395239		17-JAN-19	PTI SAND & GRAVEL INC		616.13	25-JAN-19	616.13	Reconciled
395240		17-JAN-19	R&B AUTOMATION, INC.		5,192.30	23-JAN-19	5,192.30	Reconciled
395241		17-JAN-19	ROSEDALE - RIO BRAVO WATER STORAGE DISTRICT		620,990.00	30-JAN-19	620,990.00	Reconciled
395242		17-JAN-19	SAN MATEO APTS		478.18			Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 21
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395243		17-JAN-19	SANDERS PAVING INC		850.00	22-JAN-19	850.00	Reconciled
395244		17-JAN-19	SANTA ANA BLUE PRINT		829.46	24-JAN-19	829.46	Reconciled
395245		17-JAN-19	SAUCEDA, NAOMI		17.21	25-JAN-19	17.21	Reconciled
395246		17-JAN-19	SECURITAS SECURITY SERVICES USA, INC.		60,188.43	24-JAN-19	60,188.43	Reconciled
395247		17-JAN-19	SEPARATION PROCESSES, INC.		640.25	22-JAN-19	640.25	Reconciled
395248		17-JAN-19	SHAMROCK SUPPLY CO INC		860.40	23-JAN-19	860.40	Reconciled
395249		17-JAN-19	SHERWIN WILLIAMS COMPANY		452.55	30-JAN-19	452.55	Reconciled
395250		17-JAN-19	SILVERWOOD LANDSCAPE		678.57	24-JAN-19	678.57	Reconciled
395251		17-JAN-19	SIMI VALLEY LANDFILL AND RECYCLING CENTER		241.17	22-JAN-19	241.17	Reconciled
395252		17-JAN-19	SKORUZ TECHNOLOGIES INC		15,336.00	24-JAN-19	15,336.00	Reconciled
395253		17-JAN-19	SMARTCOVER SYSTEMS		5,231.84	24-JAN-19	5,231.84	Reconciled
395254		17-JAN-19	SMOG TIME		131.25	23-JAN-19	131.25	Reconciled
395255		17-JAN-19	SOLARWINDS, INC		7,217.00	23-JAN-19	7,217.00	Reconciled
395256		17-JAN-19	SOUTH COAST WATER CO.		90.00	24-JAN-19	90.00	Reconciled
395257		17-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY		414,825.72	22-JAN-19	414,825.72	Reconciled
395258		17-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY		32.32	23-JAN-19	32.32	Reconciled
395259		17-JAN-19	SOUTHERN CALIFORNIA GAS COMPANY		11,755.32	24-JAN-19	11,755.32	Reconciled
395260		17-JAN-19	SOUTHLAND WATER TECHNOLOGIES LLC		5,360.56	30-JAN-19	5,360.56	Reconciled
395261		17-JAN-19	SOUTHWEST DEALER SERVICES		59.04	22-JAN-19	59.04	Reconciled
395262		17-JAN-19	SPARKLETTTS		59.93			Negotiable
395263		17-JAN-19	SPREEN, JEFF		64.49	22-JAN-19	64.49	Reconciled
395264		17-JAN-19	STANDART, KATHIE		50.00			Negotiable
395265		17-JAN-19	STANTEC CONSULTING SERVICES INC.		2,541.50	22-JAN-19	2,541.50	Reconciled
395266		17-JAN-19	STATE WATER RESOURCES CONTROL BOARD		218.00	23-JAN-19	218.00	Reconciled
IRWD Ledger Upgrade								
BANK: Bank of America N.A.			Branch : Los Angeles			Payment Register For 01-JAN-19 To 31-JAN-19		Report Date: 31-JAN-2019 22:06
Bank Account Currency: USD (US Dollar)			Payment Currency: USD (US Dollar)			Account: Checking AP and PR		Page: 22
Payment Type: All			Display Supplier Address: No					

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395267		17-JAN-19	STATE WATER RESOURCES CONTROL BOARD		164,281.00	25-JAN-19	164,281.00	Reconciled
395268		17-JAN-19	SUKLE ADVERTISING INC.		44,241.45			Voided
395269		17-JAN-19	SUMMIT CHEMICAL SPECIALTY PRODUCTS		11,890.56	30-JAN-19	11,890.56	Reconciled
395270		17-JAN-19	SUNNY SALON		24.77	23-JAN-19	24.77	Reconciled
395271		17-JAN-19	SUPERIOR WATER TECHNOLOGIES		7,971.82			Negotiable
395272		17-JAN-19	SUSAN A. SIROTA		4,395.00	18-JAN-19	4,395.00	Reconciled
395273		17-JAN-19	SWAINBANK, GEORDIE		30.17			Negotiable
395274		17-JAN-19	SWAINS ELECTRIC MOTOR SERVICE		9,994.68			Negotiable
395275		17-JAN-19	T.E. ROBERTS, INC.		54,227.00	24-JAN-19	54,227.00	Reconciled
395276		17-JAN-19	THE IRVINE COMPANY		2,571.39	22-JAN-19	2,571.39	Reconciled
395277		17-JAN-19	THE PARK AT IRVINE SPECTRUM		1,120.39			Negotiable
395278		17-JAN-19	THE PLAZA IRVINE OWNERS ASSN		97.02			Negotiable
395279		17-JAN-19	TIC-RETAIL PROPERTIES		1,329.98	29-JAN-19	1,329.98	Reconciled
395280		17-JAN-19	TIC-SPECTRUM OFFICE		2,847.30	29-JAN-19	2,847.30	Reconciled
395281		17-JAN-19	TOHIDIAN, IMAN		16.71			Negotiable
395282		17-JAN-19	TRI POINTE HOMES, INC.		28.28	25-JAN-19	28.28	Reconciled
395283		17-JAN-19	TROPICAL PLAZA NURSERY INC		7,157.50	22-JAN-19	7,157.50	Reconciled
395284		17-JAN-19	TRUCPARCO		839.08	22-JAN-19	839.08	Reconciled
395285		17-JAN-19	TRUONG, JESSICA		46.70			Negotiable
395286		17-JAN-19	UNITED PARCEL SERVICE INC		84.04	22-JAN-19	84.04	Reconciled

395287	17-JAN-19	UNITED SITE SERVICES OF CALIFORNIA INC		287.57	25-JAN-19	287.57	Reconciled
395288	17-JAN-19	VWR INTERNATIONAL, LLC		3,730.37	22-JAN-19	3,730.37	Reconciled
395289	17-JAN-19	WARMINGTON HOMES		25.86			Negotiable
395290	17-JAN-19	WASTE MANAGEMENT OF ORANGE COUNTY		154.64	22-JAN-19	154.64	Reconciled
395291	17-JAN-19	WATERLINE TECHNOLOGIES INC		500.60	18-JAN-19	500.60	Reconciled
395292	17-JAN-19	WAXIE'S ENTERPRISES, INC		513.45	22-JAN-19	513.45	Reconciled

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 23
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395293		17-JAN-19	WECK LABORATORIES INC		775.00	23-JAN-19	775.00	Reconciled
395294		17-JAN-19	WET, ZHAO		32.10	22-JAN-19	32.10	Reconciled
395295		17-JAN-19	WESTAMERICA COMMUNICATIONS, INC.		600.00	18-JAN-19	600.00	Reconciled
395296		17-JAN-19	WIRELESS WATCHDOGS, LLC		1,076.00	24-JAN-19	1,076.00	Reconciled
395297		17-JAN-19	XU, YI		428.36			Negotiable
395298		17-JAN-19	XYLEM WATER SOLUTIONS USA, INC.		1,331.79	23-JAN-19	1,331.79	Reconciled
395299		17-JAN-19	YARCHIN, MITCHELL		34.76	25-JAN-19	34.76	Reconciled
395300		17-JAN-19	YUE, KEVEN		390.48			Negotiable
395301		17-JAN-19	ZHANG, RUI		75.50			Negotiable
395302		17-JAN-19	ZHANG, XIMING		26.22	22-JAN-19	26.22	Reconciled
395303		17-JAN-19	ZHANG, YONGAIAN		43.94			Negotiable
395304		17-JAN-19	ZHU, BEI		83.86			Negotiable
395305		17-JAN-19	SUKLE ADVERTISING INC.	PURCHASE	5,852.50	25-JAN-19	5,852.50	Reconciled
395306		17-JAN-19	REGENTS OF THE UNIVERSITY OF CALIFORNIA AT IRVINE	201 FACILITY MG	701,927.98	22-JAN-19	701,927.98	Reconciled
395307		18-JAN-19	CITY OF IRVINE	IRVINE 1	2,647.00			Negotiable
395308		21-JAN-19	PERS LONG TERM CARE	PASADENA	538.89	24-JAN-19	538.89	Reconciled
395309		21-JAN-19	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	224.50	30-JAN-19	224.50	Reconciled
395310		21-JAN-19	FRANCHISE TAX BOARD	SACRAMENTO 1	100.00			Negotiable
395311		21-JAN-19	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	DIAMOND BAR	1,355.00	24-JAN-19	1,355.00	Reconciled
395312		22-JAN-19	JCI JONES CHEMICALS INC	NEWARK	5,255.25	29-JAN-19	5,255.25	Reconciled
395313		23-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY	PURCHASE	191,087.12	25-JAN-19	191,087.12	Reconciled
395314		24-JAN-19	Arce, Jesus (Jesse)		452.30			Negotiable
395315		24-JAN-19	Beltran, Benjamin Vega		170.00	28-JAN-19	170.00	Reconciled
395316		24-JAN-19	Hartoog, Jeremy		234.00	28-JAN-19	234.00	Reconciled

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 24
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395317		24-JAN-19	Hjorth, Charles O (Charles)		280.00			Negotiable
395318		24-JAN-19	Lao, Richard S		178.00	29-JAN-19	178.00	Reconciled
395319		24-JAN-19	Lin, Eileen (Eileen)		13.98			Negotiable
395320		24-JAN-19	Moeder, Jacob J (Jacob)		70.00	28-JAN-19	70.00	Reconciled
395321		24-JAN-19	Mossbarger, Anthony J (Tony)		70.47	24-JAN-19	70.47	Reconciled
395322		24-JAN-19	Orozco, Linda		178.00			Negotiable
395323		24-JAN-19	Phuong, Sophia		37.44	30-JAN-19	37.44	Reconciled
395324		24-JAN-19	Tran, Jason M (Jason)		156.03			Negotiable
395325		24-JAN-19	ABRAMSON, BRADLEY		34.94			Negotiable
395326		24-JAN-19	ADAM'S FALCONRY SERVICE, LLC		1,680.00	28-JAN-19	1,680.00	Reconciled

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
395327		24-JAN-19	ADT SECURITY SERVICES INC		412.47	30-JAN-19	412.47	Reconciled
395328		24-JAN-19	AECOM TECHNICAL SERVICES, INC.		11,191.60			Negotiable
395329		24-JAN-19	ALLIANCE RESOURCE CONSULTING LLC		6,750.00	28-JAN-19	6,750.00	Reconciled
395330		24-JAN-19	ALSTON & BIRD LLP		130,515.50			Negotiable
395331		24-JAN-19	AM CONSERVATION GROUP, INC.		1,100.69			Negotiable
395332		24-JAN-19	AMAZON CAPITAL SERVICES, INC.		1,748.14	28-JAN-19	1,748.14	Reconciled
395333		24-JAN-19	ANDERSONPENNA PARTNERS, INC		21,448.00			Negotiable
395334		24-JAN-19	APD CONSULTANTS INC		16,695.00			Negotiable
395335		24-JAN-19	APEX LIFE SCIENCES, LLC		2,380.00			Negotiable
395336		24-JAN-19	AT&T		5,614.57	28-JAN-19	5,614.57	Reconciled
395337		24-JAN-19	AT&T		173.53	29-JAN-19	173.53	Reconciled
395338		24-JAN-19	AT&T		64.62	28-JAN-19	64.62	Reconciled
395339		24-JAN-19	ATKINSON, ANDELSON, LOYA, RUUD AND ROMO		729.75	28-JAN-19	729.75	Reconciled
395340		24-JAN-19	AUSTIN HARDWOODS, INC		161.60	30-JAN-19	161.60	Reconciled
395341		24-JAN-19	BAI, QINGYUAN		120.36			Negotiable
395342		24-JAN-19	BASHYRY, MOHAMMAD-ALI		9.99			Negotiable
395343		24-JAN-19	BAY, TRENISE		84.27			Voided
395344		24-JAN-19	BDC SPECIAL WASTE		207.20	28-JAN-19	207.20	Reconciled

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 25
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395345		24-JAN-19	BEHRMANN, DENISE		76.65			Negotiable
395346		24-JAN-19	BELSHIRE ENVIRONMENTAL SERVICES, INC.		657.26	29-JAN-19	657.26	Reconciled
395347		24-JAN-19	BENECCI CORPORATION		58.54	29-JAN-19	58.54	Reconciled
395348		24-JAN-19	BERNOUS, BEHZAD		33.84			Negotiable
395349		24-JAN-19	BIGWIG MONSTER, LLC		3,000.00			Negotiable
395350		24-JAN-19	BILL'S SWEEPING SERVICE INC		1,466.25	30-JAN-19	1,466.25	Reconciled
395351		24-JAN-19	BLANCO, PAUL		65.00			Negotiable
395352		24-JAN-19	BOONE, TERRIE		32.93			Negotiable
395353		24-JAN-19	BRENEMAN, DAVID		57.26	30-JAN-19	57.26	Reconciled
395354		24-JAN-19	BRIGHTVIEW LANDSCAPE DEVELOPMENT		1,052.30			Negotiable
395355		24-JAN-19	BRITHINEE ELECTRIC		8,017.68	28-JAN-19	8,017.68	Reconciled
395356		24-JAN-19	BROOKFIELD ENCLAVE LLC		49.29			Negotiable
395357		24-JAN-19	BROOKFIELD ENCLAVE LLC- 10036		1,454.70			Negotiable
395358		24-JAN-19	BROWN AND CALDWELL		34,608.41	30-JAN-19	34,608.41	Reconciled
395359		24-JAN-19	BURKE, WILLIAMS & SORENSEN, LLP		975.00	28-JAN-19	975.00	Reconciled
395360		24-JAN-19	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		84.47	28-JAN-19	84.47	Reconciled
395361		24-JAN-19	CALATLANTIC HOMES		42.01	30-JAN-19	42.01	Reconciled
395362		24-JAN-19	CALIFORNIA BARRICADE RENTAL, INC.		6,365.04	28-JAN-19	6,365.04	Reconciled
395363		24-JAN-19	CALIFORNIA MUNICIPAL STATISTICS INC		3,150.00			Negotiable
395364		24-JAN-19	CALIFORNIA NEWSPAPER PARTNERSHIP		887.75			Negotiable
395365		24-JAN-19	CALIFORNIA WATER EFFICIENCY PARTNERSHIP		1,000.00			Negotiable
395366		24-JAN-19	CANCIAN, FRANCESCA		28.18			Negotiable
395367		24-JAN-19	CANON FINANCIAL SERVICES, INC		203.65	29-JAN-19	203.65	Reconciled
395368		24-JAN-19	CANON SOLUTIONS AMERICA, INC.		20.27			Negotiable

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar) Page: 26
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
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Payment Document : IRWD CHECK							
395369	24-JAN-19	CDW GOVERNMENT LLC	6,566.37	30-JAN-19	6,566.37	Reconciled	
395370	24-JAN-19	CHABALLOUT, HASHEM	107.33	28-JAN-19	107.33	Reconciled	
395371	24-JAN-19	CHAIREL CUSTOM HAY, INC.	643.71	30-JAN-19	643.71	Reconciled	
395372	24-JAN-19	CHANESS, SCOTT	16.64			Negotiable	
395373	24-JAN-19	CHEN, YANG	20.00			Negotiable	
395374	24-JAN-19	CHOI, YOUNG JUN	53.64	28-JAN-19	53.64	Reconciled	
395375	24-JAN-19	CHOU, JOSEPH	58.90	28-JAN-19	58.90	Reconciled	
395376	24-JAN-19	CHUN, JI	160.94	29-JAN-19	160.94	Reconciled	
395377	24-JAN-19	CITY OF IRVINE	386.00	28-JAN-19	386.00	Reconciled	
395378	24-JAN-19	CITY OF NEWPORT BEACH	960.00			Negotiable	
395379	24-JAN-19	CITY SERVICE PAVING	1,539.56	29-JAN-19	1,539.56	Reconciled	
395380	24-JAN-19	CLA-VAL COMPANY	2,625.95	28-JAN-19	2,625.95	Reconciled	
395381	24-JAN-19	CLAREY, CHRISTY	302.77			Negotiable	
395382	24-JAN-19	CLARIS STRATEGY INC.	7,560.00	30-JAN-19	7,560.00	Reconciled	
395383	24-JAN-19	CLEAN ENERGY	5,149.03			Negotiable	
395384	24-JAN-19	COATES, G NORMAN	47.36			Negotiable	
395385	24-JAN-19	COMMERCIAL DOOR OF ORANGE COUNTY, INC.	705.38	29-JAN-19	705.38	Reconciled	
395386	24-JAN-19	CONSTELLATION NEWENERGY, INC.	3,334.08	30-JAN-19	3,334.08	Reconciled	
395387	24-JAN-19	CORELOGIC INC	5,445.00	28-JAN-19	5,445.00	Reconciled	
395388	24-JAN-19	CORRPRO COMPANIES, INC.	135,250.88			Negotiable	
395389	24-JAN-19	CORRPRO COMPANIES, INC.	654.34			Negotiable	
395390	24-JAN-19	COX COMMUNICATIONS, INC.	3,256.37	28-JAN-19	3,256.37	Reconciled	
395391	24-JAN-19	CULLIGAN OF SANTA ANA	7,000.00	29-JAN-19	7,000.00	Reconciled	
395392	24-JAN-19	D & H WATER SYSTEMS INC.	934.60	28-JAN-19	934.60	Reconciled	
395393	24-JAN-19	D.R. HORTON	24.65			Negotiable	
395394	24-JAN-19	DATA CLEAN CORPORATION	830.00	29-JAN-19	830.00	Reconciled	
395395	24-JAN-19	DATASITE INC	550.00			Negotiable	
395396	24-JAN-19	DAUM, ELIZABETH	2.36			Negotiable	
395397	24-JAN-19	DAVIS FARR LLP	5,000.00	28-JAN-19	5,000.00	Reconciled	
395398	24-JAN-19	DEERFIELD APTS	234.40			Negotiable	
395399	24-JAN-19	DENALI WATER SOLUTIONS LLC	6,337.67	28-JAN-19	6,337.67	Reconciled	

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 27
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395400		24-JAN-19	DERISCHEBOURG, DALE		75.00			Negotiable
395401		24-JAN-19	DEWEY, JANET		37.84			Negotiable
395402		24-JAN-19	DIRECTV INC		129.98			Negotiable
395403		24-JAN-19	DRISCOLL, AMY		10.35	28-JAN-19	10.35	Reconciled
395404		24-JAN-19	DUKE CULTURAL RESOURCES MANAGEMENT, LLC		2,480.00	26-JAN-19	2,480.00	Reconciled
395405		24-JAN-19	DUTREM, TERESA		1,290.01	29-JAN-19	1,290.01	Reconciled
395406		24-JAN-19	DYE, BLAKE		80.63	28-JAN-19	80.63	Reconciled
395407		24-JAN-19	EAGLE AERIAL PHOTOGRAPHY, INC.		4,000.00			Negotiable
395408		24-JAN-19	EARTH MECHANICS, INC.		1,626.00	29-JAN-19	1,626.00	Reconciled
395409		24-JAN-19	EMEDCO		261.37	29-JAN-19	261.37	Reconciled
395410		24-JAN-19	EMERGENCY POWER CONTROLS INC		4,095.30	30-JAN-19	4,095.30	Reconciled
395411		24-JAN-19	ENVIRONMENTAL RESOURCE ASSOCIATES		173.31	30-JAN-19	173.31	Reconciled
395412		24-JAN-19	ENVIRONMENTAL SCIENCE ASSOCIATES		18,193.68			Negotiable
395413		24-JAN-19	ERDKAMP, KEVIN L		65.00			Negotiable
395414		24-JAN-19	ESPUDO, HANNAH		61.10			Negotiable
395415		24-JAN-19	EVANTEC CORPORATION		7,859.75	28-JAN-19	7,859.75	Reconciled
395416		24-JAN-19	EXCEL PAVING CO.		1,212.73	29-JAN-19	1,212.73	Reconciled
395417		24-JAN-19	EXECUTIVE LIGHTING & ELECTRIC		380.00	30-JAN-19	380.00	Reconciled
395418		24-JAN-19	FARRELL & ASSOCIATES		102.18	28-JAN-19	102.18	Reconciled
395419		24-JAN-19	FEDEX		418.28	28-JAN-19	418.28	Reconciled
395420		24-JAN-19	FENNEL, NATALIE		21.12			Negotiable
395421		24-JAN-19	FERGUSON ENTERPRISES, INC.		15,283.80	30-JAN-19	15,283.80	Reconciled

395422	24-JAN-19	FIONA HUTTON & ASSOCIATES, INC.		9,391.25				Negotiable
395423	24-JAN-19	FISERV		19,887.66				Negotiable
395424	24-JAN-19	FISHER SCIENTIFIC COMPANY LLC		6,128.31	28-JAN-19	6,128.31		Reconciled
395425	24-JAN-19	FOOTHILL PACIFIC TOWNE CENTRE		50.00	28-JAN-19	50.00		Reconciled
395426	24-JAN-19	FRAINIE, KEITH		22.10				Negotiable
395427	24-JAN-19	FRONTIER CALIFORNIA INC.		311.42	29-JAN-19	311.42		Reconciled
395428	24-JAN-19	FRYE, BOBBI		12.44	28-JAN-19	12.44		Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 28
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395429		24-JAN-19	GANAHL LUMBER CO.		132.31	30-JAN-19	132.31	Reconciled
395430		24-JAN-19	GERAGHTY, LOURDES		413.00			Negotiable
395431		24-JAN-19	GOLDMAN, SACHS & CO. LLC		14,493.15			Negotiable
395432		24-JAN-19	GRAINGER		3,860.04	28-JAN-19	3,860.04	Reconciled
395433		24-JAN-19	GRAYBAR ELECTRIC COMPANY		119.85	28-JAN-19	119.85	Reconciled
395434		24-JAN-19	GULATI, SAPNA		46.44			Negotiable
395435		24-JAN-19	HABITAT RESTORATION SCIENCES, INC.		1,183.00			Negotiable
395436		24-JAN-19	HACH COMPANY		3,342.81	29-JAN-19	3,342.81	Reconciled
395437		24-JAN-19	HARDY & HARPER, INC.		12,940.00	30-JAN-19	12,940.00	Reconciled
395438		24-JAN-19	HARRINGTON INDUSTRIAL PLASTICS LLC		15,130.13	30-JAN-19	15,130.13	Reconciled
395439		24-JAN-19	HARRIS & ASSOCIATES, INC.		4,522.50	29-JAN-19	4,522.50	Reconciled
395440		24-JAN-19	HELPMATES STAFFING SERVICES		23,462.26	30-JAN-19	23,462.26	Reconciled
395441		24-JAN-19	HERITAGE FIELDS EL TORO, LLC		905.96			Negotiable
395442		24-JAN-19	HERSHBERG, MICHAEL		29.06			Negotiable
395443		24-JAN-19	HILL BROTHERS CHEMICAL COMPANY		8,064.32	30-JAN-19	8,064.32	Reconciled
395444		24-JAN-19	HINSILBLON LTD		500.00			Negotiable
395445		24-JAN-19	HOLBERT, BLAZE		82.73			Negotiable
395446		24-JAN-19	HOLMGREN, JOAN E		41.34			Negotiable
395447		24-JAN-19	HOME DEPOT USA INC		224.13	28-JAN-19	224.13	Reconciled
395448		24-JAN-19	HONG, SARINA		46.24			Negotiable
395449		24-JAN-19	HSIUNG, TONY		30.11			Negotiable
395450		24-JAN-19	HSU, JAMES		34.90			Negotiable
395451		24-JAN-19	HUH, YOON		46.17	28-JAN-19	46.17	Reconciled
395452		24-JAN-19	HUNSAKER & ASSOCIATES IRVINE		896.00	28-JAN-19	896.00	Reconciled
395453		24-JAN-19	INORGANIC VENTURES INC		1,593.06	29-JAN-19	1,593.06	Reconciled
395454		24-JAN-19	INSITUFORM TECHNOLOGIES INC		44,250.61			Negotiable
395455		24-JAN-19	IRVINE PACIFIC		248.51			Negotiable
395456		24-JAN-19	IRVINE PIPE & SUPPLY INC		2,030.85	28-JAN-19	2,030.85	Reconciled
395457		24-JAN-19	IRVINE VALLEY COLLEGE FOUNDATION		1,000.00			Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 29
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395458		24-JAN-19	IRWD-PETTY CASH CUSTODIAN		1,252.69	28-JAN-19	1,252.69	Reconciled
395459		24-JAN-19	JOIMAX INC		114.30	29-JAN-19	114.30	Reconciled
395460		24-JAN-19	JUHAS, CYNTHIA L		46.00			Negotiable
395461		24-JAN-19	JUST ENERGY SOLUTIONS INC.		372.20	28-JAN-19	372.20	Reconciled
395462		24-JAN-19	KENNY THE PRINTER		718.70	28-JAN-19	718.70	Reconciled
395463		24-JAN-19	KLEINFELDER, INC.		16,136.83			Negotiable
395464		24-JAN-19	KONECRANES INC		3,227.08	28-JAN-19	3,227.08	Reconciled
395465		24-JAN-19	KOPPE, JERRY M		44.67			Negotiable
395466		24-JAN-19	KWON, LINDA		90.31			Negotiable
395467		24-JAN-19	LA HABRA FENCE COMPANY INC		7,064.00	30-JAN-19	7,064.00	Reconciled
395468		24-JAN-19	LAKRITZ, ILAN		54.34			Negotiable
395469		24-JAN-19	LANDCARE HOLDINGS, INC.		39,668.80			Negotiable
395470		24-JAN-19	LANE, KWANG-HSIUNG		91.41			Negotiable

395471	24-JAN-19	LE MERE, JOHN F	198.34	28-JAN-19	198.34	Reconciled
395472	24-JAN-19	LEE & RO, INC.	12,916.65			Negotiable
395473	24-JAN-19	LENNAR HOMES	563.62	30-JAN-19	563.62	Reconciled
395474	24-JAN-19	LEWIS BRISBOIS BISGAARD AND SMITH, LLP	55,734.52	30-JAN-19	55,734.52	Reconciled
395475	24-JAN-19	LEWIS, TIPHANIE	473.76	28-JAN-19	473.76	Reconciled
395476	24-JAN-19	LILLESTRAND LEADERSHIP CONSULTING, INC.	1,085.36			Negotiable
395477	24-JAN-19	LIU, YU	16.10			Negotiable
395478	24-JAN-19	LUO, CHICHUN	143.92			Negotiable
395479	24-JAN-19	MAO, KUO HSUAN	35.51			Negotiable
395480	24-JAN-19	MARTINEZ, HANNAH	36.57			Negotiable
395481	24-JAN-19	MBF CONSULTING, INC.	40,158.00			Negotiable
395482	24-JAN-19	MC MASTER CARR SUPPLY CO	2,499.62	28-JAN-19	2,499.62	Reconciled
395483	24-JAN-19	MENDOZA, GEORGE	37.65			Negotiable
395484	24-JAN-19	MERITAGE HOMES OF CALIFORNIA, INC	137.19			Negotiable
395485	24-JAN-19	MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED	16,005.48			Negotiable
395486	24-JAN-19	MERRILL, JOSH	99.49	29-JAN-19	99.49	Reconciled
395487	24-JAN-19	METTLER-TOLEDO RAININ, LLC	1,211.37	28-JAN-19	1,211.37	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 30
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395488		24-JAN-19	MICHAEL BAKER INTERNATIONAL, INC.		6,256.09	28-JAN-19	6,256.09	Reconciled
395489		24-JAN-19	MOBILE MODULAR MANAGEMENT CORPORATION		1,212.19	28-JAN-19	1,212.19	Reconciled
395490		24-JAN-19	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY		1,967.39			Negotiable
395491		24-JAN-19	MURILLO, CARRIE		90.04			Negotiable
395492		24-JAN-19	MUTUAL PROPANE		180.56	29-JAN-19	180.56	Reconciled
395493		24-JAN-19	NATIONAL READY MIXED CONCRETE CO.		1,023.91	28-JAN-19	1,023.91	Reconciled
395494		24-JAN-19	NAUTILUS ENVIRONMENTAL, INC.		1,600.00	28-JAN-19	1,600.00	Reconciled
395495		24-JAN-19	NELSON HPS		881.17			Negotiable
395496		24-JAN-19	NEOFUNDS		5,262.50	29-JAN-19	5,262.50	Reconciled
395497		24-JAN-19	NEPTUNE TECHNOLOGY GROUP, INC.		192,915.60			Negotiable
395498		24-JAN-19	NERMON, ELAIN		500.00			Negotiable
395499		24-JAN-19	NGUYEN, DUC		115.92			Negotiable
395500		24-JAN-19	NITTALA, SEETHA		209.02			Negotiable
395501		24-JAN-19	OGASA, STEVE		45.71			Negotiable
395502		24-JAN-19	OLIN CORPORATION		11,203.62			Negotiable
395503		24-JAN-19	ONSOLVE, LLC		25,000.00			Negotiable
395504		24-JAN-19	ORANGE COUNTY AUTO PARTS CO		88.18	28-JAN-19	88.18	Reconciled
395505		24-JAN-19	ORANGE COUNTY FIRE PROTECTION		1,591.00	28-JAN-19	1,591.00	Reconciled
395506		24-JAN-19	PAREKH, PALLAVI		72.60			Negotiable
395507		24-JAN-19	PARK PLACE MICHELSON LLC		4,129.46			Negotiable
395508		24-JAN-19	PARK WEST LANDSCAPE INC		1,265.46			Negotiable
395509		24-JAN-19	PARKHOUSE TIRE INC		769.70	29-JAN-19	769.70	Reconciled
395510		24-JAN-19	PATEL, KAVITA		34.90			Negotiable
395511		24-JAN-19	PAYNE & FEARS LLP		6,978.72	28-JAN-19	6,978.72	Reconciled
395512		24-JAN-19	PHAM, AI		932.57	30-JAN-19	932.57	Reconciled
395513		24-JAN-19	PHAM, GIANG		55.97			Negotiable
395514		24-JAN-19	PHILLIPS, THOMAS		36.93			Negotiable
395515		24-JAN-19	PIVOT INTERIORS INC		1,732.56	28-JAN-19	1,732.56	Reconciled
395516		24-JAN-19	PORTER, KATIE		151.34			Negotiable
395517		24-JAN-19	PRAXAIR DISTRIBUTION INC		1,585.62	29-JAN-19	1,585.62	Reconciled

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 31
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								

395518	24-JAN-19	PREMIER PAVING INC.	1,589.03	28-JAN-19	1,589.03	Reconciled
395519	24-JAN-19	PSOMAS	2,918.75	28-JAN-19	2,918.75	Reconciled
395520	24-JAN-19	PTI SAND & GRAVEL INC	1,698.65	29-JAN-19	1,698.65	Reconciled
395521	24-JAN-19	PYRO-COMM SYSTEMS INC	1,490.00	28-JAN-19	1,490.00	Reconciled
395522	24-JAN-19	QUINN COMPANY	96.10	28-JAN-19	96.10	Reconciled
395523	24-JAN-19	QUINN RENTAL SERVICES	5,788.79	28-JAN-19	5,788.79	Reconciled
395524	24-JAN-19	R & S SOIL PRODUCTS INC	700.38			Negotiable
395525	24-JAN-19	R&B AUTOMATION, INC.	8,560.74			Negotiable
395526	24-JAN-19	RALPH ANDERSEN & ASSOCIATES	3,510.00	30-JAN-19	3,510.00	Reconciled
395527	24-JAN-19	RAM AIR ENGINEERING INC	17,020.24	30-JAN-19	17,020.24	Reconciled
395528	24-JAN-19	RAPPARPORT, LISA	202.70	28-JAN-19	202.70	Reconciled
395529	24-JAN-19	RED WING SHOE STORE	196.77	28-JAN-19	196.77	Reconciled
395530	24-JAN-19	RELIANCE STANDARD LIFE INSURANCE COMPANY	28,781.72			Negotiable
395531	24-JAN-19	REO INTERNATIONAL CORPORATION	13.11			Negotiable
395532	24-JAN-19	RICHARD C. SLADE & ASSOCIATES LLC	1,583.63			Negotiable
395533	24-JAN-19	ROCHESTER MIDLAND CORPORATION	1,588.32			Negotiable
395534	24-JAN-19	ROSE, FRANK E	237.52			Negotiable
395535	24-JAN-19	ROY, MONA	437.19			Negotiable
395536	24-JAN-19	RYU, GI HYON	59.80			Negotiable
395537	24-JAN-19	S & J SUPPLY CO INC	1,631.87	28-JAN-19	1,631.87	Reconciled
395538	24-JAN-19	SAN CARLO APARTMENTS	128.22			Negotiable
395539	24-JAN-19	SANTA ANA BLUE PRINT	4,678.78	30-JAN-19	4,678.78	Reconciled
395540	24-JAN-19	SCHAFNITZ, MATTHEW	131.95			Negotiable
395541	24-JAN-19	SERRANO HIGHLANDS MASTER ASSOC	11,236.78			Negotiable
395542	24-JAN-19	SERRANO WATER DISTRICT	55,927.96			Negotiable
395543	24-JAN-19	SEWALL, COREY	13.69			Negotiable

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 32
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395544		24-JAN-19	SHAMROCK SUPPLY CO INC		1,675.83	29-JAN-19	1,675.83	Reconciled
395545		24-JAN-19	SIERRA, ALEXA		160.54			Negotiable
395546		24-JAN-19	SILVERWOOD LANDSCAPE		1,253.18			Negotiable
395547		24-JAN-19	SIRIUS COMPUTER SOLUTIONS INC		330,517.09			Negotiable
395548		24-JAN-19	SJD&B		1,960.34			Negotiable
395549		24-JAN-19	SMOG TIME		200.00	28-JAN-19	200.00	Reconciled
395550		24-JAN-19	SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT		1,995.54			Negotiable
395551		24-JAN-19	SOUTH COAST WATER DISTRICT		2,577.00	29-JAN-19	2,577.00	Reconciled
395552		24-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY		133,426.28	29-JAN-19	133,426.28	Reconciled
395553		24-JAN-19	SOUTHERN CALIFORNIA GAS COMPANY		82.16			Negotiable
395554		24-JAN-19	SPATIAL WAVE, INC.		1,280.00	28-JAN-19	1,280.00	Reconciled
395555		24-JAN-19	STANTEC CONSULTING SERVICES INC.		4,302.75			Negotiable
395556		24-JAN-19	STERIS CORPORATION		8,029.18	28-JAN-19	8,029.18	Reconciled
395557		24-JAN-19	STREAKWAVE WIRELESS, INC.		1,128.07	29-JAN-19	1,128.07	Reconciled
395558		24-JAN-19	SUKLE ADVERTISING INC.		12,636.09			Negotiable
395559		24-JAN-19	SUMNANI, MALIK		414.69	28-JAN-19	414.69	Reconciled
395560		24-JAN-19	SUN, ZENEY		11.77			Negotiable
395561		24-JAN-19	SUNSTATE EQUIPMENT CO.		1,265.53			Negotiable
395562		24-JAN-19	SURF CITY OPTOMETRY		225.00	30-JAN-19	225.00	Reconciled
395563		24-JAN-19	SYN-TECH SYSTEMS INC		9,576.00	28-JAN-19	9,576.00	Reconciled
395564		24-JAN-19	THE LINDA SWAN NASH TRUST		27.67			Negotiable
395565		24-JAN-19	TOLL BROS., INC.		1,841.42			Negotiable

395566	24-JAN-19	TREE OF LIFE NURSERY		1,363.00	30-JAN-19	1,363.00	Reconciled
395567	24-JAN-19	TREVITHICK, KEVIN		152.32			Negotiable
395568	24-JAN-19	TRI COUNTY PUMP COMPANY		6,940.00	28-JAN-19	6,940.00	Reconciled
395569	24-JAN-19	TRI POINTE HOMES, INC.		3,503.36			Negotiable

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Page: 33
 Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395570		24-JAN-19	TROPICAL PLAZA NURSERY INC		39,653.85	30-JAN-19	39,653.85	Reconciled
395571		24-JAN-19	UCI FOUNDATION		15,000.00			Negotiable
395572		24-JAN-19	UNITED PARCEL SERVICE INC		96.45	28-JAN-19	96.45	Reconciled
395573		24-JAN-19	UNITED SITE SERVICES OF CALIFORNIA INC		143.67	29-JAN-19	143.67	Reconciled
395574		24-JAN-19	UPADHYAYA, AJIT		39.06			Negotiable
395575		24-JAN-19	US BANK NAT'L ASSOC N.DAKOTA		10,145.20			Negotiable
395576		24-JAN-19	US BANK NAT'L ASSOCIATION NORTH DAKOTA		44,588.93			Negotiable
395577		24-JAN-19	USA BLUEBOOK		202.62	29-JAN-19	202.62	Reconciled
395578		24-JAN-19	V&A CONSULTING ENGINEERS		14,280.75			Negotiable
395579		24-JAN-19	VERTECH INDUSTRIAL SYSTEMS, LLC		2,747.50	28-JAN-19	2,747.50	Reconciled
395580		24-JAN-19	VONEHREN, REKHA D		19.38			Negotiable
395581		24-JAN-19	VWR INTERNATIONAL, LLC		132.55	28-JAN-19	132.55	Reconciled
395582		24-JAN-19	WANG, LIJUN		39.16			Negotiable
395583		24-JAN-19	WARD, BRIANNA		512.76	30-JAN-19	512.76	Reconciled
395584		24-JAN-19	WAX DEPOT		351.44	30-JAN-19	351.44	Reconciled
395585		24-JAN-19	WAXIE'S ENTERPRISES, INC		1,987.07	28-JAN-19	1,987.07	Reconciled
395586		24-JAN-19	WENG, CHUNLI		48.97			Negotiable
395587		24-JAN-19	WOODARD & CURRAN INC		79,742.76			Negotiable
395588		24-JAN-19	WOODBRIIDGE WILLOWS APARTMENTS		27.50			Negotiable
395589		24-JAN-19	YOUNG, MARTA		29.89			Negotiable
395590		24-JAN-19	YST, INC		796.78	28-JAN-19	796.78	Reconciled
395591		24-JAN-19	YU, DANQING		38.96			Negotiable
395592		24-JAN-19	ZOU, SHANQUAN		43.12			Negotiable
395593		24-JAN-19	CANON FINANCIAL SERVICES, INC	CHICAGO	8,091.14	29-JAN-19	8,091.14	Reconciled
395594		28-JAN-19	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	PO BOX 942879	695.88			Negotiable
395595		28-JAN-19	JCI JONES CHEMICALS INC	NEWARK	2,263.80			Negotiable

IRWD Ledger Upgrade
 BANK: Bank of America N.A. Branch : Los Angeles Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Bank Account Currency: USD (US Dollar) Account: Checking AP and PR Page: 34
 Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395596		28-JAN-19	CALIFORNIA DEPARTMENT OF TAX AND FEE ADMINISTRATION	PO BOX 942879	109.05			Negotiable
395597		30-JAN-19	Asman, David D		76.65			Negotiable
395598		30-JAN-19	Drzymkowski, Michele A (Michele)		5.25			Negotiable
395599		30-JAN-19	Hayes, John H (John)		60.00			Negotiable
395600		30-JAN-19	La, Jason (Jason)		277.00			Negotiable
395601		30-JAN-19	Smyth, Jeffrey S (Jeff)		30.00			Negotiable
395602		30-JAN-19	A STITCH ON TIME.COM		213.35			Negotiable
395603		30-JAN-19	ABM INDUSTRY GROUPS, LLC		18,915.01			Negotiable
395604		30-JAN-19	AEGIS ENGINEERING MANAGEMENT, INC.		15,879.00			Negotiable
395605		30-JAN-19	AERATION INDUSTRIES INTERNATIONAL INC		15,559.10			Negotiable

395606	30-JAN-19	AIRGAS, INC.	862.37	Negotiable
395607	30-JAN-19	AMAZON CAPITAL SERVICES, INC.	420.09	Negotiable
395608	30-JAN-19	AMERICAN GEOTECHNICAL, INC.	2,210.00	Negotiable
395609	30-JAN-19	AMERICAN VAN EQUIPMENT, INC	1,888.16	Negotiable
395610	30-JAN-19	ANTHONY N. LARSEN	450.00	Negotiable
395611	30-JAN-19	APCO GRAPHICS INC	305.04	Negotiable
395612	30-JAN-19	ASSURED FLOW SALES INC	167.92	Negotiable
395613	30-JAN-19	AT&T	1,468.94	Negotiable
395614	30-JAN-19	AT&T	55.03	Negotiable
395615	30-JAN-19	AUTOZONE PARTS, INC.	1,101.20	Negotiable
395616	30-JAN-19	BAEK, MYUNG	40.92	Negotiable
395617	30-JAN-19	BAVCO BACKFLOW APPARATUS & VALVE COMPANY	165.34	Negotiable
395618	30-JAN-19	BIEGLER, JON	13.38	Negotiable
395619	30-JAN-19	BIOMAGIC INC	14,560.91	Negotiable
395620	30-JAN-19	BLACK & VEATCH CORPORATION	266,339.35	Negotiable
395621	30-JAN-19	BRITHINEE ELECTRIC	6,035.08	Negotiable

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 35
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395622		30-JAN-19	BURLINGTON SAFETY LABORATORY OF CALIFORNIA INC		1,541.49			Negotiable
395623		30-JAN-19	BUSH & ASSOCIATES INC		942.00			Negotiable
395624		30-JAN-19	C WELLS PIPELINE MATERIALS INC		8,601.16			Negotiable
395625		30-JAN-19	CAT, SANJIAN		13.00			Negotiable
395626		30-JAN-19	CALIFORNIA BARRICADE RENTAL, INC.		1,900.00			Negotiable
395627		30-JAN-19	CHEN, FANGI		39.72			Negotiable
395628		30-JAN-19	CHENG, LIANXI		108.76			Negotiable
395629		30-JAN-19	CHLORINATORS INCORPORATED		325.10			Negotiable
395630		30-JAN-19	CHUNG, SOOKHWA		180.61			Negotiable
395631		30-JAN-19	CITY OF NEWPORT BEACH		1,117.10			Negotiable
395632		30-JAN-19	CITY OF NEWPORT BEACH		384.00			Negotiable
395633		30-JAN-19	CITY OF SANTA ANA		150.03			Negotiable
395634		30-JAN-19	CITY OF TUSTIN		249.48			Negotiable
395635		30-JAN-19	CONSTELLATION NEWENERGY, INC.		29,268.91			Negotiable
395636		30-JAN-19	COUNTY OF ORANGE		102.61			Negotiable
395637		30-JAN-19	COX COMMUNICATIONS, INC.		129.92			Negotiable
395638		30-JAN-19	D & G SIGNS		1,228.35			Negotiable
395639		30-JAN-19	DANESHVAR, RAHI REZA		148.81			Negotiable
395640		30-JAN-19	DAVIS FARR LLP		12,040.00			Negotiable
395641		30-JAN-19	DELL MARKETING LP		2,968.06			Negotiable
395642		30-JAN-19	DIRECTV INC		129.78			Negotiable
395643		30-JAN-19	DONLON, CHARLENE		24.33			Negotiable
395644		30-JAN-19	DOUGLAS ENVIRONMENTAL GROUP INC		1,375.00			Negotiable
395645		30-JAN-19	E.J. MEYER COMPANY		659.60			Negotiable
395646		30-JAN-19	EAGLE PRINT DYNAMICS		748.16			Negotiable
395647		30-JAN-19	EI&C ENGINEERING INC		54,469.02			Negotiable
395648		30-JAN-19	EXECUTIVE LIGHTING & ELECTRIC		190.00			Negotiable
395649		30-JAN-19	FACILITYDUDE.COM		8,268.75			Negotiable

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

Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 Account: Checking AP and PR Page: 36
 Payment Currency: USD (US Dollar)
 Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395650		30-JAN-19	FARRELL & ASSOCIATES		241.18			Negotiable
395651		30-JAN-19	FEDEX		284.04			Negotiable

395652	30-JAN-19	FERGUSON ENTERPRISES, INC.	609.06	Negotiable
395653	30-JAN-19	FIRE EXTINGUISHING SAFETY & SERVICE	332.89	Negotiable
395654	30-JAN-19	FIRE EXTINGUISHING SAFETY & SERVICE	775.15	Negotiable
395655	30-JAN-19	FISHER SCIENTIFIC COMPANY LLC	13,767.46	Negotiable
395656	30-JAN-19	FORESTRY SUPPLIERS INC	396.83	Negotiable
395657	30-JAN-19	FRONTIER CALIFORNIA INC.	273.27	Negotiable
395658	30-JAN-19	FULLER TRUCK ACCESSORIES	3,087.51	Negotiable
395659	30-JAN-19	GANAHL LUMBER CO.	309.18	Negotiable
395660	30-JAN-19	GEIGER BROS	878.13	Negotiable
395661	30-JAN-19	GENTERRA CONSULTANTS INC	3,700.00	Negotiable
395662	30-JAN-19	GRAINGER	5,145.18	Negotiable
395663	30-JAN-19	GRAYBAR ELECTRIC COMPANY	16,244.67	Negotiable
395664	30-JAN-19	HAAKER EQUIPMENT COMPANY	1,229.68	Negotiable
395665	30-JAN-19	HACH COMPANY	3,877.06	Negotiable
395666	30-JAN-19	HARDY & HARPER, INC.	4,100.00	Negotiable
395667	30-JAN-19	HARRINGTON INDUSTRIAL PLASTICS LLC	9,658.65	Negotiable
395668	30-JAN-19	HELPMATES STAFFING SERVICES	16,955.33	Negotiable
395669	30-JAN-19	HERITAGE FIELDS EL TORO, LLC	901.00	Negotiable
395670	30-JAN-19	HILL BROTHERS CHEMICAL COMPANY	4,290.00	Negotiable
395671	30-JAN-19	HOME DEPOT USA INC	410.31	Negotiable
395672	30-JAN-19	IRVINE PIPE & SUPPLY INC	880.61	Negotiable
395673	30-JAN-19	IRWD-PETTY CASH CUSTODIAN	662.57	Negotiable
395674	30-JAN-19	JCI JONES CHEMICALS INC	5,700.37	Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 37
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395675		30-JAN-19	JOE RHODES MAINT SERVICE INC		503.09			Negotiable
395676		30-JAN-19	JOHNSON PLASTICS		1,298.49			Negotiable
395677		30-JAN-19	KAL LAMBAZ AND MONA LAMBAZ		49.74			Negotiable
395678		30-JAN-19	KUSTERS ZIMA CORPORATION		5,267.87			Negotiable
395679		30-JAN-19	L. G. SUPPLY COMPANY		2,429.76			Negotiable
395680		30-JAN-19	LANDCARE HOLDINGS, INC.		2,765.06			Negotiable
395681		30-JAN-19	LEE & RO, INC.		11,220.84			Negotiable
395682		30-JAN-19	LI, VICTORIA		110.33			Negotiable
395683		30-JAN-19	LITTLE, ANDREA		37.24			Negotiable
395684		30-JAN-19	LONE STAR BLOWER, INC		7,639.00			Negotiable
395685		30-JAN-19	LU'S LIGHTHOUSE, INC.		1,163.70			Negotiable
395686		30-JAN-19	MALIK, OMER		29.13			Negotiable
395687		30-JAN-19	MAP COMMUNICATIONS, INC.		1,337.07			Voided
395688		30-JAN-19	MC MASTER CARR SUPPLY CO		125.26			Negotiable
395689		30-JAN-19	MCKENNA GENERAL ENGINEERING, INC.		954.95			Negotiable
395690		30-JAN-19	MEL UNDERWOOD WATER TRUCKS & EQUIPMENT		910.00			Negotiable
395691		30-JAN-19	MERRIMAC PETROLEUM, INC.		22,111.98			Negotiable
395692		30-JAN-19	MOORE, MICHELLE		44.06			Negotiable
395693		30-JAN-19	NATURES IMAGE INC		2,912.34			Negotiable
395694		30-JAN-19	NEWPORT BAY CONSERVANCY		35.00			Negotiable
395695		30-JAN-19	NINYO & MOORE		9,264.75			Negotiable
395696		30-JAN-19	NMG GEOTECHNICAL INC		12,486.50			Negotiable
395697		30-JAN-19	OLEN COMMERCIAL REALTY CORP		646.65			Negotiable
395698		30-JAN-19	OLIN CORPORATION		19,804.07			Negotiable
395699		30-JAN-19	ONESOURCE		12,284.54			Negotiable

395700 30-JAN-19 DISTRIBUTORS LLC 965.00 Negotiable
 ORACLE
 APPLICATIONS USERS
 GROUP

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 38
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395701		30-JAN-19	ORANGE COUNTY AUTO PARTS CO		1,434.60			Negotiable
395702		30-JAN-19	ORANGE LINE OIL COMPANY		2,074.27			Negotiable
395703		30-JAN-19	PARK WEST LANDSCAPE INC		171.90			Negotiable
395704		30-JAN-19	PARKHOUSE TIRE INC		769.70			Negotiable
395705		30-JAN-19	PARKWAY LAWNMOWER SHOP		74.84			Negotiable
395706		30-JAN-19	PERKINELMER HEALTH SCIENCES INC		7,188.00			Negotiable
395707		30-JAN-19	PIPELINE PRODUCTS INC		6,396.04			Negotiable
395708		30-JAN-19	PRAXAIR DISTRIBUTION INC		2,261.66			Negotiable
395709		30-JAN-19	QUALITY ENVIRONMENTAL CONTAINERS		4,747.13			Negotiable
395710		30-JAN-19	RCE CONSULTANTS, INC.		4,081.20			Negotiable
395711		30-JAN-19	REAL WATER CONSULTANTS INC.		14,990.25			Negotiable
395712		30-JAN-19	RESTEK CORPORATION		819.55			Negotiable
395713		30-JAN-19	RICHARD C. SLADE & ASSOCIATES LLC		28,791.78			Negotiable
395714		30-JAN-19	RYAN HERCO PRODUCTS CORP		240.04			Negotiable
395715		30-JAN-19	SANDERS PAVING INC		18,275.00			Negotiable
395716		30-JAN-19	SHAMROCK SUPPLY CO INC		305.36			Negotiable
395717		30-JAN-19	SHEA HOMES, LIMITED PARTNERSHIP		12.94			Negotiable
395718		30-JAN-19	SIGMA-ALDRICH INC		747.15			Negotiable
395719		30-JAN-19	SMOG TIME		330.00			Negotiable
395720		30-JAN-19	SOUTH ORANGE COUNTY WASTEWATER AUTHORITY		57,324.00			Negotiable
395721		30-JAN-19	SOUTHERN CALIFORNIA EDISON COMPANY		326,150.95			Negotiable
395722		30-JAN-19	SOUTHERN CALIFORNIA WATER COMMITTEE INC		1,500.00			Negotiable
395723		30-JAN-19	SOUTHLAND WATER TECHNOLOGIES LLC		1,817.55			Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 39
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395724		30-JAN-19	STEEL UNLIMITED INC		400.19			Negotiable
395725		30-JAN-19	STERN, DELOY		26.59			Negotiable
395726		30-JAN-19	STETSON ENGINEERS INC.		7,158.64			Negotiable
395727		30-JAN-19	STREAKWAVE WIRELESS, INC.		4,455.77			Negotiable
395728		30-JAN-19	SU, CHRISTY		39.98			Negotiable
395729		30-JAN-19	SUKLE ADVERTISING INC.		3,487.95			Negotiable
395730		30-JAN-19	SWAINS ELECTRIC MOTOR SERVICE		8,753.70			Negotiable
395731		30-JAN-19	TEKDRAULICS		4,381.04			Negotiable
395732		30-JAN-19	TESTAMERICA LABORATORIES, INC		281.40			Negotiable
395733		30-JAN-19	THERMO ELECTRON NORTH AMERICA LLC		4,387.30			Negotiable
395734		30-JAN-19	TOTAL RESOURCE MANAGEMENT, INC.		32,313.57			Negotiable
395735		30-JAN-19	TRIPAC MARKETING INC		2,478.31			Negotiable
395736		30-JAN-19	TROPICAL PLAZA NURSERY INC		15,962.00			Negotiable

395737	30-JAN-19	UN BRADFORD AND JASON KOO	14.15	Negotiable
395738	30-JAN-19	UNITED PARCEL SERVICE INC	271.18	Negotiable
395739	30-JAN-19	UNITED SITE SERVICES OF CALIFORNIA INC	852.63	Negotiable
395740	30-JAN-19	VERIZON WIRELESS SERVICES LLC	13,163.86	Negotiable
395741	30-JAN-19	VHG LABS, INC	356.00	Negotiable
395742	30-JAN-19	WECK LABORATORIES INC	415.00	Negotiable
395743	30-JAN-19	XING, WEIXIANG	31.06	Negotiable
395744	30-JAN-19	YU, WENNIE	33.69	Negotiable
395745	31-JAN-19	Colston, James	392.58	Negotiable
395746	31-JAN-19	Lao, Richard S	67.28	Negotiable
395747	31-JAN-19	Martin, Shane	53.88	Negotiable
395748	31-JAN-19	McNulty, Amy K (Amy)	40.00	Negotiable
395749	31-JAN-19	Nicholson, Darin	285.00	Negotiable
395750	31-JAN-19	Orozco, Linda	77.18	Negotiable
395751	31-JAN-19	Reynoso, Pio (Pio)	285.00	Negotiable
395752	31-JAN-19	Stontz, Adam J	67.28	Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 40
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD CHECK								
395753		31-JAN-19	Wang, Peter (Peter)		145.00			Negotiable
395754		31-JAN-19	INDUSTRIAL METAL SUPPLY CO	PAY	46.36			Negotiable
395755		31-JAN-19	Hufana, Eugenio D	HOME	87.58			Negotiable
395756		31-JAN-19	INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 47	DIAMOND BAR	1,355.00			Negotiable
395757		31-JAN-19	PERS LONG TERM CARE	PASADENA	538.89			Negotiable
395758		31-JAN-19	FRANCHISE TAX BOARD	SACRAMENTO 1	571.08			Negotiable
395759		31-JAN-19	ORANGE COUNTY SHERIFF'S OFFICE	4601 JAMBOREE	224.50			Negotiable
Payment Document Subtotal:					12,146,969.70		9,124,087.90	

Payment Document : IRWD Wire

12938		04-JAN-19	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	12,576.24			Negotiable
12939		07-JAN-19	YORK INSURANCE SERVICES GROUP INC - CA	PAY	3,722.33			Negotiable
12940		07-JAN-19	INTERNAL REVENUE SERVICE	FRESNO	184,635.16			Negotiable
12941		07-JAN-19	FRANCHISE TAX BOARD	SACRAMENTO	57,041.63			Negotiable
12942		07-JAN-19	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	14,357.56			Negotiable
12943		07-JAN-19	ORDONEZ, CYNTHIA MARIE	DESERT HOT SPR	324.50			Voided
12944		07-JAN-19	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	1,693.04			Negotiable
12945		07-JAN-19	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	133,093.63			Negotiable
12946		08-JAN-19	YORK INSURANCE SERVICES GROUP INC - CA	PAY	4,149.42			Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 41
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12947		08-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	2,695.33			Negotiable
12948		08-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	192.31			Negotiable
12949		09-JAN-19	CALPERS	SACRAMENTO	2,891.07			Negotiable

12950	09-JAN-19	CALPERS	1 SACRAMENTO	503,824.04	Negotiable
12951	15-JAN-19	YORK INSURANCE SERVICES GROUP INC - CA	1 PAY	6,370.72	Negotiable
12952	15-JAN-19	CALPERS	SACRAMENTO	190,184.14	Negotiable
12953	16-JAN-19	U.S. BANK NATIONALST. LOUIS ASSOCIATION		7,406.60	Negotiable
12954	16-JAN-19	ARAKI, YASUHIRO	PAY	47.69	Negotiable
12955	16-JAN-19	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	1,480.00	Negotiable
12956	18-JAN-19	EMPLOYEE BENEFIT SPECIALISTS, INC.	PO BOX 11657	30,982.78	Negotiable
12957	18-JAN-19	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	1,421.96	Negotiable
12958	28-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	160.00	Negotiable
12959	28-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	7,550.02	Negotiable
12960	28-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	1,970.78	Negotiable
12961	28-JAN-19	INTERNAL REVENUE SERVICE	FRESNO	194,168.69	Negotiable
12962	28-JAN-19	FRANCHISE TAX BOARD	SACRAMENTO	59,517.98	Negotiable
12963	28-JAN-19	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	15,058.01	Negotiable
12964	28-JAN-19	CALIFORNIA DEPARTMENT OF CHILD SUPPORT SERVICES	SACRAMENTO	1,693.04	Negotiable
12965	28-JAN-19	GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY	DENVER	141,768.42	Negotiable
12966	28-JAN-19	EMPLOYMENT DEVELOPMENT DEPARTMENT	W SACRAMENTO	7,050.83	Negotiable

IRWD Ledger Upgrade Payment Register For 01-JAN-19 To 31-JAN-19 Report Date: 31-JAN-2019 22:06
 BANK: Bank of America N.A. Branch : Los Angeles Account: Checking AP and PR Page: 42
 Bank Account Currency: USD (US Dollar) Payment Currency: USD (US Dollar)
 Payment Type: All Display Supplier Address: No

Payment Number	Sequence Num	Date	Supplier Name	Site	Payment Amount	Cleared Date	Cleared Amount	Status
Payment Document : IRWD Wire								
12967		28-JAN-19	U.S. BANK NATIONALST. LOUIS ASSOCIATION		76,089.27			Negotiable
12968		28-JAN-19	U.S. BANK NATIONALST. LOUIS ASSOCIATION		34,585.70			Negotiable
12969		28-JAN-19	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	57,481.64			Negotiable
12970		28-JAN-19	BANK OF AMERICA	SAN FRANCISCO	66,573.96			Negotiable
12971		28-JAN-19	BANK OF AMERICA	SAN FRANCISCO	60,319.80			Negotiable
12972		28-JAN-19	SUMITOMO MITSUI BANKING CORPORATION	NEW YORK	39,961.66			Negotiable
12973		28-JAN-19	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	109,740.50			Negotiable
12974		28-JAN-19	U.S. BANK NATIONALST. LOUIS ASSOCIATION		66,495.24			Negotiable
12975		28-JAN-19	MUNICIPAL WATER DISTRICT OF ORANGEVALLEY COUNTY	FOUNTAIN	675,604.71			Negotiable
12976		28-JAN-19	FILANC-BALFOUR BEATTY JV	ACT 4427724347	993,594.67			Negotiable
12977		28-JAN-19	FILANC-BALFOUR BEATTY JV	ESR 211084000	1,680.42			Negotiable
12978		28-JAN-19	CALPERS	SACRAMENTO	194,815.16			Negotiable
12979		28-JAN-19	CALPERS	SACRAMENTO	1,191.58			Negotiable
12980		28-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	4,061.18			Negotiable
12981		29-JAN-19	YORK INSURANCE SERVICES GROUP INC - CA	PAY	19,278.76			Negotiable
12982		30-JAN-19	BANK OF AMERICA MERRILL LYNCH	CHICAGO	14,040.11			Negotiable
12983		30-JAN-19	CALPERS	SACRAMENTO	2,250.00			Negotiable
12984		30-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	7,353.03			Negotiable
12985		30-JAN-19	CHARD SNYDER & ASSOCIATES, INC.	PURCHASE	2,172.18			Negotiable
12986		31-JAN-19	BANK OF NEW YORK MELLON TRUST COMPANY NA	NEWARK	2,650,512.50			Negotiable

Exhibit "E"

MONTHLY SUMMARY OF PAYROLL ACH PAYMENTS

January
2019

	AMOUNT	VENDOR	PURPOSE
1/4/2019	942,573.61	BANK OF AMERICA	ACH Payments for Payroll
1/18/2019	981,637.72	BANK OF AMERICA	ACH Payments for Payroll
	<u><u>\$1,924,211.33</u></u>		

Exhibit "F"

IRWD Gov Code 53065.5 Disclosure Report

Payment or Reimbursements for Individual charges of \$100 or more per transaction for services or product received.

01-JAN-19 to 31-JAN-19

NAME	CHECK NO.	CHECK	AMOUNT	ITEM DESCRIPTION	EXPENSE JUSTIFICATION
Arce, Jesse	395314	24-Jan-19	172.30	Other(Misc)	Contact Hours/CEU Wastewater Operator Grade II
Arce, Jesse	395314	24-Jan-19	155.00	Certification Renewal	SWRCB Wastewater Operator II exam fee
Arce, Jesse	395314	24-Jan-19	125.00	Certification Renewal	SWRCB Wastewater Operator II certificate
Beltran, Benjamin Vega	395315	24-Jan-19	170.00	Certification Renewal	CWEA Collection System Maintenance Grade I
Colston, James	395745	31-Jan-19	392.58	Membership	The State Bar of California 2019 annual membership fee
Hall, William	394868	10-Jan-19	135.00	Certification Renewal	AWWA Cross Connection Specialist
Hartoog, Jeremy	395316	24-Jan-19	188.00	Membership	CWEA membership
Hjorth, Charles	395317	24-Jan-19	188.00	Membership	CWEA membership
La, Jason	395600	30-Jan-19	277.00	Membership	AWWA annual membership
LaMar, Steven	395074	17-Jan-19	348.07	Lodging	Federal Advocacy Trip, Washinton DC - Oct. 15, 2018
LaMar, Steven	395074	17-Jan-19	348.08	Lodging	Federal Advocacy Trip, Washinton DC - Oct. 16, 2018
Lao, Richard	395318	24-Jan-19	178.00	Membership	AWWA annual membership
Matheis, Mary Aileen	395075	17-Jan-19	191.90	Lodging	WEF's No. Calif. Waters Tour, Sacramento, CA - Oct. 9, 2018
Montejano, Grace	394876	10-Jan-19	197.13	Lodging	CalPERS annual conference, Indian Wells, CA - Oct. 22, 2018
Montejano, Grace	394876	10-Jan-19	197.13	Lodging	CalPERS annual conference, Indian Wells, CA - Oct. 23, 2018
Nicholson, Darin	395749	31-Jan-19	188.00	Membership	CWEA membership
Oldewage, Lars	394878	10-Jan-19	152.52	Other(Misc)	Operating supplies
Oldewage, Lars	394878	10-Jan-19	368.00	Membership	CWEA Laboratory Analyst Grade IV
Orozco, Linda	395322	24-Jan-19	178.00	Membership	AWWA annual membership
Reynoso, Pio	395751	31-Jan-19	188.00	Membership	CWEA membership
Roberts, Tom	395076	17-Jan-19	720.00	Registration Fees	ACWA 2018 Fall Conf., San Diego, CA - Nov. 27-29, 2018
Saini, Mohit	394879	10-Jan-19	207.79	Other(Misc)	Meeting supplies
Spangenberg, Carl	394881	10-Jan-19	115.00	Membership	2019 CA Civil Engineering license renewal
Torres, Richard	395078	17-Jan-19	200.00	Other(Misc)	Safety shoe allowance
Withers, John	395080	17-Jan-19	210.00	Lodging	CALAFCO Annual Conf., Yosemite, CA - Oct. 4, 2018
Withers, John	395080	17-Jan-19	344.44	Other(Misc)	Roundtrip mileage - CALAFCO Annual Conf., Yosemite, CA
Total Amount:			\$6,134.94		

March 11, 2019

Prepared by: H. Cho / M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul A. Cook *[Signature]*

ACTION CALENDAR

SAN JOAQUIN RESERVOIR FILTRATION BUDGET ADDITION AND CONSULTANT SELECTION

SUMMARY:

The San Joaquin Reservoir Filtration project consists of filtration and disinfection system improvements at the reservoir to mitigate algae and debris entering the Zone B recycled water system. Staff recommends that the Board:

- Authorize the addition of San Joaquin Reservoir Filtration, Project 10379, to the FY 2018-19 Capital Budget in the amount of \$3,654,000, and
- Authorize the General Manager to execute a Professional Services Agreement with Carollo Engineers in the amount of \$634,888 for engineering design services for the San Joaquin Reservoir Filtration project.

BACKGROUND:

The San Joaquin Reservoir serves recycled water to the IRWD Zone B distribution system primarily from Interstate 405 to the Newport Coast and Crystal Cove areas of the District. A site plan of the San Joaquin Reservoir is shown in Exhibit "A". Algal growth on the surface of the reservoir has become an issue during the summer months as the water temperature rises. Although the recycled water is chlorinated as it flows out of the reservoir, it is only filtered through porous screens on the outlet valves, allowing algae and other particles to be conveyed into the distribution system. This results in increased clogging of customers' onsite private irrigation components (e.g., high efficiency sprinkler heads and fine mesh filters).

Last year, IRWD retained PACE Advanced Water Engineering to evaluate the reservoir's water quality and to recommend filter pore sizes for water treatment. Based on the PACE study, filtration system and disinfection improvements will be constructed at the San Joaquin Reservoir to mitigate algae and debris entering the Zone B system.

Design Consultant Selection:

Staff issued a Request for Proposal for design services to five consultants: AECOM, Carollo Engineers, Gannett Fleming, Lee & Ro and Tetra Tech. Gannett Fleming and Lee & Ro declined to submit proposals citing staff availability. AECOM, Carollo Engineers and Tetra Tech submitted proposals on January 30, 2019.

Staff evaluated the proposals based on the consultants' project approach, project team and relevant experience and recommends the selection of Carollo Engineers. Both AECOM and Carollo provided proposals that reflected a good understanding of the scope, the resources required to complete the design, and the associated costs. Tetra Tech's proposal underestimated the work effort, which reflected in a substantially lower proposal cost. AECOM and Carollo

both included alternative design tasks to evaluate reservoir management to mitigate algae growth, consequently minimizing water filtration. Both firms estimate that filter loading and filter backwash cycling in the summer months could be high.

Staff recommends that this contract be awarded to Carollo based on the design concepts and project approach presented within its proposal, the strength of the project team, and its design experience on similar District projects (e.g., IRWD's PDF Sodium Hypochlorite Storage and Feed System, the IDF Hypochlorite Conversion, and the Rattlesnake Reservoir Hypochlorite Conversion. Carollo's performance on all three of these recent projects was excellent. The consultant evaluation matrix is attached as Exhibit "B" and Carollo's proposal is attached as Exhibit "C".

FISCAL IMPACTS:

Staff requests the addition of Project 10379 to the FY 2018-19 Capital Budget in the amount shown in the table below. Funding will be provided by the Recycled Water Standard Split.

Project No.	Current Budget	Addition <Reduction>	Total Budget
10379	-\$0-	\$3,654,000	\$3,654,000

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA). In conformance with the California Code of Regulations Title 14, Chapter 3, Section 15004, the appropriate environmental document will be prepared when "meaningful information" becomes available.

COMMITTEE STATUS:

This item was reviewed by the Engineering and Operations Committee on February 19, 2019.

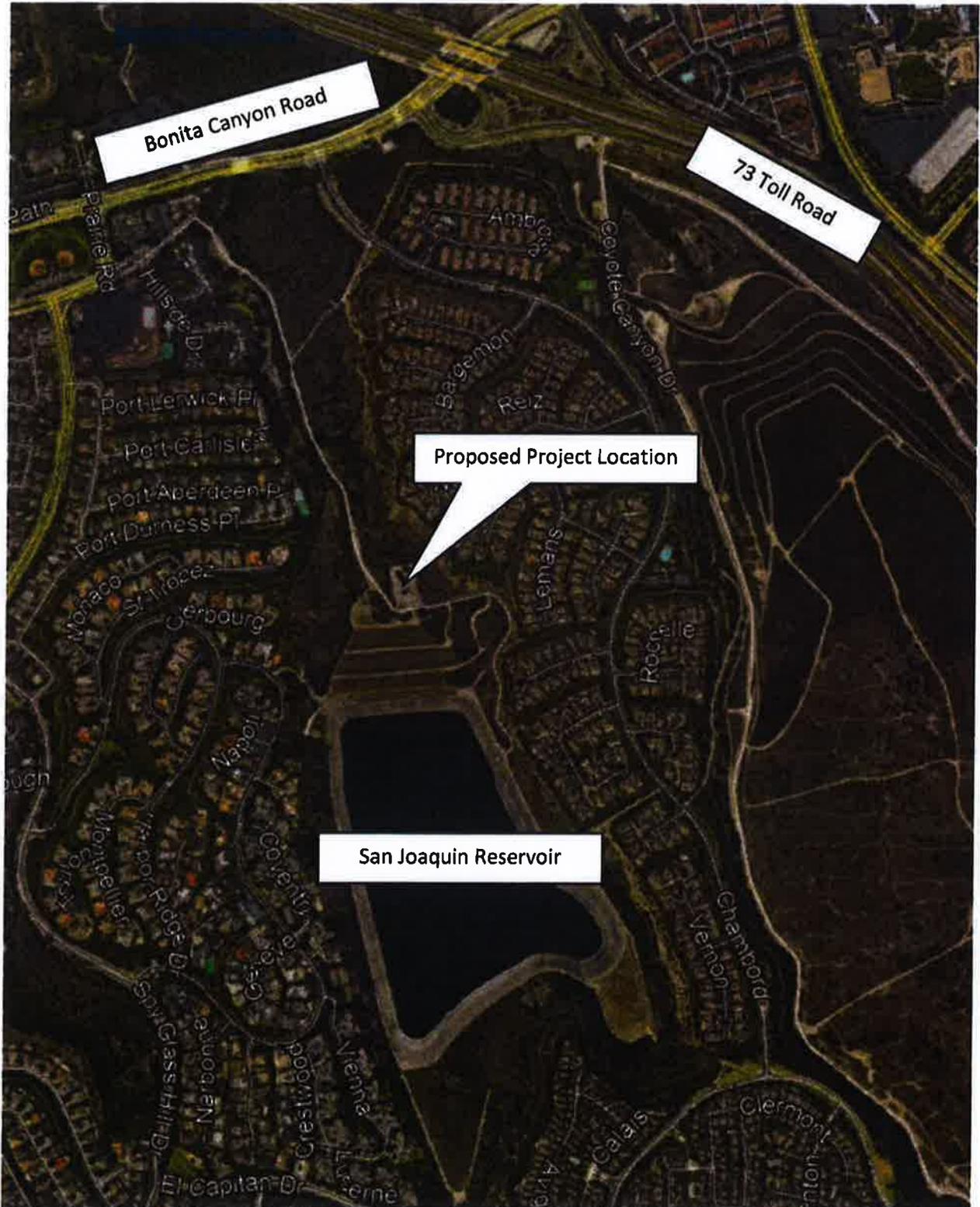
RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE ADDITION OF SAN JOAQUIN RESERVOIR FILTRATION, PROJECT 10379, TO THE FY 2018-19 CAPITAL BUDGET IN THE AMOUNT OF \$3,654,000; AND AUTHORIZE THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH CAROLLO ENGINEERS IN THE AMOUNT OF \$634,888 FOR ENGINEERING DESIGN SERVICES FOR THE SAN JOAQUIN RESERVOIR FILTRATION, PROJECT 10379.

LIST OF EXHIBITS:

- Exhibit "A" – Site Plan
- Exhibit "B" – Consultant Selection Evaluation Matrix
- Exhibit "C" – Carollo Engineers' Proposal

EXHIBIT "A"



Bonita Canyon Road

73 Toll Road

Proposed Project Location

San Joaquin Reservoir

EXHIBIT "B"

	Weights	AECOM	Carolio	Tetra Tech
TECHNICAL APPROACH	60%			
*Project Approach	50%	2	1	3
*Scope of Work	50%	2	1	3
Weighted Score (Technical Approach)		2.00	1.00	3.00
EXPERIENCE	40%			
*Firm/Team	30%	3	1	2
*Project Manager	40%	2	1	3
*Project Engineer	30%	1	2	3
Weighted Score (Experience)		2.00	1.30	2.70
Project Manager		Joe Long	Jim Meyerhofer	Steve Tedesco
Design Manager		Bryan Paine	-	-
Project Engineer		Dylan LaFrance	Mike Bundy	Kara Buttacavoli
QC/QA or Principal		Zeynep Erdal	Jeff Welshaar	Tom Epperson
Structural		David Kuang	James Doering	Victor Ramirez
Electrical/Instrumentation		Alan Randall	Troy Hedlund	Mazen Kassar
Hydraulics/Mechanical		Ufuk Erdal	Vincent Roquefort	Mark Bush
Filtration		-	Danny Murphy	Mark Wilf
Surveying		<i>Bush & Associates</i>	-	-
Geotechnical		Preveen Yerra	-	<i>Leighton Consulting</i>
Potholing		<i>C Below</i>	-	-
COMBINED WEIGHTED SCORE		2.00	1.12	2.88
		Man-hours	Man-hours	Man-hours
Task 1 Project Management		288	206	394
Task 2 Preliminary Design		816	432	847
Task 3 Final Design		2,696	2,302	1,419
TOTAL HOURS		3,800	2,940	2,660
Sheet Count				
General		3	5	4
Civil/Demolition		10	19	11
Mechanical		12	15	15
Structural		6	15	8
Electrical		9	13	5
Instrumentation		3	20	5
Architectural/Landscaping		7	0	0
TOTAL SHEETS		50	87	48
FD HRS/SHT		54	26	30
FEE				
Project Management		\$56,310	\$45,578	\$66,650
PDR		\$132,225	\$84,602	\$123,385
Final Design		\$360,965	\$433,416	\$192,505
Alternate Item - Reservoir Management		\$27,530	\$71,292	-
Total		\$577,030	\$634,888	\$382,540
Number of Drawings		50 dwgs	87 dwgs	48 dwgs
Final Design Unit Prices (\$/dwg)		\$7,219	\$4,982	\$4,011
Professional Liability Insurance		YES	YES	YES
General Liability Insurance		YES	YES	YES
FORCED RANKINGS:				
1 - Best		2	1	3
2 - Second best				
3 - Third best				

EXHIBIT "C"



3139 Bristol Street, Suite 500, Costa Mesa, California 92626
P: 714.593.5100 F: 714.593.5101

January 30, 2019

Mr. Malcom A. Cortez, P.E.
Principal Engineer - Engineering Operations Support
Irvine Ranch Water District
Engineering Department
3512 Michelson Drive
Irvine, CA 92618

Subject: Proposal for Engineering Design Services for the San Joaquin Reservoir Filtration Project

Dear Mr. Cortez:

The Irvine Ranch Water District (IRWD/District) is undertaking an important project at their San Joaquin Recycled Water Storage Reservoir to remove algae which has caused significant problems to their downstream customers. This project will eliminate the current issues with irrigation sprinklers and drip systems and allow the District to recombine their Zone B system to operate it as originally designed.

We are specialists in water-related filtration and, more importantly, in the type of algae screening facilities that will be required here. Our proposed team recently completed the design of a similar facility in Duchesne, Utah. From this experience, and others, we understand how these facilities need to be sized and supported to ensure success.

For your project, we need to get three major items right to make certain that this facility is an asset to the District and not a continuing problem:

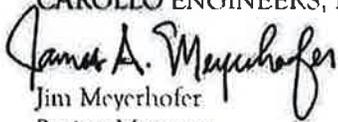
- ✓ The strainer sizing must meet current and future demands/production and the new combined zone hydraulics.
- ✓ The strainer backwash facilities need to be sized correctly to make sure it does not become a bottleneck during severe algae/peak demand periods and restrict production or degrade water quality
- ✓ The District must have a good plan for managing algae removed from the reclaimed water so it does not lead to more severe water quality problems.

Not only does Carollo have the expertise to help the District with these critical issues, but we're also providing technical support staff (Patrick Carlson and Danny Murphy) that recently completed the Duchesne, Utah project. These experts will be surrounded with a strong Southern California leadership team that you know and trust.

Lastly, we understand that visual impacts to the local community and the overall completion schedule are key. We will dedicate the resources to deliver on time and to your satisfaction. We have the capabilities and resources to create 3-D sketch-up models and visuals that are not just cartoons but represent what the facilities will actually look like. This is demonstrated throughout our proposal, as well as on our on-going and previous projects with the District.

We appreciate the trust that IRWD has placed in Carollo in the past and look forward to helping you make this project a resounding success.

Sincerely,
CAROLLO ENGINEERS, INC.


Jim Meyerhofer
Project Manager


Mike Bundy
Project Engineer

SCOPE

BACKGROUND

Irvine Ranch Water District (IRWD or District) owns, operates, and maintains the 55 acre San Joaquin Reservoir (SJR) as a recycled water seasonal storage reservoir. SJR was originally constructed by Metropolitan Water District of Southern California in 1963 as a raw water potable reservoir and later converted to a recycled water reservoir by IRWD in 2003.

SJR is a component of IRWD's Zone B Recycled Water System. The reservoir is typically operated between elevations of 400 to 470 feet. Control modifications were made in 2003 to allow SJR to meet Zone B demands including the addition of pumps to deliver water when the reservoir is level too low to serve the zone.

SJR suffers seasonally from a moderate to severe algae problem. Because of this issue and related color problems the Zone B Recycled Water System is not operated as originally envisioned. The zone has been split to deliver higher quality water to sensitive recycled water users in the Irvine Spectrum Area from the Laguna Canyon Zone B Reservoir.

PROJECT DESCRIPTION AND UNDERSTANDING

This project will improve the water quality of the outflow from SJR and eliminate the need for the zone split by constructing a filtration system at the reservoir. In addition, modifications will be made to the existing chlorination system to improve its operations.

A successful project will address a number of challenges, many of which are discussed below.

1. The new facilities must be attractive and fit in with the surrounding neighborhoods. Equipment will be housed under a canopy type structure with a roof that will likely match existing houses. The graphic on the cover illustrates our initial layout concept.
2. Sizing of the filtration facilities will have to be conservative given the lack of available information regarding algae types and concentrations. Proven strainers must be used such as the Arkal disk filters, which were developed for treating irrigation supplies to prevent clogging. The RFP called for 10-micron filters based on the experience of downstream recycled water users seeing clogging of 20 to 30 micron pre-filters in their irrigation systems. Arkal strainers are available in a range of 20 to 400 microns; therefore, two stage straining will be needed. During the

PDR phase of the project, details for the two-stage filtration process will be established. At this point, it looks like one alternative would be fourteen Super Galaxy Arkal horizontal strainer modules each fitted with 40-micron polypropylene discs followed in the second stage by seven Amiad Omega 10-micron weave wire screens. A lot more discussion on screen types, configurations, and layouts is contained in the Task 2 section starting on page 3.

3. The required design flow is another issue which needs to be addressed. Outflow numbers that have been listed in the RFP are based on split zone hydraulics. The pumping facility located in the control building has a firm capacity of 8,200 gpm (11.8-mgd), and was designed to be utilized to meet higher outflow demands when reservoir levels fall below elevation 450 feet. Since the zone has been split for the past six years, the pumps have not been used. Typical and peak outflows have been 12 cfs (7.8-mgd) and 25 cfs (16.2-mgd). It is the District's intent to recombine the zone when the filtration project is completed. As demands have increased since planning in 2003 established the 8,200 gpm year 2020 demand projection, we are assuming a peak demand of 25 cfs is necessary. These assumptions will be confirmed in the PDR phase.



Arkal Strainers generally result in compact layouts.

4. Following confirmation of required demands, the existing pumping facility can be analyzed to see if it can be modified to provide required operating head through strainers (35 to 40 psi) and compensate for the loss of head through the added piping/valves and modules (7 to 15 psi). Modifications may involve replacing pumps.

5. Sizing of strainer backwash facilities will also be critical to making certain that these do not become a bottleneck to operations. We have limited information regarding algae concentrations and types in the reservoir water. We can assume a backwash frequency and size backwash booster pumps and the backwash waste pipeline, which will need to be constructed to the head of the reservoir. However, if we get it wrong, it could restrict reservoir outflow capacity or degrade water quality in the outflow. Backwash facilities should need to be sized conservatively. For



Amiad Screen

a two-module design we would need 75 psi (minimum) backwash supply of 1,600 gpm, which would wash all the modules in 6 minutes. At 3,200 gpm the module would be backwashed in 3 minutes. This does not seem significant, however at maximum capacity and severe algae concentrations actual operating experience has shown the modules can require cleaning almost continuously. A 3 to 4 module design would require fewer valves but larger diameter water piping and backwash booster pumps. A new backwash waste equalization basin may be needed with an estimated volume of 20,000 gallons. Backwash waste would be returned through either the extended seepage return line or a new larger backwash line which could be constructed up the existing reservoir patrol road.

6. The RFP suggested that perhaps the existing seepage return system could be used to return backwash waste to the reservoir inlet. This needs to be confirmed during the PDR phase. If found to be inadequate, these facilities would have to be replaced.

7. Returning backwash waste to the reservoir inlet is another issue that needs to be carefully considered to ensure the project's long term viability. We know the problems that returning waste filter backwash cause to a potable raw water reservoir with regards to concentration of contaminants. In this project, we should be concerned that increasing the carbon loading in the reservoir in the presence of reclaimed water nitrogen and phosphorus levels may result in increased algae concentrations, possibly even HALs (Harmful Algae Levels).

8. The District at this time is not considering discharge of the filter backwash waste to the sewer, given the location of the nearest sewer and potential problems with sewer capacity downstream. Other options for removing backwash waste from the reservoir include concentration with air flotation or thickeners, and subsequent drying of the solids. This could be evaluated in the PDR phase.

9. There are also a number of reservoir management options which could be used to possibly mitigate the impact of the waste backwash water return. These include expanding the existing aeration system, adding mixing, biological algae harvesting, light attenuation, and others. We are proposing an optional task to prepare a Reservoir Management Study to evaluate available alternatives for addressing the backwash waste return and develop a long term strategy.

SCOPE OF WORK

TASK 1 Project Management

1.1 Project Status Reports

Weekly and monthly status reports will be provided to the District. Weekly status reports will be submitted on Monday and shall consist of a brief e-mail summary of activities completed the previous week along with activities anticipated for the following week.

Monthly reports will accompany and supplement monthly invoices along with updated project schedules. These reports will provide a narrative summary of the progress on the project, including budget and schedule status. The report will discuss work completed on the project for the reporting period and anticipated work for the next period. Critical decisions and outstanding action items will be documented and included with each report. Any out-of-scope work, if needed, will be identified in the progress report.

1.2 Meetings and Workshops

The meeting and workshop structure will follow the format provided in the RFP. The preliminary design kick-off will be structured as a two hour team workshop to comprehensively review the scope of work, discuss project objectives, options for design optimization, and overall project approach.

Project issues and concerns can be expressed by stakeholders and resolution pathways identified. Data and other information needs will be discussed. A total of nine (9) meetings have been planned for the Preliminary and Final Design tasks.

Anticipated Meetings and Workshops

Description	Timing	Minimum Number
Project Meetings	Monthly	6
Site Visits	As needed	2
Agency Coordination	<ul style="list-style-type: none"> • Southern California Edison • Orange County Fire Authority • City of Santa Ana • Division of Safety Dams • City of Newport Beach • CEQA 	
Design Phase Presentations/Workshops		
60% Design	August 2019	1
90% Design	September 2019	1
100% Design	October 2019	1

Draft agenda and supporting materials will be distributed for review at least five days prior to each meeting and workshop. Draft and final minutes will be distributed to all attendees and other interested staff within one week of the meeting.

1.3 Quality Assurance and Quality Control

Carollo has built a reputation around producing consistently high quality designs for our clients in the water sector, and as such, we place the utmost importance on QA/QC procedures. Carollo has a well-defined and rigorous process that has been continually refined over our company history. Our quality assurance program provides for quality work through proven procedures for planning, coordination, checking, reviewing, and scheduling the work.

Carollo's quality management program engages staff at every level and every stage of the project. By involving key senior staff and quality management experts at all project stages,

quality management is not viewed as a single milestone, but an integral part of the project delivery structure.

The project review team will be led by Jeff Weishaar and supported by a highly experienced team of senior engineers and process experts.

Internal quality review checks will be performed with key Carollo team members prior to the four (4) major project submittals:

1. TM - PDR Review & Refinement
2. 60% Submittal
3. 90% Submittal
4. 100% Submittal

Task 1 Deliverables:

- Weekly & Monthly Project Status Reports
- Project Schedule – updated monthly
- Meeting Agendas
- Meeting Minutes

TASK 2 Preliminary Design Report

2.1 Background Information Collection and Analysis

The primary goal of this subtask will be to gather existing information to be used in the PDR evaluation.

2.1.1 Site Survey

Carollo will use the topographic survey of the reservoir and project area provided by the District to design the new filtration system, backwash system, and related facilities.

2.1.2 Utility Review

Carollo will perform utility research to locate utilities on the project site so as to minimize construction interference. Carollo will recommend potholing where necessary.

2.1.3 Geotechnical Investigation

Carollo will review existing geotechnical reports as provided by the District to determine if any additional soils investigations are required.

2.2 Filtration System Analysis

IRWD has identified a need to provide 10-micron filtration for the recycled water leaving SJR. To hit the ground running, Carollo has investigated and identified feasible options for providing this level of filtration in an efficient, reliable, and cost effective manner.

Carollo has extensive experience in tertiary filtration and a proven track record in providing not just functional treatment plants, but also well thought-out facilities that represent best-in-class installations for reliability, accessibility, maintainability, and cost efficiency. The project team's experience spans all of the large scale filtration and algae treatment technologies:



40-Micron Grooved Disc Strainers are a good choice as a coarse screen.

- Grooved-disc Pressure Straining
- Weave-wire Pressure Straining
- Wedge-wire Pressure Straining
- Granular Media Filtration
- Cloth Media Filtration
- Cartridge Filtration
- Dissolved Air Flotation

The benefit of this experience to IRWD is that you will receive not just a robust treatment process, but a filtration facility to be proud of.

Carollo's assessment of the information provided in the RFP indicates that pressure straining is a good fit for the SJR application. When designed correctly, pressure strainers provide a simple and low-maintenance solution, even for challenging applications such as algal blooms.

Under this task Carollo will provide a filter technology assessment that considers all technology options and demonstrates why pressure straining is the best technology to suit IRWD's needs.

Our Suggested Approach to Strainer Evaluation

It is common for open recycled water storage to lead to challenging filtration requirements due to the propensity for algae blooms.

When it comes to algae, not all strainers are created equal. The primary challenge posed by algae is that it commonly forms long strands that will "staple" through the openings in

the screen and wrap around the screen. When the screen is backwashed, this long material that is wrapped around the screen is not effectively removed. Typically this requires an operator to disassemble the screen and clean it manually to restore full capacity. Carollo proposes utilizing 40-micron grooved-disc strainers as a coarse screen and primary barrier against algae.



10-Micron Weave Wire Strainers would perform well as a second stage screen.

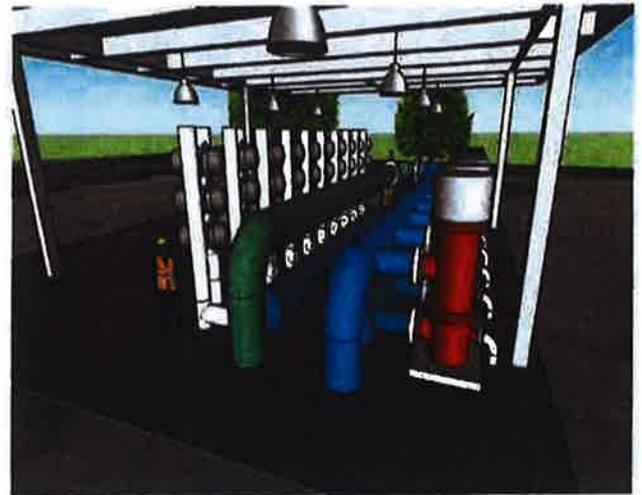
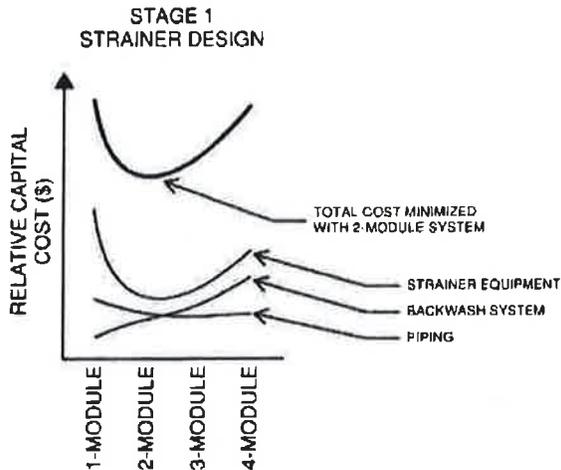
Grooved-disc strainers are an alternative that are very well suited to algae removal. The reason for this is that a backwash cycle forces the discs to expand and spin completely free of each other, allowing even long stringy algae to be removed automatically.

Once algae has been removed, a second stage of fine-strainers will filter the water down to 10-microns. At this particle size, weave-wire strainers are an appropriate technology.

Any filtration system designed by Carollo has an emphasis on process performance, access, and maintainability. In considering this project, we have already assessed numerous potential strainer configurations to provide IRWD with the some initial plant layouts. Options included:

- Strainer technology (disc, weave-wire, wedge-wire)
- Strainer orientation (vertical, horizontal, angled mounting)
- Number of stages (one vs. two vs. three vs. four stage approaches)
- Strainer module sizes (number of strainers connected to a single backwash supply)
- Stage layout (proximity and orientation of Stage 1 and Stage 2 strainers)
- Strainer bypass piping (option for connection of Stage 1 and/or Stage 2 bypass)

When assessing these alternate configurations, construction costs were considered. An example is provided below, assessing the financial impacts of using 1-module up to 4-module Stage 1 strainers. Increasing the number of modules reduces the number of valves, but it increases the size of the valves, and capacity of the backwash pumps. By seeing how these changes effect construction cost we can be sure we provide a great layout without a big price tag.



Three Stage Module Configuration

During the preliminary design phase, our initial layouts could serve as a starting point in discussing, developing, and evaluating alternatives.

2.2.1 Backwash System

Strainer backwash supply sizing will be critical to making the difference between a successful project and creating a system bottleneck. The Arkal first stage units require a minimum 75 psi supply.



Four Stage Module Configuration

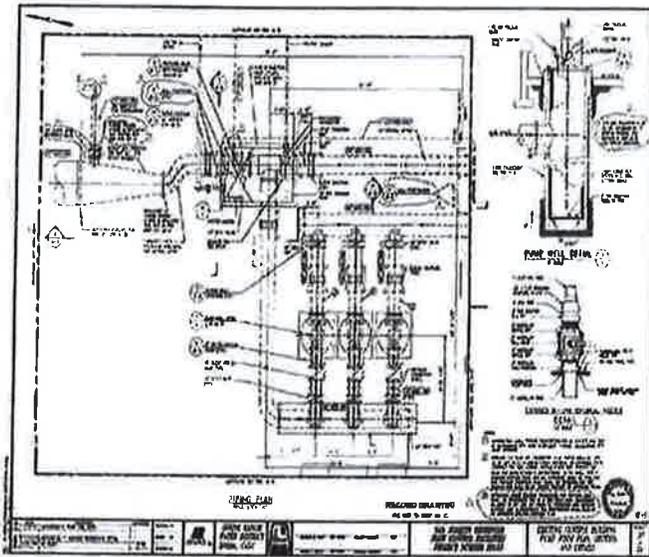
The second stage units operate off system pressure which is less, typically 35 to 45 psi. From a preliminary screening, it appears that the first stage screens should be two-stage which would require a minimum backwash supply of 1,600 gpm and would wash all modules in 6 minutes. A sensitivity analysis will be conducted in the PDR to confirm the adequacy of a 6 minutes cycle time.

2.2.2 Filter Waste Water System

After backwashing, the waste washwater will flow to a new estimated 20,000 gallon concrete tank located under the new facility. The equalization tank will be sized to hold two complete module backwashes.

The RFP lists the existing seepage return pump station and return line as possible facilities which could be used to return waste washwater back to the reservoir. This system includes two 75-hp submersible sump pumps mounted

in a 6-ft diameter, 15,000 gallon manhole. The existing pumps may be too small in capacity to serve as return waste washwater pumps. This will be evaluated in the PDR phase. Other options to evaluate could include reuse of the existing manhole by replacing the pumps or new vertical turbine return pumps could be mounted above the new equalization tank.



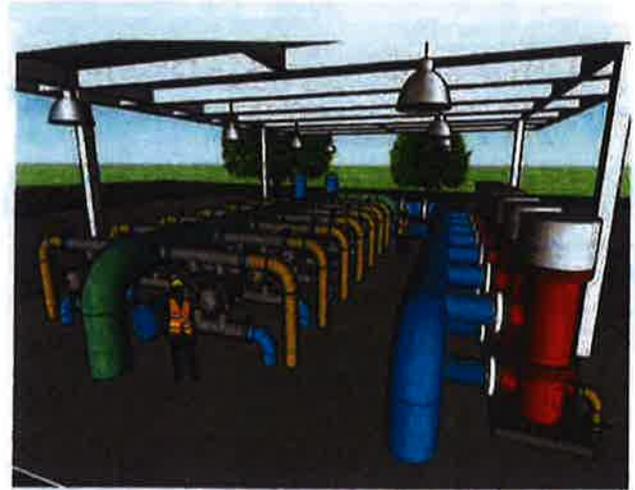
The existing seepage return line would have to be extended to move the waste washwater to the head of the reservoir. Based on our preliminary analysis it appears that the existing line size may be too small and a new larger line may be needed. The PDR will look carefully at how these existing assets may be used in the final design.

2.3 Pump System Analysis

As discussed in Task 2.2.1, preliminary screening shows a minimum operating pressure of 75 psi to drive the reservoir outflow through the screens for algae removal may be required. The RFP suggests that perhaps the existing control station pumps may be utilized for this purpose.

The existing three-4,300 gpm pumps were designed to add 16 to 34 feet of hydraulic head to the reservoir when it drops below elevation 450 which limits the delivery to Zone B. Preliminary screening shows that we will need pumps that can provide 130-400 feet hydraulic head.

The analysis is complicated at this level by lack of a complete understanding of the required pump requirements which will be defined in the PDR. The RFP lists average and peak overflow demands of 12 and 25 cfs,



Two Stage Configuration - Initial Layout



A proposed conceptual site layout of the strainers and supporting facilities

respectively. These demands have increased over the 8,200 gpm year 2020 demands forecasted in 2003. Since the zone was split to serve higher quality demanding customers in the Irvine Spectrum area, hydraulic conditions could also have changed. The zone hydraulics need to be clearly understood since one of the results of this project will be to recombine the zone. How will that affect demands?

Based on our knowledge to date, it appears that three-700 gpm pumps will be needed to meet a firm capacity of 25 cfs. Several significant questions arise from this:

- Can we use the existing pump cans in which the pumps are mounted and take suction? If not, modifications to the pump station may be needed.
- If we can find pumps to fit into the relatively shallow cans, will the installation meet Hydraulic Institute (HI) Standards?
- What modifications will be needed to electrical and surge control systems?

Following discussions with pump manufacturers it appears that they can supply the required pumps and that they will fit within the existing cans.

Our initial review of the installation with regards to HI Standards is as follows:

The proposed pump installation was reviewed in the context of Hydraulic Institute (HI) Standards as related to intake design. This is important as the proposed pumps may physically fit in the existing pump cans, but the hydraulics could suffer and result in excessive pump wear and replacement. Examples of poor hydraulics includes excessive intake velocities that could result in flow recirculation at the impeller or exceeding NPSH requirements of the pump manufacturer and cause cavitation.

Several HI recommended metrics were evaluated on the basis of the existing piping and can layout. A summary of the findings is as follows:

- Horizontal spacing between intakes: 5 ft (max.) recommended vs. 5'-6" as built (per 2006 Record Dwgs)
- Intake velocity: 4 ft/s (max.) vs. 5.7 ft/s as built
- Intake link: 8'4" (min.) vs. 8'4" as built
- Vertical distance between intake and can bottom: 68" (min.) vs. 94" as built
- Pump barrel/can annular velocity: 5 ft/s (max.) vs. 3.9 ft/s design
- Barrel vanes: >3,000 gpm, need to field verify

Based on this preliminary review, the existing can and piping appears re-usable for the proposed flow conditions. However several items will require additional coordination. For example, pump suppliers should review and confirm their pump guarantee if there are indeed no flow straightening vanes in the can and intake velocity, although slightly high is acceptable. The Carollo team has experience with both these areas. Pump suppliers may provide a vortex breaker or suction strainer to account for a lack of flow straightening vanes in the can. Additionally suppliers can accommodate intake velocities that are above HI recommendation of 4 ft/s maximum.

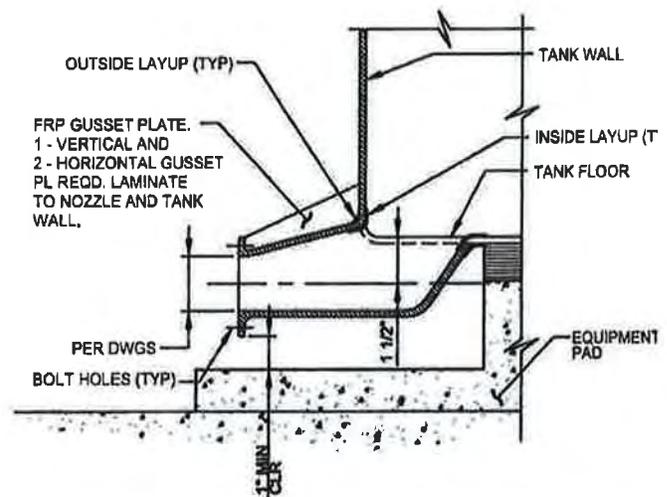
Preliminary pump selection indicates a 205 hp motor for each pump, 2-stage bowl assembly, and NPSH required approaching 30 ft. For this reason, Carollo recommends a review of the intake hydraulic profile to determine the water surface elevation in the can. The water surface should be approximately 21 inches above the intake pipe. As one of the first steps in design, the Carollo team will vet

the proposed design, flows, and layouts with several pump suppliers. This provides IRWD with a final design that is biddable and provides reliable operation.

The PDR will completely define the pumping, electrical and associated system (surge control, etc.) modifications necessary for the project.

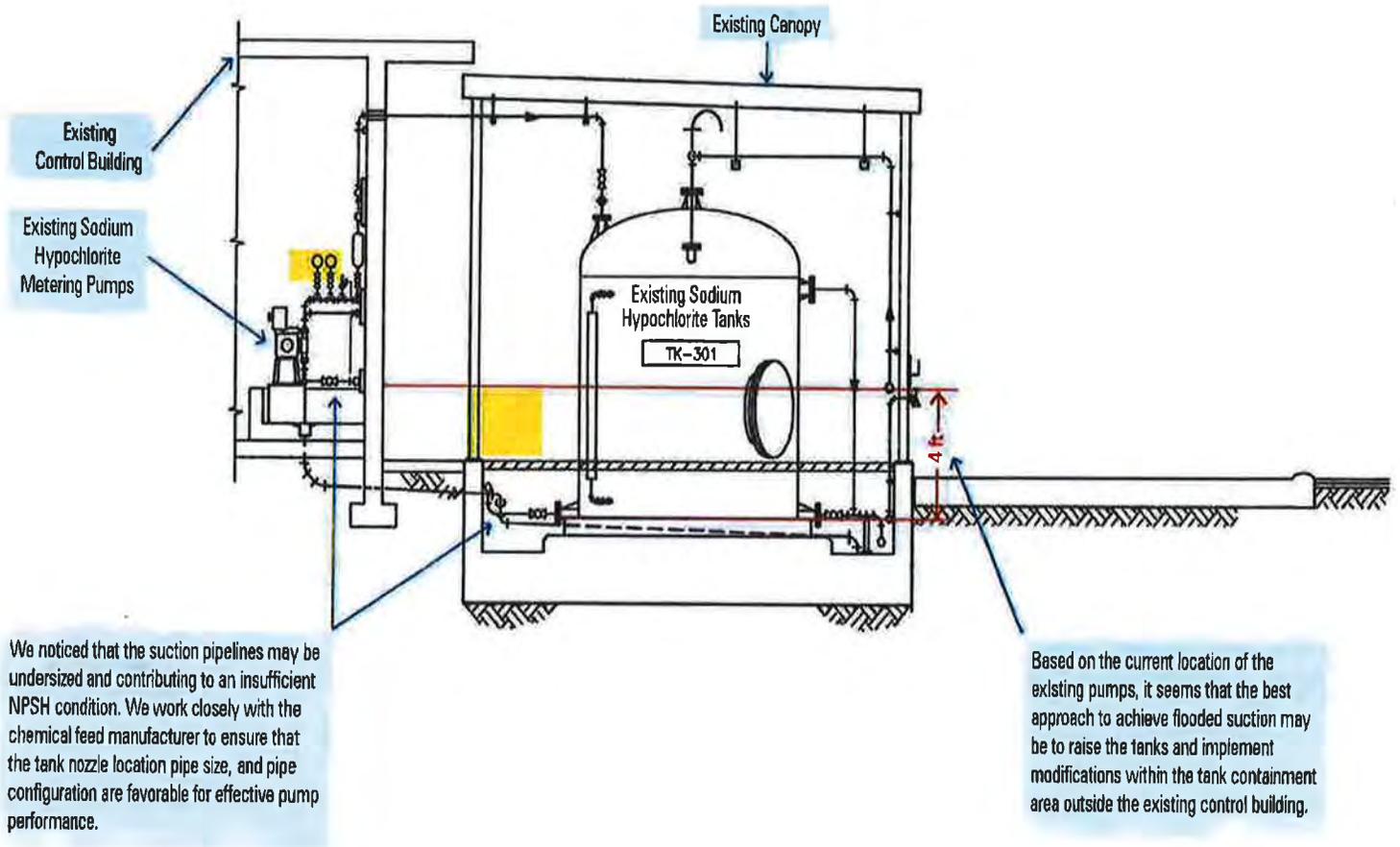
2.4 Chlorination System

In the field, we noticed your existing sodium hypochlorite storage tanks are showing signs of corrosion and structural issues at pipe connections. During this project, we will evaluate the condition of the tanks and their viability long term. New tanks may help provide a sodium hypochlorite system that is fully capable of lasting 20 years before replacement is needed.



A full bottom nozzle can be provided to wash out sediment and fully drain each tank.

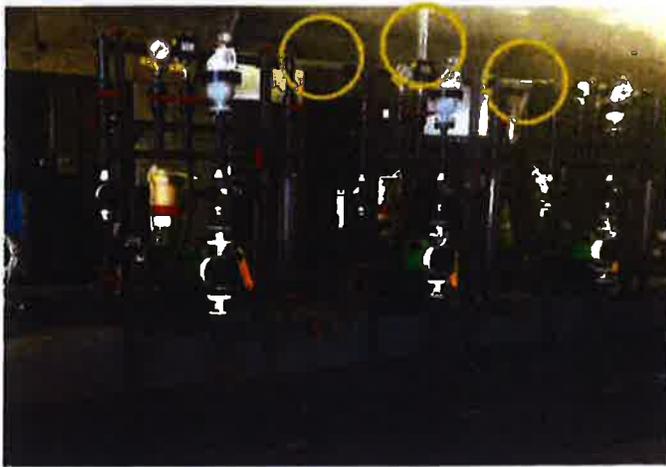
The District currently uses Pulsafeeder Pulsar Hypo Pumps for chemical metering applications at facilities throughout the District. The Pulsafeeder pumps at San Joaquin Reservoir are only 5-years-old. We do not anticipate that they will need replacement. We will just need to confirm their capacity to chlorinate the reservoir outflow to a chlorine residual of 5 parts per million.



The existing pumps are installed too high and are not able to utilize the entire volume of the chemical tanks below the elevation of the pumps. The pumps are installed at grade on a small pedestal inside the existing control building. The sodium hypochlorite storage containment area is located outside and partially below-grade. The pump area drains by gravity through a pipe into the storage tank area. Our initial evaluations have identified the following options to achieve flooded suction.

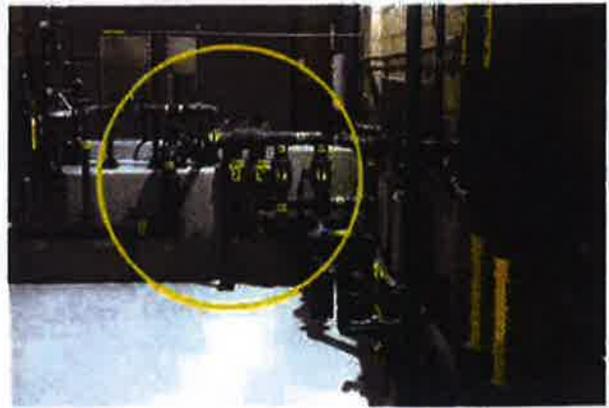
1. Raise the existing 3,000-gallon, 8-foot diameter storage tanks. This would require modifications to raise the existing canopy, and the seismic anchoring of the existing tanks would need to be re-evaluated for code compliance. The evaluation of the seismic anchoring could potentially result in having to increase the sides of the tank pedestal.
2. Another option is to install new tanks with a larger diameter at the correct height, particularly if the width of the tank pedestals needs to be modified regardless to meet seismic compliance. Shorter tanks with the larger diameter could prevent the need to modify the canopy. The containment volume would have to be analyzed to account for displacement by the larger pedestals. To accommodate additional required volume, the containment wall could be raised or deep sumps could be installed, an innovative approach that is currently under design for PDF.

We also noticed that the sodium hypochlorite piping may likely need to be replaced. Replacing will allow improvements and modifications to match the systems we designed at Rattlesnake Reservoir, IDF, and PDF

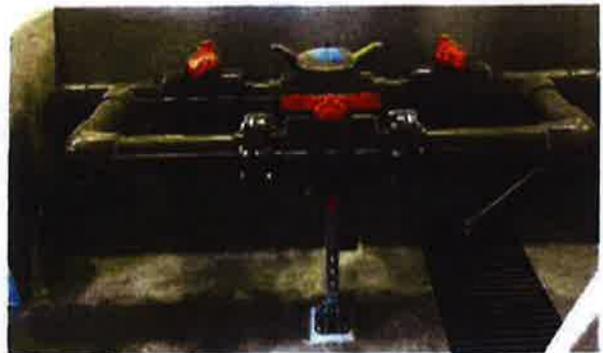


At IDF and PDF, we installed clear piping on the vent lines and at key locations on the pump discharge. This allows operators to verify the flow and location of chemicals.

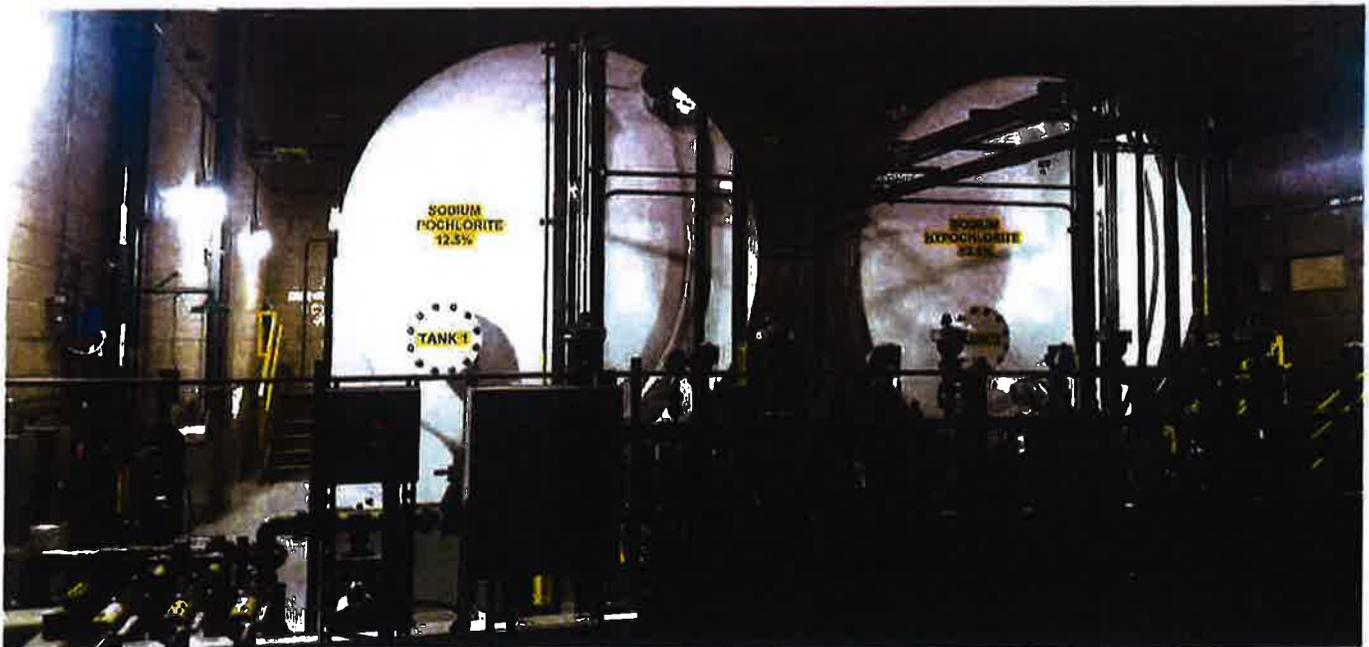
Double containment piping should be used for all chemical feed lines in overhead working areas and outside of the containment zone.



Carollo designed a dual-purpose chemical transfer system at Rattlesnake Reservoir and PDF to allow operations staff to transfer chemical between storage tanks and to fill the IRWD tanker truck.



IRWD's typical design includes strainers on the pump suction and tank fill lines to control sediment buildup in sodium hypochlorite systems.



Gas collection in high points of the piping can effectively stop liquid flow. Degassing valves should be installed at every high point of the system and on the discharge of the metering pumps. The valves are vented back to the storage tank.

2.5 Electrical/Instrumentation Design

In the PDR existing power availability will be determined, loads (both existing and proposed) will be totaled, and new facilities, if needed, will be listed.

The instrumentation design for new facilities will be consistent with existing systems. The existing PLC will be evaluated for capacity and needed PLC upgrades will be identified.

Addition of a filtration system will require a significant number of valves and instrumentation to be added to the existing SJR facilities. Under this task, Carollo will review the new instrumentation and control strategies with IRWD staff and identify preferred vendors for instrumentation based on IRWD's Project Manual. An EI&C site inspection will be undertaken to assess the existing PLC's and determine the suitability for reusing equipment.

IRWD will benefit from algae strainer control strategies and P&IDs that Carollo has already developed for past projects. These will be presented to IRWD at the beginning of the preliminary design phase for discussion and adaption. This will give the project schedule a jump start and allow us to move quickly into detailed design.

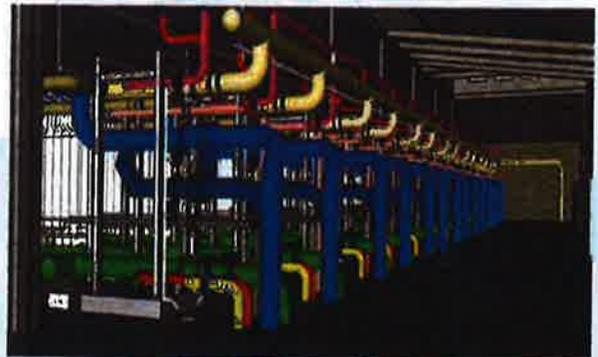
2.6 Conceptual Layouts

In this task, we will provide conceptual site layouts for all existing and new facilities as defined in the RFP. These shall include not only existing and proposed new control building and screening facilities, but will also detail yard/offsite piping and valves associated electrical/I&C facilities and conduits, property lines and easement, and temporary/staging areas needed for construction.

We understand how important it is for the engineer to provide the District and architectural firm with accurate conceptual layouts for public presentations to receive buy in. Our models produce products that are not just cartoons but represent the final product. Herein, we present comparisons of exterior renderings developed from one of our models in Austin versus the constructed building along with our interior model screenshot at IRWD's Baker WTP versus the constructed membrane filters. I think you will agree that they are strikingly similar.



Austin WTP Admin. Building



Baker WTP MF Filters

These examples demonstrate the "real life" appearance of our 3D Sketch Up project models.

2.7 Project Schedule

The PDR will present a construction project schedule which will reflect construction activities and identify critical path issues such as long lead equipment delivery times and coordination issues. Allowance will also be included for District reviews as directed by IRWD.

2.8 Opinion of Probable Construction Costs

Outcomes from each of the tasks listed above will be used to produce the engineer's opinion of probable construction costs to review with you prior to proceeding with design.

2.9 Right of Way/Permits/Regulatory Interface/CEQA Documentation

In this task, required easements will be identified, required permits will be identified and secured and Carollo will provide IRWD with data regarding construction activities that will impact the environment for IRWD to complete the final CEQA document.

This project will be subject to permits from the following authorities:

- City of Newport Beach Building Department
- Orange County Fire Authority
- California Department of Water Resources - Division of Safety of Dams
- California Environmental Quality Act (CEQA)
- Southern California Edison (SCE)
- City of Santa Anna

Carollo understands the expectation of each of these permitting stakeholders and we are familiar with navigating the permitting processes. Each government body will be engaged early for input and again at strategic stages of the design. Carollo will obtain approval of the final site plan prior to beginning on final design.

2.10 Preliminary Design Report

The work described in Tasks 2.1 through 2.9 will be described in a PDR. The PDR shall be finalized prior to proceeding with the 60% design deliverables.

Task 2 Deliverables:

- Eight printed copies and one electric copy of Draft PDR for review
- Eight printed copies and one electric copy of the Final PDR
- Permit Applications

TASK 3 Final Design

3.1 Project Manual

Carollo will prepare the Project Manual in the standard IRWD format. This manual will contain IRWD's general technical specifications, modifications thereof, and project specific technical specifications.

The Project Manual will describe the allowable shutdown durations and sequencing associated with any connections and tie-ins to existing IRWD facilities.

Our past use of IRWD's project manual will allow us to seamlessly combine, modify, and supplement the project technical specifications for this project.

3.2 Construction Plans and Design Development

Carollo shall prepare detailed construction drawing for each set of Contract Documents in the latest version of AutoCAD and using NCS V4.0 layering standards, on 24" X 36" sheets utilizing IRWD's standard border template. Separate sheets with sheet index/location map/legend, general notes, index map, construction notes, phase, and detail connections shall be included. Construction notes shall be use (callouts on the plans are not allowed) on all construction drawings. Existing IRWD utilities shall be identified on the plan view by as-built plan set number with the pipeline material and IRWD pressure zone labeled. The index map shall include sheet legend, final alignment, valve locations, surrounding streets, and significant project site locations. Construction plans shall be prepared using the NAVD 88 and NAD 83 survey standards

A description of each level of design and the associated deliverables are as follows:

60% Design Development

This task will include the advancement of the information developed in the PDR and this proposal to the 60% design completion, including items identified and agreed upon during the review and validation of the PDR. The 60% design shall comply with IRWD standards and requirements as described in the IRWD Project Manual and the IRWD Construction Manual.

This task will include the following design elements to 60% completion:

- Civil/site, mechanical and electrical plans, basic mechanical equipment will be chosen

- Structural and architectural layouts will be developed
- Pipeline alignments, preliminary profiles, and all existing utilities will be identified

Deliverables – 60% Design:

- Six (6) 11"x 17" and two (2) 24" X 36" bound copies of the 60% submittal and one CD containing a single PDF file of the entire plan set
- Complete Table of Contents for the Project Manual
- Completed Comment/Response Log to the 60% design
- The civil/site, mechanical, and electrical plan will be shown. The mechanical equipment, structural and architectural layouts, pipeline alignments, preliminary profiles, and exiting utilities will be shown

90% Design Development

This task will include the advancement of the information developed in the 60% design to 90% design level. Carollo will incorporate all IRWD comments from the 60% design submittal. All design elements for civil, structural, mechanical, architectural, electrical, and instrumentation, including all plans, profiles, connections, details, and locations of appurtenances will be included. A 90% Design Review Meeting between IRWD staff and Carollo staff will be conducted to review the closure of comments. Upon completion of the meeting, Carollo will incorporate the required corrections and provide written responses to the comments.

Deliverables – 90% Design:

- Six (6) 11"x 17" and two (2) 24" X 36" bound copies of the 90% submittal and one CD containing a single PDF file of the entire plan set
- Five (5) color coded copies of the 90% completed Project Manual, including sections for contract documents, general provisions, special provisions, general requirements, technical specification, and appendix
- Completed Comment/Response Log to the 90% design

100% Design Development

This task will include the advancement of the information developed in the 90% design to 100% design level. A 100% Design Review Meeting between IRWD staff and Carollo staff will be conducted to review the 90% comments and confirm final design development. Subsequent to this

meeting, Carollo will make the required corrections and provide written responses to the comments.

Deliverables - 100% Design:

- Six (6) 11"x 17" and two (2) 24" X 36" bound copies of the 100% submittal, one CD containing AutoCAD files for the entire plan set, and one DC containing a single PDF file of the entire plan set
- Three (3) color coded copies of the Project Manual, and one (1) CD of the MS Word file used in the preparation of the Project Manual
- Final design calculations for all disciplines, including mechanical, civil, structural, HVAC, electrical, pipe thickness, and restraint
- Completed Comment/Response Log to the 100% design
- Meeting agenda and minutes for the 100% Design Review Meeting

Concepts of each component of the design such as civil, structural, mechanical, architectural, and electrical and instrumentation will be shown. Plan, profile, connections, details, and location of appurtenances will be shown. Plan and profile drawings and mechanical details/drawings shall be developed to a high level of detail.

Final Design

Carollo will submit the Final Design completed plans and specifications to the local jurisdiction for building Plan Check review and complete the Plan Check process for issuance of a building permit. Carollo will contact the local agency for specific Plan Check review requirements and processes. Upon review by the local Plan Check Department, Carollo will incorporate all necessary changes and address all comments from plan check process.

Deliverables – Final Design:

- One (1) full size final stamped and signed reproducible plan set on mylar and one original signed Project Manual for District's signatures

3.3 Electrical/Instrumentation Design

As part of the 60%, 90%, and 100% design tasks described above, the Carollo team will prepare an operational scheme for the planned improvements, including process and instrumentation drawings (P&IDs), single-line diagrams, control loop descriptions, and method of integrating the new facilities into IRWD's existing supervisory control and data acquisition (SCADA) system.

During the 60% design phase, Carollo will meet with District staff to determine IRWD's standard operations, programming and tagging requirements to be incorporated into the design.

Carollo will obtain SCE approval for the proposed modifications.

3.3.1 SCE Final Service Plan

Carollo will coordinate with SCE early in the design phase to obtain the Final Service Plan. This Plan will be included as part of the Project Manual described above.

Carollo will meet with SCE representatives as needed to communicate project requirements and obtain the necessary buy off from agency authorities. We will address and implement all SCE comments into the project design.

3.4 Construction Phasing

During design, Carollo will work with District staff to develop a comprehensive plan and recommended sequencing of work for a phased construction to provide non-interrupted operation at the San Joaquin Reservoir Control facilities.

Construction sequencing should be planned with the following items taken into consideration:

- Obtain potentially long lead items early in the project
- All purchased equipment related to the new system shall be on-site and ready for installation prior to demolition of existing system

3.5 Permits

A Storm water Pollution Prevention Plan (SWPPP) may be required for this project. Carollo shall perform a Risk Level assessment in accordance with the Construction General Permit and provide Risk Level for inclusion in the Contract Documents. The SWPPP document will be prepared by the contractor, if required.

3.6 Project Schedule

We understand your schedule concerns, and we are committed to meeting the proposed schedule and milestones as presented above and shown on our expandable schedule.

Carollo shall maintain and consistently update the project schedule, which shall include detailed schedules for both design and construction activities. The schedule shall include all critical factors impacting the project schedule including implementation, permitting, and coordination activities to ensure that the project is completed in accordance with the proposed schedule. The schedule shall be prepared in Microsoft Project.

Milestone	Date
Notice of Award (Design)	February 27, 2019
Kick-Off Meeting	March 4, 2019
Final PDR Submittal	June 2019
60% Design Submittal	August 2019
90% Design Submittal	September 2019
100% Design Submittal	October 2019
Plans Approved	November 2019
Bid Opening/Notice of Award (Construction)	December 2019

3.7 Opinion of Probable Construction Cost (OPCC)

Carollo shall prepare a detailed and itemized opinion of probable construction cost (OPCC) for the proposed facilities, which shall be updated and submitted with each of the final design deliverables, at 60%, 90% and 100% design.

TASK 3 Deliverables:

- Permit Applications
- Project Schedule at 60%, 90%, and 100% design
- OPCC at 60%, 90%, and 100% design

TASK 4 Addenda Preparation and Pre-Bid Meeting

4.1 Pre-Bid Meeting and Site Visit

Carollo shall attend one (1) pre-bid meeting, including a site visit with potential bidding contractors. Carollo shall provide appropriate team members to respond to bidders' questions during the conference and site visit.

4.2 Review of Bidder Questions

Carollo will provide technical support to IRWD during the bidding phase of construction, including review and response to all project inquiries from the bidder, as requested. Response shall be within 48 hours of the District's request or as agreed upon. Carollo has budgeted forty (40) hours of appropriate staff time to address and respond to bidder questions.

4.3 Plan and Specification Revisions

Carollo will prepare up to three (3) addenda for incorporation of revisions to the design plans and specifications.

Carollo budgeted forty (40) hours of staff time to revise plans in the construction drawings and twenty-five (25) hours of staff time for modifications to the specifications.

Our commitment to meeting the project schedule is demonstrated by our proactive use of 3D Sketch-up throughout the project. Its use conveys design concepts to facilitate decision making during the preliminary and final design phases. In addition, the Sketch-up graphics will seamlessly translate to the Public Relations firm tasked with negotiating neighborhood support for the project.

- TASK 4 DELIVERABLES**
- Addenda, up to three (3) (1 electronic copy of each in PDF format)

Optional Reservoir Management Study

Task 0.1 - Develop Reservoir Management Alternatives

In this task, alternatives for controlling the growth of the algae in the reservoir will be developed and evaluated. These include more conventional mixing and aeration technologies, as well as newer technologies such as ultrasound.

Task 0.2 - Develop Algae Removal/Disposal Alternatives

In this task, alternatives for treating the filter backwash waste through disposal will be developed and evaluated. These will include air flotation, and centrifugation along with others. Final disposal alternative will include drying naturally and thermally.

Task 0.3 - Review Sewer Capacity

Herein the existing downstream sewer capacity will be screened to determine if disposal to the wastewater treatment plant would be viable.

Task 0.4 - Opinion of Probable Construction Costs

In this task, estimated construction costs will be developed for the alternatives considered most viable for the project.

Task 0.5 - Technical Memorandum

The results and recommendations developed in the study will be presented in a technical memorandum format for District review.



PRELIMINARY DRAWING LIST BASED ON EXPERIENCE WITH SIMILAR PROJECTS

General Sheets

- G-01 COVER SHEET, LOCATION AND VICINITY MAP
- G-02 INDEX OF DRAWINGS
- G-03 DESIGN CRITERIA AND HYDRAULIC PROFILE
- G-04 PROCESS FLOW DIAGRAM - MECHANICAL
- G-05 GENERAL LEGEND, SYMBOLS, AND ABBREVIATIONS

Civil Sheets

- GC-01 GENERAL CIVIL NOTES, LEGEND AND SYMBOLS
- GC-02 CIVIL COORDINATES
- C-01 CONTRACTOR STAGING AND ACCESS PLAN
- C-02 OVERALL SITE PLAN
- C-03 GRADING AND PAVING PLAN
- C-04 PIPING KEY PLAN
- C-05 PLAN AND PROFILE 1
- C-06 PLAN AND PROFILE 2
- C-07 WASTE WASHWATER PLAN AND PROFILE
- C-08 YARD DETAILS 1
- C-09 YARD DETAILS 2
- C-10 YARD DETAILS 3

Demolition Sheets

- D-01 PUMP ROOM DEMO PLAN
- D-02 CHEMICAL ROOM DEMO PLAN
- D-03 ELECTRICAL DEMO PLAN

Structural Sheets

- GS-01 GENERAL STRUCTURAL NOTES, LEGEND AND SYMBOLS
- S-01 BACKWASH/EQ TANK FOUNDATION PLAN
- S-02 BACKWASH/EQ TANK LOWER PLAN
- S-03 BACKWASH/EQ TANK UPPER PLAN
- S-04 GRADE PLAN
- S-05 CANOPY ROOF PLAN
- S-06 SECTIONS 1
- S-07 SECTIONS 2
- S-08 SECTIONS 3
- S-09 STRUCTURAL DETAILS 1
- S-10 STRUCTURAL DETAILS 2

DRAWINGS LIST

Mechanical Sheets

- GM-01 GENERAL MECHANICAL NOTES, LEGEND AND SYMBOLS
- GM-02 MECHANICAL SCHEDULES
- **M-02 BACKWASH/EQ TANK PLAN**
- M-03 FILTRATION FACILITY PLAN
- M-04 PUMP MODIFICATION PLAN
- M-05 HYPOCHLORITE MODIFICATIONS PLAN
- M-06 BACKWASH/EQ TANK SECTION 1
- M-07 BACKWASH/EQ TANK SECTION 2
- M-08 FILTRATION FACILITY SECTION 1
- M-09 FILTRATION FACILITY SECTION 2
- M-10 PUMP MODIFICATION SECTION
- M-11 HYPOCHLORITE MODIFICATIONS SECTION

Electrical Sheets

- GE-01 ELECTRICAL SYMBOLS AND NOTES
- GE-02 ELECTRICAL ABBREVIATIONS
- E-01 ELECTRICAL SITE PLAN 1
- E-02 ONE LINE DIAGRAM
- E-03 MCC ELEVATION
- E-04 ELECTRICAL SCHEDULES
- E-05 FILTRATION FACILITY POWER AND CONTROL PLAN
- E-06 PUMP ROOM POWER AND CONTROL PLAN
- E-07 HYPOCHLORITE AREA POWER AND CONTROL PLAN
- E-08 LIGHTING AND GROUNDING PLAN

Instrumentation Sheets

- GN-01 SYMBOLS AND ABBREVIATIONS - I
- GN-02 SYMBOLS AND ABBREVIATIONS - II
- GN-03 SYMBOLS AND ABBREVIATIONS - III
- GN-04 SYMBOLS AND ABBREVIATIONS - IV
- GN-05 SCHEMATIC SYMBOLS
- GN-06 SAMPLE LOOP DRAWING
- GN-07 EQUIPMENT TAGGING SYSTEM - WATER TREATMENT
- GN-08 EQUIPMENT TAGGING SYSTEM - CHEMICAL WATER TREATMENT
- **GN-09 EQUIPMENT TAGGING SYSTEM - SUPPORT STREAMS**
- N-01 CONTROL SYSTEM BLOCK DIAGRAM
- N-02 CONTROL SCHEMATIC
- N-03 FILTRATION FACILITY P&ID - I
- N-04 FILTRATION FACILITY P&ID - II
- N-05 FILTRATION FACILITY P&ID - III
- N-06 FILTRATION FACILITY P&ID - IV

DRAWINGS LIST

Instrumentation Sheets

- N-07 PUMP STATION P&ID - I
- N-08 PUMP STATION P&ID - II
- N-09 HYPOCHLORITE SYSTEM P&ID - I

Typical Details

- TC-01 CIVIL TYPICAL DETAILS 1
- TC-02 CIVIL TYPICAL DETAILS 2
- TS-01 STRUCTURAL TYPICAL DETAILS 1
- TS-02 STRUCTURAL TYPICAL DETAILS 2
- TS-03 STRUCTURAL TYPICAL DETAILS 3
- TS-04 STRUCTURAL TYPICAL DETAILS 4
- TM-01 MECHANICAL TYPICAL DETAILS 1
- TM-02 MECHANICAL TYPICAL DETAILS 2
- TP-01 PIPING TYPICAL DETAILS 1
- TP-02 PIPING TYPICAL DETAILS 2
- TE-01 ELECTRICAL TYPICAL DETAILS 1
- TE- 02 ELECTRICAL TYPICAL DETAILS 2
- TE-03 ELECTRICAL TYPICAL DETAILS 3
- TN-01 INSTRUMENTATION TYPICAL DETAILS 1
- TN-02 INSTRUMENTATION TYPICAL DETAILS 2

ESTIMATED FEE

TASK	WORK ELEMENT	Project Submittal Requirements	Permit & Regulatory	Construction	Operations	Maintenance	Training	Commissioning	Closeout	Post-Construction	Other	Subtotal	Hourly Rate	Fixed Fee	Contingency	Subtotal	Hourly Rate	Fixed Fee	Contingency	Subtotal	
1	Project Management																				
1.1	Preparation of Project Status Reports	4	16										20	\$ 4,212	\$ -	\$ 4,212					
1.2	Meetings and Workshops	8	18										58	\$ 12,506	\$ 1,900	\$ 14,006					
1.3	Quality Assurance/Quality Control	8	8										128	\$ 27,840	\$ -	\$ 27,840					
	Task Subtotal	20	42		0	0	0	0	0	0	0	0	206	\$ 44,078	\$ 1,900	\$ 45,578					
2	Preliminary Design																				
2.1	Background Information Collection and Analysis																				
2.1.1	Site Survey	4											12	\$ 2,220	\$ -	\$ 2,220					
2.1.2	Utility Review	4	4										8	\$ 1,500	\$ 500	\$ 2,000					
2.1.3	Geotechnical Review	4											12	\$ 2,884	\$ -	\$ 2,884					
2.2	Filtration System Analysis	8	40										48	\$ 8,440	\$ -	\$ 8,440					
2.2.1	Barometer System	8	8										16	\$ 3,000	\$ -	\$ 3,000					
2.2.2	Filter Waste Water System	8	8										16	\$ 3,000	\$ -	\$ 3,000					
2.3	Pump Station Analysis	8											18	\$ 3,000	\$ -	\$ 3,000					
2.4	Chlorination System Analysis	8											24	\$ 5,388	\$ -	\$ 5,388					
2.5	Electrical/Instrumentation Design	8	8	18									24	\$ 4,360	\$ -	\$ 4,360					
2.6	Conceptual Layout	8	8				16						22	\$ 6,728	\$ -	\$ 6,728					
2.7	Project Schedule	2	8										48	\$ 9,064	\$ -	\$ 9,064					
2.8	Opinion of Probable Construction Costs	2	8										18	\$ 2,106	\$ -	\$ 2,106					
2.9	Reg's of Way/Permits/Regulatory Interface/CEQA Documentation	2	8	20	18								22	\$ 5,014	\$ -	\$ 5,014					
2.1	Preliminary Design Report	4	24	20	18								48	\$ 8,580	\$ -	\$ 8,580					
	Task Subtotal	8	116	104	34	0	20	30	48	20	8	40	24	\$ 63,602	\$ 1,000	\$ 64,602					
3	Final Design																				
3.1	Project Manual	2	8	8	4								80	\$ 14,964	\$ -	\$ 14,964					
3.2	Construction Plans												0	\$ -	\$ -	\$ -					
3.2.1	80% Design	16	60	80	24								306	\$ 98,594	\$ 750	\$ 99,344					
3.2.2	90% Design	8	60	80	8								230	\$ 80,016	\$ 750	\$ 80,766					
3.2.3	100% Design	8	60	80	4								112	\$ 58,210	\$ 750	\$ 58,960					
3.2.4	Final Design	2	26	26	2								74	\$ 35,192	\$ 750	\$ 35,942					
3.3	Electrical/Instrumentation Design	2	20	80			160						168	\$ 79,720	\$ -	\$ 79,720					
3.3.1	BICE Final Service Plan	1.5					24						40	\$ 8,872	\$ -	\$ 8,872					
3.4	Construction Phasing	1.6	1.6										12	\$ 6,000	\$ -	\$ 6,000					
3.5	Permits	8				40							48	\$ 38,880	\$ -	\$ 38,880					
3.6	Project Schedule	2	16										58	\$ 2,746	\$ -	\$ 2,746					
3.7	Opinion of Probable Construction Costs	2	8										50	\$ 11,426	\$ -	\$ 11,426					
	Task Subtotal	40	528	380	42	40	172	100	48	4	2	926	128	\$ 2,710	\$ 411,700	\$ 3,000	\$ 414,700				
4	Appendix Preparation & Pre-Bid Meeting																				
4.1	Pre-Bid Meeting & Site Visit	2	2										4	\$ 876	\$ 800	\$ 1,376					
4.2	Review of Bidder Questions		20	20									40	\$ 7,800	\$ -	\$ 7,800					
4.3	Plan & Specification Revisions		48										48	\$ 9,840	\$ -	\$ 9,840					
	Task Subtotal	2	70	20	0	0	0	0	0	0	0	0	92	\$ 18,226	\$ 500	\$ 18,726					
	HOURS TOTAL PROJECT	70	556	522	76	40	200	118	128	32	90	956	152	2,940							
	TOTAL PROJECT COST	\$ 16,318	\$ 113,980	\$ 87,840	\$ 12,820	\$ 8,820	\$ 46,600	\$ 27,684	\$ 29,824	\$ 7,456	\$ 18,450	\$ 168,050	\$ 18,152		\$ 597,596	\$ 6,000	\$ 561,596				
	OPTIONAL RESERVOIR MANAGEMENT STUDY																				
0.1	Develop Reservoir Management Alternatives						40														
0.2	Develop Algae Removal/Control Alternatives						40														
0.3	Review Sewer Capacity		40																		
0.4	Opinion of Probable Construction Costs	2	4																		
0.5	Technical Memorandum	2	24																		
	HOURS TOTAL PROJECT	4	68	0	0	120	0	0	128	0	0	0	0	0	8	332					
	TOTAL PROJECT COST	\$ 932	\$ 19,840	\$ -	\$ -	\$ 27,860	\$ -	\$ -	\$ 27,860	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 70,782	\$ 400	\$ 71,182				

March 11, 2019
Prepared by: R. Bennett / K. Welch
Submitted by: F. Sanchez / P. Weghorst
Approved by: Paul A. Cook 

ACTION CALENDAR

SUSTAINABLE GROUNDWATER MANAGEMENT ACT COMPLIANCE FOR IRWD'S KERN COUNTY WATER BANKING FACILITIES

SUMMARY:

On September 16, 2014, Governor Brown signed the Sustainable Groundwater Management Act (SGMA). The intent of the legislation was to require local and regional agencies to develop and implement plans to sustainably manage the groundwater resources of basins throughout the State. IRWD's Strand Ranch and Stockdale West water banking projects are located within the Kern County Sub-basin of the San Joaquin Valley Groundwater Basin.

The Kern Groundwater Authority was formed as a local Groundwater Sustainability Agency (GSA), which includes Rosedale-Rio Bravo Water Storage District. Rosedale has offered to provide SGMA coverage for IRWD's water banking lands, which are located outside of Rosedale's boundaries, by including these areas within its chapter of the Groundwater Sustainability Plan (GSP) being prepared by the Kern Groundwater Authority. Rosedale would provide SGMA coverage through the execution of two agreements. To ensure SGMA compliance for IRWD's Strand Ranch and Stockdale West properties, staff recommends that the Board authorize the General Manager to execute the following agreements subject to non-substantive changes approved by legal counsel:

- Memorandum of Agreement – Sustainable Groundwater Management Act Agreement with Rosedale-Rio Bravo Water Storage District, and
- Groundwater Sustainability Planning Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District.

BACKGROUND:

Governor Brown signed three bills that comprised SGMA (SB1168, AB1739 and SB1319) on September 16, 2014. The intent of the law is to require local and regional agencies to develop and implement sustainable groundwater management plans through the formation of GSAs. This groundwater management law accomplishes the following:

- Establishes a framework for local agencies to develop plans and strategies to sustainably manage groundwater resources;
- Requires that all high and medium priority basins have a GSA made up of one or more local agencies to develop and implement a GSP for each basin;
- Sets a 20-year timeline for implementation; and
- Presumes areas not covered by a GSA will be managed by the county in which the area lies. If the county chooses not to manage those areas, the areas would coordinate and report directly to the State Water Resources Control Board.

IRWD's Strand Ranch and Stockdale West water banking properties are located within the Kern County Sub-basin of the San Joaquin Valley Groundwater Basin, which has been identified by Department of Water Resources (DWR) as a high priority basin. IRWD's properties are located outside of any specific local agency's boundary and are therefore considered un-districted or "white areas" within the Kern County Sub-basin. The County of Kern was designated to represent and manage the white areas that overlie the Kern County Sub-basin. In December 2018, the Kern County Board of Supervisors elected to withdraw as the representative for the white areas after failing to secure blanket immunity from lawsuits that could arise from efforts to reduce local groundwater pumping in attempts to manage the basin.

Kern Groundwater Authority:

In March 2017, the Kern Groundwater Authority was formed as a joint powers authority, in which Rosedale is a member agency, which will serve as one of the local GSAs for the Kern County Sub-basin. The Kern Groundwater Authority will provide a framework for the active, comprehensive management of a portion of the Sub-basin, to preserve and maintain local control of the groundwater resources and to provide long-term surety for all water users. The Kern Groundwater Authority's vision is to include all lands contained within its members' boundaries, except those that choose to participate in another GSA. Attached as Exhibit "A" is a list of the members of the Kern Groundwater Authority. Exhibit "B" shows the location of the current GSAs within the Sub-basin.

To comply with SGMA, each member of the Kern Groundwater Authority will prepare its own chapter of the GSP, which describes how groundwater supplies will be managed. All of the individual chapters will be incorporated into the Authority's GSP. The Kern Groundwater Authority encourages its member agencies to offer GSP coverage for lands located in close proximity to their jurisdictional boundaries that are within the white areas. Execution of the agreements described below will ensure that the Strand and Stockdale West water banking projects and properties are included within Rosedale's chapter of the GSP.

Necessary Agreements for GSP Coverage for IRWD:

Rosedale's Board of Directors approved a Landowner Agreement which serves as a means for respective white area landowners to receive coverage through Rosedale's chapter of the GSP. IRWD's special legal counsel at Kronick Moskovitz Tiedemann & Girard (KMTG), reviewed the Landowner Agreement and determined that, since IRWD is different than a typical white area agricultural landowner, a separate agreement was needed to reflect specific terms related to IRWD's and Rosedale's long-term water banking relationship. Per KMTG, additional information on the Landowner Agreement and the proposed separate agreement between IRWD and Rosedale is provided below.

Landowner Agreement:

Rosedale has executed the Landowner Agreement with 11 landowners whose lands are located outside of Rosedale's boundaries and who also desire to secure SGMA coverage within the

Rosedale chapter of the GSP. This Landowner Agreement was recorded with the County of Kern on September 13, 2018. Rosedale can incorporate additional lands to be represented by the Landowner Agreement by executing a Memorandum of Agreement that incorporates the recorded Landowner Agreement. Rosedale has prepared a Memorandum of Agreement for IRWD's signature, which effectively adds the Strand Ranch and Stockdale West properties into the Landowner Agreement. Execution of the Memorandum of Agreement will safeguard GSP coverage for IRWD. The Memorandum of Agreement and the incorporated Landowner Agreement are included as Exhibit "C". At the meeting, staff will review the key points of the Landowner Agreement. Once the Memorandum of Agreement is executed, it will be recorded in the official records of the County of Kern.

IRWD's special legal counsel believes that the Landowner Agreement is comprehensive and considers it reasonable for Rosedale to retain its ability to recover all costs incurred from the inclusion of lands located outside of its boundary into Rosedale's chapter of the GSP. Legal counsel has expressed concerns related to the possibility that additional land-based assessments or water charges could be imposed by entities other than the Kern Groundwater Authority. Although such assessments should not apply to IRWD's Strand and Stockdale West water banking facilities, these assessments could potentially occur outside of the Authority's control resulting in Rosedale not having control over levying these types of assessments on IRWD. This is a risk to all landowners within the jurisdiction of the Kern Groundwater Authority.

Separate Agreement Between Rosedale and IRWD:

Staff worked with IRWD's special legal counsel and Rosedale to create a separate agreement between IRWD and Rosedale (IRWD-RRB Agreement), which ensures IRWD's lands are included in Rosedale's chapter of the GSP, while limiting selected parts of the Landowner Agreement that are not appropriate for IRWD's water banking properties. The separate IRWD-RRB Agreement is intended to reduce the District's potential exposure under the Landowner Agreement. The IRWD-RRB Agreement would protect IRWD's Strand Ranch and Stockdale West banking projects from any Rosedale GSP chapter restrictions or any fees, charges or assessments intended by the Kern Groundwater Authority to correct groundwater overdraft problems ("undesirable results") to which IRWD's projects do not contribute. The IRWD-RRB Agreement is attached as Exhibit "D". At the Committee meeting, staff will review key points of the IRWD-RRB agreement.

Staff Involvement in the SGMA Process:

Staff remains engaged in the SGMA process in Kern County and is actively participating with Rosedale. In November 2018, staff began participating in a Landowner Advisory Committee, which is comprised of five white area landowners. This committee was formed to provide Rosedale input and guidance on landowner issues relating to the development and implementation of Rosedale's chapter of the GSP.

In January 2019, IRWD began participating in a Rosedale Stakeholder Advisory Committee as a landowner within the Kern County Sub-basin. Rosedale created this committee to solicit key

stakeholders' involvement in the development of specific criteria for inclusion into its chapter of the GSP. This committee meets monthly and advises the Rosedale Board of Directors on issues pertaining to the development of Rosedale's chapter of the GSP.

FISCAL IMPACTS:

IRWD will initially pay \$9,340 (\$10 per acre) to include the Strand Ranch and Stockdale West lands within the Rosedale chapter of the GSP. A formula to calculate and allocate any additional costs will be determined by Rosedale in consultation with Landowners' signatory to the Landowner Agreement and any associated Memorandum of Agreement.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed with the Supply Reliability Programs Committee on February 21, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE THE MEMORANDUM OF AGREEMENT - SUSTAINABLE GROUNDWATER MANAGEMENT ACT AGREEMENT WITH ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT AND TO EXECUTE THE GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT BETWEEN ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT AND IRVINE RANCH WATER DISTRICT, SUBJECT TO NON-SUBSTANTIVE CHANGES APPROVED BY LEGAL COUNSEL.

LIST OF EXHIBITS:

- Exhibit "A" – Kern Groundwater Authority Member Agencies
- Exhibit "B" – Location of Groundwater Sustainability Agencies in the Kern County Sub-basin
- Exhibit "C" – Memorandum of Agreement - Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District
- Exhibit "D" – Groundwater Sustainability Planning Agreement Between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District

Exhibit "A"

Kern Groundwater Authority Groundwater Sustainability Agency Members ⁽¹⁾

#	Member
1	Arvin Community Services District
2	Arvin-Edison WSD
3	City of Shafter
4	Kern County Water Agency
5	Kern County
6	Kern-Tulare WD
7	North Kern Water Storage District
8	Rosedale-Rio Bravo WSD
9	Shafter-Wasco ID
10	Southern San Joaquin Municipal Utility District
11	Tejon-Castaic WD
12	Westside District Water Authority
13	Wheeler Ridge-Maricopa WSD

(1) In addition to the 13 Kern Groundwater Authority Groundwater Sustainability Agency (GSA) members shown above, the Cawelo WD, Olcese WD, Semitropic WSD and West Kern WD are parties to the Kern Groundwater Authority's Joint Powers Agreement (March 22, 2017). These four agencies have formed their own GSA and are not part of the Kern Groundwater Authority's GSA (GEI and KGA, June, 2017).

EXHIBIT "C"

RECORDING REQUESTED BY AND
WHEN RECORDED, MAIL TO:

ROSEDALE-RIO BRAVO WATER
STORAGE DISTRICT
P.O. Box 20820
Bakersfield, CA 93390-0820

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**RECORDING FOR THE BENEFIT OF A GOVERNMENT AGENCY
NO FEE PURSUANT TO CA. GOV'T CODE SECTION 6103**

**Kern County APN's: 160-010-02; 160-010-07; 160-010-21; 160-010-22; 160-010-60;
160-020-12; 160-020-23**

MEMORANDUM OF AGREEMENT

Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District

This Memorandum of Agreement - Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District ("Agreement") is made and entered into this _____, 2019, by and among the Rosedale-Rio Bravo Water Storage District, ("District") and the landowner identified by its name and signature below ("Landowner"). District and Landowner are sometimes each individually referred to herein as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, Landowner is an owner of certain real property in Kern County, California ("Landowner Land"), which property is generally identified by its Kern Assessor's Parcel Number(s) listed above and along with the Landowner's signature on this document, and which property is located outside of the District's boundaries.

WHEREAS, Landowner desires the District's assistance with respect to compliance with the Sustainable Groundwater Management Act ("SGMA");

WHEREAS, District has entered into a *Sustainable Groundwater Management Act Management Agreement* (dated May 31, 2018 and recorded on September 13, 2018 in the official records of Kern County as Document No. 000218120706) with several other landowners whose land is also located outside of the District's boundaries and who also desire the District's assistance with respect to SGMA compliance;

WHEREAS, District and Landowner desire to execute this Memorandum of Agreement, which is to be recorded in the official records of Kern County, in order that third parties may have notice of the respective rights and obligations of the District and Landowner with respect to SGMA compliance and the Landowner Land.

NOW, THEREFORE, in consideration of the foregoing Recitals and all of the terms and conditions of the above-referenced *Sustainable Groundwater Management Act Management Agreement*, it is agreed by and between the Parties as follows:

I. PURPOSE OF AGREEMENT

As set forth more fully in the *Sustainable Groundwater Management Act Management Agreement*, the Parties enter into this Memorandum of Agreement solely for the purpose of providing the Landowner a process to attempt to comply with SGMA through the inclusion of the Landowner Lands within the District's GSP Chapter. Neither the District nor any landowners within the District's current boundaries are committing anything to the Landowner Land except for the inclusion of the Landowner Land within the District's GSP Chapter, provided that all Landowners comply with the terms of the *Sustainable Groundwater Management Act Management Agreement*. Said agreement is intended to form the basis of the Parties' understanding regarding the terms and conditions of including the Landowner Land within the District's GSP Chapter, and their individual rights and responsibilities subsequent to such inclusion. Concurrently with entering into this Memorandum of Agreement, the Parties also have entered into a related *Groundwater Sustainability Planning Agreement* dated _____ ("*Planning Agreement*") that confirms the Parties' intent for the GSP Chapter to be consistent with certain water banking project agreements and SGMA.

II. INCORPORATION OF AGREEMENT BY REFERENCE

All of the terms, conditions, provisions and covenants in the *Sustainable Groundwater Management Act Management Agreement* identified above are incorporated into this Memorandum of Agreement by reference as though written out at length herein. In the event of any inconsistency between the provisions of this Memorandum of Agreement and those of the *Sustainable Groundwater Management Act Management Agreement*, the provisions of the *Sustainable Groundwater Management Act Management Agreement* shall control. Copies of the *Sustainable Groundwater Management Act Management Agreement* are held by both Landowner and the District at their respective addresses. The Parties hereby acknowledge, agree to, and accept all of the terms, conditions, provisions and covenants in the *Sustainable Groundwater Management Act Management Agreement* identified above.

[SIGNATURES AND PROPERTY IDENTIFICATION ON THE FOLLOWING PAGE]

IRVINE RANCH WATER DISTRICT

APNs: 160-010-02; 160-010-07;
160-010-21; 160-010-22; 160-010-60;
160-020-12; 160-020-23

Signature

By: Paul A. Cook, General Manager
Name and Title

Date

ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT:

Signature

By: Eric Averett, General Manager
Name and Title

Date

RECORDING REQUESTED BY:

Jon Lifquist, Assessor – Recorder
Kern County Official Records

BOLDENL
9/13/2018
11:12 AM

Recorded at the request of
Public

DOC#: **218120706**

Stat Types: 1 Pages: **34**



Fees	0.00
Taxes	0.00
Others	0.00
PAID	<u>0.00</u>

WHEN RECORDED MAIL TO
AND UNLESS OTHERWISE STATED BELOW,
MAIL TAX STATEMENTS TO:

Rosedale-Rio Bravo Water Storage District
P.O. Box 20820
Bakersfield, CA 93390-0820

Space above this line for Recorder's use only

This page has been added to provide adequate space for recording information
(Additional recording fees apply)

Recording for the benefit of a Government Agency

DOCUMENT TITLE(S): Sustainable Groundwater Management Act
Management Agreement with Rosedale-Rio
Bravo Water Storage District

No fee pursuant to the Government Code 6103

(IF APPLICABLE—DEEDS, ETC.) DOCUMENTARY TRANSFER TAX: \$ _____

- COMPUTED ON FULL VALUE OF PROPERTY CONVEYED, OR
- COMPUTED ON FULL VALUE LESS LIENS AND ENCUMBRANCES
REMAINING THEREON AT TIME OF SALE.

SIGNATURE OF DECLARANT OR AGENT DETERMINING TAX, FIRM NAME

MAIL TAX STATEMENTS TO: _____

RECORDERS MEMO: POOR RECORDED
REPRODUCTION DUE TO QUALITY OF
PRINT OR TYPE ON ORIGINAL DOCUMENT.

**Sustainable Groundwater Management Act Management Agreement
with
Rosedale-Rio Bravo Water Storage District**

This Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District (“Agreement”) is made and entered into this 31st day of May, 2018, by and among the Rosedale-Rio Bravo Water Storage District, (“District”) and the landowners identified in Exhibit A (collectively, “Landowners”). District and Landowners are sometimes each individually referred to herein as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, Landowners are individuals, or authorized agents of entities, owning real property in Kern County, California ("Landowner Land"), which is generally identified by its respective Kern Assessor's Parcel Number on Exhibit A hereto, and which is located outside of the District's boundaries, which are generally shown on Exhibit B, attached hereto and incorporated by reference.

WHEREAS, District is a Water Storage District comprised of approximately 44,500 acres situated in Kern County.

WHEREAS, the Sustainable Groundwater Management Act (“SGMA”) provides that all basins designated as critically overdrafted high-priority basins shall be managed under a Groundwater Sustainability Plan (“GSP”) or a coordinated GSP by January 31, 2020.

WHEREAS, the Landowner Land is overlying the Kern County Sub-basin (Basin Number 5-022.14, DWR Bulletin 118) within the San Joaquin Valley Groundwater Basin (“Basin”), a DWR designated high-priority and critically overdrafted basin and, therefore, the Basin, and all portions thereof, must be managed by a local agency under a GSP by January 31, 2020.

WHEREAS, SGMA allows local agencies to become a groundwater sustainability agency (“GSA”) to engage in the sustainable management of groundwater pursuant to the provisions of SGMA. Private landowners, either individually or collectively, are not local agencies under SGMA, and therefore cannot be members of a GSA.

WHEREAS, District is a member of the Kern Groundwater Authority Groundwater Sustainability Agency (“Kern GSA”), under which the District will work collaboratively with with other interested local agencies to develop and implement a Groundwater Sustainability Plan (“GSP”) to manage a portion of the Basin for which the Kern GSA has elected to be the GSA pursuant to SGMA.

WHEREAS, with respect to SGMA jurisdictional considerations, the Landowner Land is within the jurisdictional boundaries of the County of Kern, which is also a member of the Kern GSA.

WHEREAS, the Kern GSA is planning to organize its GSP in chapters that prescribe the management actions to be taken to comport with the requirements of SGMA. Each chapter will be developed by one or more local agencies that are members of the Kern GSA. Kern GSA has encouraged its members developing chapters of the GSP to provide GSP coverage for lands located in close proximity to their jurisdictional boundaries, but which are, for SGMA jurisdictional considerations, located in the areas covered by the County of Kern.

WHEREAS, Landowners desire to be included in the chapter to be developed by the District (the "District's GSP Chapter") to afford GSP coverage to the Landowner Land. In this respect, Landowners are willing to provide local information and assistance to the development of the GSP that is ultimately adopted by the Kern GSA that will regulate the Landowner Land under SGMA. Thus, the Landowners enter into this Agreement for the purpose of Landowners attempting to attain GSP coverage for their land through the District's GSP Chapter.

WHEREAS, the Landowners contemplate an arrangement whereby Landowners independently form a group from among owners of the Landowner Land to serve as an advisory panel to the District with respect to matters covered by this Agreement. The Landowners will provide information for their respective real property and funding for the process for the District to include the Landowner Land within the the District's GSP Chapter. The approval of any GSP covering the Landowner Land will ultimately lie with the Kern GSA and the State of California, which will consider the completeness and effectiveness the GSP to be developed under SGMA. Due to the mandated deadlines of SGMA and its associated regulations, the District will initiate proceedings to amend the area to be covered by District's GSP Chapter to include Landowner Land, but must also concurrently begin preparation of the the District's GSP Chapter, and thus, the Landowners consent to and authorize the District to hire the necessary consultants on behalf of the Landowners, and any such associated fees or costs of such consultants (i.e. engineers, attorneys, accountants, etc.) shall be borne solely by the Landowners and paid promptly upon being invoiced by either the District or by such consultants directly. The GSP, after being approved and agreed to by the Kern GSA and ultimately the State of California, shall be managed by the Kern GSA, with input and coordination with the District as a member of the Kern GSA.

WHEREAS, the Landowners desire that the Landowner Land be included within the District's GSP Chapter, so as to provide a process for the Landowners to be subject to a GSP and allow the Landowners to be represented by consultants and other necessary individuals to assist in the completion of the Kern GSA's GSP. The Landowners shall be independently responsible to provide information and funding at the request of the District to maintain and support the efforts to include the Landowner Land within the District's

GSP Chapter so as to comport with SGMA and any future statutory laws and regulations that may be adopted to amend SGMA, supplement SGMA, replace SGMA or other laws or regulations adopted to engage in the sustainable management of groundwater in relation to the Landowner Land.

WHEREAS, the Parties do not intend that the inclusion of the Landowner Land within the District's GSP Chapter, or that this Agreement in any way provides Landowners with a right to any portion of the water supplies of the District to which the owners of the land located within the District have a right.

NOW, THEREFORE, in consideration of the foregoing Recitals and the following terms and conditions, it is agreed by and between the Parties as follows:

I. PURPOSE OF AGREEMENT

The Parties enter into this Agreement solely for the purpose of providing the Landowners a process to attempt to comply with SGMA through the inclusion of the Landowner Lands within the District's GSP Chapter. Neither the District nor any landowners within the District's current boundaries are committing anything to the Landowner Land except for the inclusion of the Landowner Land within the District's GSP Chapter, provided that all Landowners comply with the terms of this Agreement. This Agreement is intended to form the basis of the Parties' understanding regarding the terms and conditions of including the Landowner Land within the District's GSP Chapter, and their individual rights and responsibilities subsequent to such inclusion.

II. TERMS AND CONDITIONS OF INCLUDING LANDOWNER LAND WITHIN THE DISTRICT'S GSP CHAPTER

1. Commitment to Include Landowner Land in District's GSP Chapter. The District hereby agrees to make reasonable efforts to include the Landowner Land within the District's GSP Chapter, and the Landowners hereby agree for the Landowner Land to be included within the District's GSP Chapter, provided that such inclusion is approved by all necessary governmental bodies and the Parties have complied with all provisions of this Agreement.

2. Regulation Contingent on Funding. The District and Landowners acknowledge that funding for the District's efforts hereunder shall be provided on a long-term basis, if possible, through the development and subsequent payment by the Landowners of a land-based assessment or water charge as authorized by SGMA or other legally authorized fee or funding mechanism. Prior to the establishment of said land-based assessment or water charge for the Landowner Land, the Landowners acknowledge and agree that the District's inclusion of the Landowner Land within the District's GSP Chapter, and District's efforts to include the Landowner Lands with the District's GSP Chapter pursuant to this Agreement, are contingent upon Landowners' regular and timely payment of (1) the general administrative expenses of the District that are attributable to the District's efforts hereunder, (2) the Landowners' pro-rata share of costs for consultants retained by the District for the purposes of developing or implementing the District's GSP

Chapter, and (3) any administrative or other costs the District incurs in implementing SGMA and coordinating with KGA for SGMA purposes concerning the Landowner Land.

Upon final execution of this Agreement, District shall bill and Landowners shall pay the District \$10.00 per acre of Landowner Land as an initial payment to fund the District's (and necessary consultants') efforts made pursuant to this Agreement, any proposition 218 or other land-based fee/funding proceedings, and any other activities related to the GSP processes.

3. Determination of Funding Obligation; Landowner Advisory Committee.

The amount of any additional payments required for services rendered by the District or others for the purposes of fulfilling the obligations set forth herein, or the formula for the calculation of such payments, and the method of such payments, shall be determined by the District, in consultation with Landowners, as soon as reasonably practicable. District shall create a Landowner Advisory Committee, comprised of not less than three (3) and not more than five (5) Landowners to provide the District input and guidance on Landowner issues relating to the development and implementation of the District's GSP Chapter.

4. Failure to Satisfy Funding Obligation & GSP Requirements.

Landowners acknowledge and agree that if, for any reason, any Landowner refuses or otherwise fails to remit any payment required hereunder, in the amount and using the method determined and requested by the District, or fails to comply with the requirements of the GSP and its management and regulation, ("Defaulted Landowner") the District:

(a) shall be relieved of any and all obligation to proceed with including the Defaulted Landowner's Land within the District's GSP Chapter;

(b) shall be relieved of any and all obligation to provide the services and obligations enumerated in this Agreement to a Defaulted Landowner; and

(c) may, in its sole and absolute discretion, seek to remove the Defaulted Landowner's Land from the District's GSP Chapter, at Defaulted Landowner's expense, and in such event the Defaulted Landowner agrees to obtain regulation under SGMA by some other method separate and apart from the District pursuant to the terms for a withdrawing Landowner set forth in Paragraph 8 of this Agreement.

5. No Protest in Case of Removal of Defaulted Landowner Land; Duty to Cooperate.

Landowners hereby agree that, if any Landowner breaches the terms of this Agreement, including but not limited to the refusal or failure to remit any payment required herein, following reasonable notice of alleged breach and opportunity to cure, the District, may in its sole and absolute discretion, seek to remove the Defaulted Landowner's Land from the District's GSP Chapter, and if the District does so, the Landowners shall not lodge any protest, participate in any protest hearing, or act in any way to influence the outcome of the District's decision. Landowners further agree to work in good faith with the District to provide the District any non-privileged materials or information in Landowners' possession or control that may, in the District's sole determination, be necessary or

appropriate to effectuate the District's decision to remove the Defaulted Landowner Land from the District's GSP Chapter, including, but not limited to, providing timely responses to requests for non-privileged information and meeting with District representatives to establish terms of removal.

6. Disclaim Water Rights. Landowners expressly disclaim any right to any District water supplies other than through any negotiated purchase, transfer, or exchange any Landowner has obtained or may obtain wholly outside of this Agreement and not related to this Agreement. Landowners understand and agree that as a result of the foregoing disclaimer, among other things, inclusion of the Landowner Lands within the District's GSP Chapter will not entitle them to receive any portion of the District's water supply. Landowners further understand and agree the sole purpose of this Agreement is to provide the Landowners a process for them obtain coverage by the Kern GSA's GSP, and thus, SGMA compliance for the Landowners' by affording Landowners the benefit of inclusion within the District's GSP Chapter. Any GSP must ultimately be approved and agreed to by the District and thereafter by the Kern GSA's GSP and such GSP shall be solely managed and regulated by the Kern GSA in coordination with the District, supported in part by information and funds provided by Landowners. Landowners further understand and agree that any other benefits accruing to the Landowner Land and/or to Landowners as a result of this Agreement are purely incidental and shall not give rise to any expectation, entitlement, or right to District water supplies of any kind, including, but not limited to, Kern River water, Stater Water Project water, Central Valley Project water, carryover supplies, supplies from any lake, river, stream, manmade conveyance, or aquifer that the District purchases, acquires, transfers, exchanges, takes receipt of or otherwise controls, including groundwater supplies or any return flows that may enter the underground aquifer as a result of delivery within District of any of the foregoing water supplies, or any other designation or classification of District water whatsoever, whether in existence at the time of this Agreement is executed or created at some future time. Other than the reservations noted above, nothing in this Agreement is intended to limit current or future groundwater rights of the Landowners beyond that imposed by operation of law.

7. No Voluntary Consent. Once the Landowner Land is included within the District's GSP Chapter and the GSP is adopted by the Kern GSA and approved by DWR, Landowners hereby agree not to consent to the inclusion of the Landowner Lands within another chapter of the Kern GSA's GSP developed by any entity other than the District without the District's express prior written consent.

8. Withdrawal of Landowner. Until the GSP is adopted by the Kern GSA and approved by DWR, any Landowner may elect to withdraw from this Agreement and be excluded from the District's GSP Chapter, and instead be included within another chapter of the Kern GSA's GSP developed by another member of the Kern GSA or otherwise seek alternative lawful SGMA compliance, by providing written notice to the District and all other Landowners. Any Landowner which elects to withdraw shall be responsible for all costs and obligations associated with the withdrawal, including but not limited to any amendments or revisions of the District's GSP Chapter or the Kern GSA's GSP required to maintain compliance with SGMA in the event of their withdrawal. The District may

impose additional requirements upon any withdrawing Landowner, to ensure compliance with SGMA, the GSP Chapter or the Kern GSA's GSP, and any financial obligations resulting from the withdrawal of such Landowner. Upon any withdrawal, the withdrawing Landowner shall arrange for the withdrawn lands to be covered by another chapter of the Kern GSA's GSP developed by another member of the Kern GSA or otherwise seek alternative lawful SGMA compliance, so that such lands of the withdrawing Landowner would continue to be compliant with SGMA. Any withdrawal from the District's GSP Chapter shall not be effective unless and until the withdrawing landowner has made such arrangements and the alternative means of SGMA compliance is effective for the such lands of the withdrawing Landowner.

9. Notice of Agreement. Landowners agree to provide a copy of this Agreement to each and every person who receives any interest in any portion of the Landowner Lands.

10. Runs with the Land. The benefits and burdens of this Agreement are intended to attach to and run with the land generally identified in Exhibit A to this Agreement, are related to the direct benefit, use, maintenance and improvement of the Landowner Land, and shall be binding on and inure to the benefit of the Parties and their respective legal representatives, successors, heirs and assigns. It is the intent of the Landowners from the date of this Agreement, that the equitable servitudes, covenants, conditions, restrictions, assessments and other duties and obligations herein or in the District's GSP Chapter (so long as such lands have not been withdrawn pursuant to Section 8 hereof) run with the land and shall be binding on any successors or assigns. All persons or entities claiming under the Parties, or who accept deeds, leases, easements or other grants of conveyances to any portion of the Landowner Land agree that they shall be personally bound by all of the provisions of this Agreement, and shall conform to and observe the provisions of this Agreement and the District's GSP Chapter and the Kern GSA's GSP. The Parties agree that a covenant evidencing this Agreement and its nature as attaching to and running with the land shall be executed by each Landowner and recorded with the Clerk/Recorder of the County of Kern as a condition to the the inclusion of the Landowner Lands within the District's GSP Chapter and the Kern GSA's GSP.

11. Entire Agreement; Amendments or Modifications. The Parties agree that this Agreement contains the entire Agreement and understanding concerning the subject matter among the Parties and supersedes and replaces all prior negotiations of proposed agreements, written or oral, if any. This Agreement shall not be amended or modified except in writing, executed and agreed to by all of the Parties to this Agreement.

12. Effective Illegality. If any paragraph, sentence, clause, or phrase becomes illegal, null, or void for any reason or is held by any court of competent jurisdiction to be illegal, null, void, or against public policy, the remaining paragraphs, sentences, clauses, or phrases are not affected, and the Parties must negotiate an equitable adjustment of the affected provision with a view toward effecting the purpose of this Agreement.

13. Construction. Headings are used for convenience only and have no force or effect in the construction or interpretation of this Agreement. As used in this Agreement, the singular includes the plural and the masculine includes the feminine and neuter. This Agreement is a joint product of all Parties and is to be interpreted as such. This Agreement: (1) shall not be construed against the Party preparing it; (2) shall be construed as if the Parties had jointly prepared this Agreement; and (3) shall be deemed their joint work product. Each and every provision of this Agreement shall be construed as through the Parties participated equally in the drafting hereof, and, therefore, any uncertainty or ambiguity shall not be interpreted against any one Party. As a result of the foregoing, any rule of construction that a document is to be construed against the drafter shall not be applicable.

14. No Third-Party Rights. Nothing in this Agreement, whether expressed or implied, either is intended, or is to be construed, or otherwise interpreted as, conferring any rights or remedies on any third parties. Also, nothing in this Agreement gives any third parties any rights of subrogation against any Party.

15. Governing Law and Venue. This Agreement is entered into and performed in the State of California and is to be interpreted pursuant to the internal substantive law, and not the law of conflicts, of the State of California. Venue in any action brought under this Agreement shall be in the Superior Court of the County of Kern, State of California.

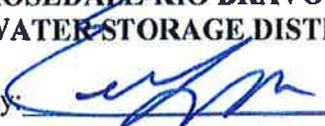
16. Indemnification. Landowners (“Indemnifying Party”) shall protect, defend, indemnify and hold harmless the District and its directors, officials, officers, managers, employees, contractors and agents (“Indemnified Party”) from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, attorneys’ fees and expenses) imposed upon, incurred by, or asserted against an Indemnified Party arising out of, resulting from, or in connection with any action taken or omitted to be taken by the Indemnifying Party under this Agreement, including but not limited to the following: (i) the actions or omissions by Landowners or Landowners’ affiliates, members, managers, employees, contractors and agents related to this Agreement and the GSP; (ii) Landowners or Landowners’ affiliates, members, managers, employees, contractors and agents’ violation of any applicable laws or regulations; or (iii) the failure on the part of Landowners or Landowners’ affiliates to perform or comply with any of the terms of this Agreement, provided, however, that such indemnity shall not extend to any such suit, claim, or damage to the extent caused solely by the negligent or wrongful acts or omissions of any Indemnified Party. The indemnification provisions in this section shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by the District or its directors, officials, officers, managers, employees, contractors and agents.

17. Effective Date And Term Of Agreement. The effective date of this Agreement shall be the date last signed below. This Agreement shall remain in effect with respect to each particular Landowner unless and until such Landowner fails to perform according to the terms of this Agreement or such Landowner withdrawals from the Agreement pursuant to Section 8 hereof. This Agreement shall have no force or effect upon

a determination that the performance of any provision of this Agreement will result or has resulted in the violation of state or federal law.

“District”

**ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT**

By:  Eric L. Bennett

Title: General Manager

Date: Sept. 13, 2018

[landowner signatures and property APN's on following pages]

Landowner

AFFENTRANGER & SONS DAIRY

Fritz Affentranger
Signature

Fritz Affentranger / Partner owner
Printed Name/Title

463-030-15-00-8
APN(s)

463-030-12-00-9, 463-030-13-00-2

5-31-2018
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HEIN, MARTIN & KATHRYN FAMILY TRUST

Signature

Printed Name/Title

104-012-12-5 & 408-210-14-4
APN(s)

Date

Landowner

HEIN, MARTIN H

Signature

Printed Name/Title

104-011-15-0 & 104-012-24-0
APN(s)

Date

Landowner

AFFENTRANGER & SONS DAIRY

Signature

Printed Name/Title

463-030-15-00-8
APN(s)

463-030-12-00-9, 463-030-13-00-2

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HEIN, MARTIN & KATHRYN FAMILY TRUST

Martin Hein
Signature

MARTIN HEIN / TRUSTEE
Printed Name/Title

104-012-12-5 & 408-210-14-4
APN(s)

Date

5-31-2018

Landowner

HEIN, MARTIN H

John Zimmerer
Signature

John Zimmerer / PARTNER
Printed Name/Title

104-012-24-0
APN(s)

Date

5-31-2018

Landowner

HOPKINS FAMILY L P

Michael D. Hopkins
Signature

MICHAEL D. HOPKINS CEO
Printed Name/Title

104-030-01-01-8
APN(s)

5-22-18
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006 FAMILY TRUST

Signature

Printed Name/Title

159-010-07-00-1
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HOPKINS FAMILY L P

Signature

Printed Name/Title

104-030-01-01-8
APN(s)

Date

Landowner

**LEE, ROBERT & STEPHANIE 2006
FAMILY TRUST**

Signature

Printed Name/Title

159-010-07-00-1
APN(s)

Date

Landowner

LAYSHOT FAMILY TRUST

Alan D Layskot
Signature

Alan D Layskot, Trustee
Printed Name/Title

159-010-06-00-8
APN(s)

5-31-2018
Date

Landowner

LAYSHOT FAMILY TRUST

Irina H. Layskot - Trustee
Signature

Irina H. Layskot / Trustee
Printed Name/Title

159-010-06-00-8
APN(s)

5-31-2018
Date

Landowner

HOPKINS FAMILY L P

Signature

Printed Name/Title

104-030-01-01-8
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006 FAMILY TRUST

Signature

Robert Lee Trustee
Printed Name/Title

159-010-07-00-1
APN(s)

Date

5/15/18

Landowner

Signature

Stephanie Lee Trustee
Printed Name/Title

159-010-07-00-1
APN(s)

Date

5/15/18

Landowner

MC CARTHY, MICHAEL & LINDA FAMILY TRUST OF 2006

Michael McCarthy

Signature

MICHAEL M'cARTHY/TRUSTEE

Printed Name/Title

159-020-04-005
APN(s)

5/31/2018
Date

Landowner

LOUISE F. MC CARTHY FAMILY TRUST DATED DECEMBER 6, 2000

Louise F. McCarthy

Signature

LOUISE F. MC CARTHY /TRUSTEE

Printed Name/Title

159-020-04-005
APN(s)

5/31/2018
Date

Landowner

OCAFRAIN, MARCEL & JOSEPHINE REV TRUST

Josephine Ocafrain

Signature

Josephine OCAFRAIN TRUSTEE

Printed Name/Title

104-040-01-00-2
APN(s)

5-31-2018
Date

Landowner

Marcel Ocafrain

Signature

MARCEL OCAFRAIN TRUSTEE

Printed Name/Title

APN(s)

5-31-2018
Date

Landowner

MARVIN WEIDENBACH FARMS

Ruth A. Weidenbach, Partner

Signature

Ruth A. Weidenbach, Partner
Printed Name/Title

463-020-24-8, 463-020-08-1, 463-020-10-7,
APN(s)

463-030-15-1, & 463-020-17-2,

463-020-12-3, 463-020-13-1

May 30, 2018

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

WONDERFUL NUT ORCHARDS LLC

Signature

Printed Name/Title

160-130-36
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

WEIDENBACH FAMILY FARMS LLC

Signature

Printed Name/Title

463-020-24-8
APN(s)

Date

Landowner

MARVIN WEIDENBACH FARMS

Signature

Printed Name/Title

463-020-08-1, 463-020-10-7,
APN(s)

463-020-12-3, 463-020-13-1,

463-030-15-1, & 463-020-17-2

Date

Landowner

WONDERFUL NUT ORCHARDS LLC


Signature

Cheryl Postkarich / CFO
Printed Name/Title

160-130-36
APN(s)

5/21/18
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

DIAMOND FARMING CO

Jeff Huchaby

Signature

Jeff Huchaby, President

Printed Name/Title

524-020-15, 524-020-16 &
APN(s)

524-020-20

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

BOLTHOUSE LAND CO LLC

Signature

Printed Name/Title

104-012-03, 104-012-06,
APN(s)

104-012-20, & 104-012-19

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

DIAMOND FARMING CO

Signature

Printed Name/Title

524-020-15, 524-020-16 &
APN(s)

524-020-20

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

BOLTHOUSE LAND CO LLC

Anthony L. Leggio
Signature

Anthony L. Leggio, Manager
Printed Name/Title

104-012-03, 104-012-06,
APN(s)

104-012-20, & 104-012-19

05/22/2018
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness accuracy or validity of that document.

State of California)
County of Kern)

On September 13, 2018, before me, Guadalupe Gonzalez,
Notary Public, personally appeared Eric L. Averett,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed
the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s); or the entity upon behalf of which the person(s) acted, executed
the instrument.

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

WITNESS my hand and official seal.



Signature *Guadalupe Gonzalez* (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(insert name and title of the officer)

personally appeared Franz Affentranger
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature  (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(Insert name and title of the officer)

personally appeared John Zimmerer and Martin Hein
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature

Guadalupe Gonzalez

(Seal)



ACKNOWLEDGMENT

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State of California
County of Kern

Notary Public

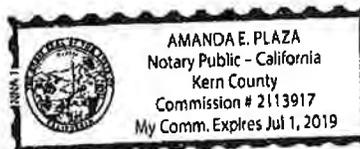
On May 22, 2018 before me, Amanda E. Plaza
(insert name and title of the officer)

personally appeared Michael D. Hopkins
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature [Handwritten Signature] (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(Insert name and title of the officer)

personally appeared Irma H. Layshot and Alan D. Layshot,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature



(Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Los Angeles

On May 15, 2018 before me, - Becky Lin, Notary Public -
(insert name and title of the officer)

personally appeared - Robert Lee and Stephanie Lee -
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.



Signature

Becky Lin

(Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern)

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(insert name and title of the officer)

personally appeared Louise F. McCarthy and Michael McCarthy
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.



Signature *Guadalupe Gonzalez* (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(insert name and title of the officer)

personally appeared Josephine Ocafrain and Marcel Ocafrain
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) ~~is~~ are subscribed to the within instrument and acknowledged to me that ~~he~~ ~~she~~ they executed the same in ~~his~~ ~~her~~ their authorized capacity(ies), and that by ~~his~~ ~~her~~ their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature



(Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 30, 2018 before me, Sandra L. Woodruff, Notary Public
(insert name and title of the officer)

personally appeared Ruth A. Weidenbach
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature Sandra L. Woodruff (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 21, 2018 before me, Katrina Miller, Notary Public
(insert name and title of the officer)

personally appeared Cheryl Puskarich
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.



Signature Katie Miller

(Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On 6/21/18 before me, Mandy Harris, Notary Public
(insert name and title of the officer)

personally appeared Jeff Huchaby
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature Mandy

(Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 23, 2018 before me, Nancy E. Vogel, Notary Public
(insert name and title of the officer)

personally appeared Anthony L. Leggio
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature Nancy E Vogel (Seal)



EXHIBIT A

1	AFFENTRANGER & SONS DAIRY	463-030-12-00-9 463-030-13-00-2 463-030-15-00-8
2	HEIN MARTIN & KATHRYN FAMILY TR	104-012-12-5 408-210-14-4
	HEIN MARTIN H	104-012-24-0
3	HOPKINS FAMILY L P	104-030-01-01-8
4	LAYSHOT FAMILY TRUST	159-010-06-00-8
5	LEE ROBERT & STEPHANIE 2006 FAMILY TRUST	159-010-07-00-1
6	MC CARTHY MICHAEL & LINDA FAMILY TRUST OF 2006	159-020-04-005
	LOUISE F. MC CARTHY FAMILY TRUST DATED DECEMBER 6, 2000	
7	OCAFRAIN MARCEL & JOSEPHINE REV TRUST	104-040-01-00-2
8	MARVIN WEIDENBACH FARMS	463-020-08-1 463-020-10-7 463-020-12-3 463-020-13-1 463-020-15-1 463-020-17-2 463-020-24-8
9	WONDERFUL NUT ORCHARDS LLC	160-130-36
10	DIAMOND FARMING CO	524-020-15
		524-020-16
		524-020-20
11	BOLTHOUSE LAND CO LLC	104-012-03
		104-012-06
		104-012-20
		104-012-19

EXHIBIT B

[District Boundary Map]

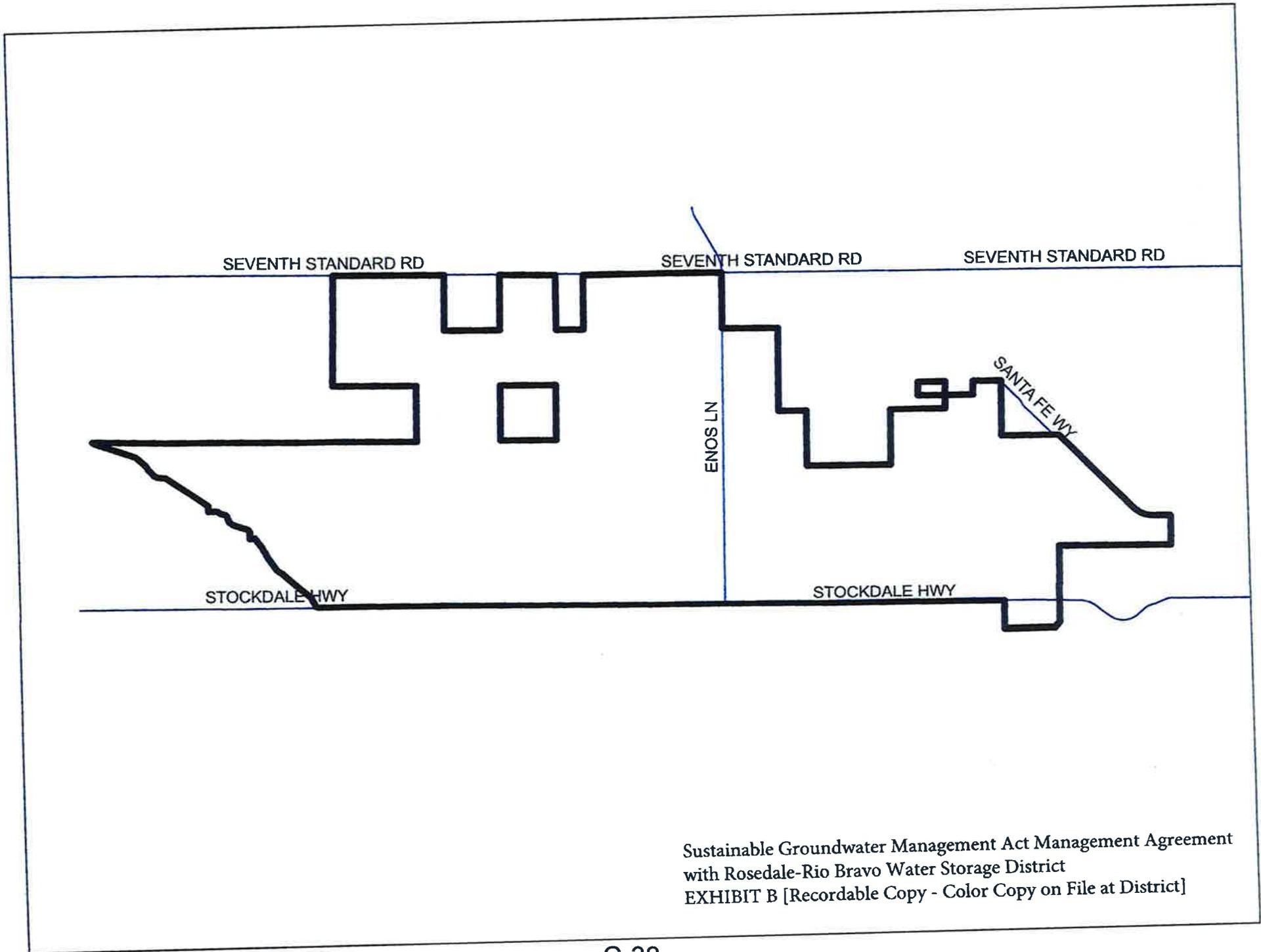


EXHIBIT "D"

GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT BETWEEN ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT AND IRVINE RANCH WATER DISTRICT

THIS GROUNDWATER SUSTAINABILITY PLANNING AGREEMENT ("Agreement") is made and entered into as of the Effective Date by and between the ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT ("Rosedale") and the IRVINE RANCH WATER DISTRICT ("IRWD"). Rosedale and IRWD are sometimes referred to individually as a "Party" and collectively as the "Parties."

RECITALS

A. Rosedale is a public agency organized in accordance with the California Water Storage District Law (Division 14, commencing with § 39000 of the California Water Code) for the purpose of acquiring, storing, distributing, and replenishing water supplies within its boundaries in Kern County, California.

B. IRWD is a public agency organized in accordance with the California Water District Law (Division 13, commencing with section 34000 of the California Water Code) to provide water services and certain other services. IRWD's powers and purposes include the acquisition within or without the district in the State of all necessary property, water and water rights for the production, storage, transmission and distribution of water for irrigation, domestic, industrial and municipal purposes and to provide and sell such water at wholesale and retail to customers within its boundaries in Orange County, California.

C. IRWD has agreed to the terms of that certain agreement titled *Sustainable Groundwater Management Act Management Agreement* with Rosedale-Rio Bravo Water Storage District ("Landowners Agreement") providing for Rosedale to include in its chapter of the Kern Groundwater Authority's ("Authority") Groundwater Sustainability Plan ("GSP") IRWD's Strand Ranch property and the Stockdale West property (collectively "IRWD Property"), which are located outside of and adjacent to Rosedale's territorial boundary, a copy of which Landowners Agreement is attached as Exhibit A to this Agreement.

D. On January 13, 2009, Rosedale and IRWD entered into an "Agreement For A Water Banking and Exchange Program," as amended by Amendment No. 1, entered into on or about February 27, 2015 (collectively, the "Strand Ranch Integrated Banking Project Agreement"). On February 4, 2016, Rosedale and IRWD entered into an "Agreement for A Water Banking, Recovery and Exchange Program," as amended by Amendment No. 1, entered into on or about January 16, 2018 (collectively, the "Stockdale Integrated Banking Project Agreement"). The Strand Ranch Integrated Banking Project Agreement and the Stockdale Integrated Banking Project Agreement are collectively referred to as the "Banking Project Agreements."

E. Rosedale and IRWD desire for Rosedale to develop and implement the chapter of the Authority GSP encompassing Rosedale and including the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project (collectively "IRWD Projects") – all to ensure that Rosedale will continue operating the IRWD Projects in an efficient and coordinated manner that complies with the requirements of SGMA and that preserves and meets the Parties' mutual rights and obligations under the respective Banking Project Agreements.

NOW, THEREFORE, the Parties agree as follows:

AGREEMENT

1. Effective Date and Term.

This Agreement shall be effective upon the date when both Parties have signed this Agreement (the "Effective Date"). This Agreement shall remain in effect so long as the IRWD Property is subject to Rosedale's chapter of the Authority's GSP.

2. Rosedale's Incorporation of the Strand Ranch Integrated Banking Project and the Stockdale Integrated Banking Project. Rosedale shall include the IRWD Property within Rosedale's chapter of the Authority's GSP. A map showing the locations of the Strand Ranch property and the Stockdale West property adjacent to Rosedale's southern boundary is attached and incorporated herein as Exhibit B to this Agreement.

3. Preserving Rights and Obligations under the Banking Project Agreements. Rosedale's chapter of the Authority's GSP shall be consistent with and shall preserve all the Parties' respective rights and obligations under the Banking Project Agreements; provided, however, that such rights and obligations must be exercised in a manner that is consistent with the requirements of SGMA, including the avoidance of undesirable results.

4. Fees and Charges for Mitigation. Rosedale shall not initiate or impose on IRWD's Strand Ranch property or Stockdale West property or on the IRWD Projects on these properties any fee, charge or assessment that pays for mitigation of groundwater production and use effects to which the IRWD Projects do not contribute.

5. Termination. Consistent with section 1, this Agreement shall remain in effect so long as the IRWD Projects and IRWD Property are subject to Rosedale's chapter of the Authority's GSP.

Each Party has executed this Agreement on the date set forth below its signature.

Irvine Ranch Water District

Rosedale-Rio Bravo Water Storage District

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

Exhibit A

**Sustainable Groundwater Management Act Management Agreement
with
Rosedale-Rio Bravo Water Storage District**

This Sustainable Groundwater Management Act Management Agreement with Rosedale-Rio Bravo Water Storage District (“Agreement”) is made and entered into this 31st day of May, 2018, by and among the Rosedale-Rio Bravo Water Storage District, (“District”) and the landowners identified in Exhibit A (collectively, “Landowners”). District and Landowners are sometimes each individually referred to herein as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, Landowners are individuals, or authorized agents of entities, owning real property in Kern County, California ("Landowner Land"), which is generally identified by its respective Kern Assessor's Parcel Number on Exhibit A hereto, and which is located outside of the District's boundaries, which are generally shown on Exhibit B, attached hereto and incorporated by reference.

WHEREAS, District is a Water Storage District comprised of approximately 44,500 acres situated in Kern County.

WHEREAS, the Sustainable Groundwater Management Act (“SGMA”) provides that all basins designated as critically overdrafted high-priority basins shall be managed under a Groundwater Sustainability Plan (“GSP”) or a coordinated GSP by January 31, 2020.

WHEREAS, the Landowner Land is overlying the Kern County Sub-basin (Basin Number 5-022.14, DWR Bulletin 118) within the San Joaquin Valley Groundwater Basin (“Basin”), a DWR designated high-priority and critically overdrafted basin and, therefore, the Basin, and all portions thereof, must be managed by a local agency under a GSP by January 31, 2020.

WHEREAS, SGMA allows local agencies to become a groundwater sustainability agency (“GSA”) to engage in the sustainable management of groundwater pursuant to the provisions of SGMA. Private landowners, either individually or collectively, are not local agencies under SGMA, and therefore cannot be members of a GSA.

WHEREAS, District is a member of the Kern Groundwater Authority Groundwater Sustainability Agency (“Kern GSA”), under which the District will work collaboratively with with other interested local agencies to develop and implement a Groundwater Sustainability Plan (“GSP”) to manage a portion of the Basin for which the Kern GSA has elected to be the GSA pursuant to SGMA.

WHEREAS, with respect to SGMA jurisdictional considerations, the Landowner Land is within the jurisdictional boundaries of the County of Kern, which is also a member of the Kern GSA.

WHEREAS, the Kern GSA is planning to organize its GSP in chapters that prescribe the management actions to be taken to comport with the requirements of SGMA. Each chapter will be developed by one or more local agencies that are members of the Kern GSA. Kern GSA has encouraged its members developing chapters of the GSP to provide GSP coverage for lands located in close proximity to their jurisdictional boundaries, but which are, for SGMA jurisdictional considerations, located in the areas covered by the County of Kern.

WHEREAS, Landowners desire to be included in the chapter to be developed by the District (the "District's GSP Chapter") to afford GSP coverage to the Landowner Land. In this respect, Landowners are willing to provide local information and assistance to the development of the GSP that is ultimately adopted by the Kern GSA that will regulate the Landowner Land under SGMA. Thus, the Landowners enter into this Agreement for the purpose of Landowners attempting to attain GSP coverage for their land through the District's GSP Chapter.

WHEREAS, the Landowners contemplate an arrangement whereby Landowners independently form a group from among owners of the Landowner Land to serve as an advisory panel to the District with respect to matters covered by this Agreement. The Landowners will provide information for their respective real property and funding for the process for the District to include the Landowner Land within the the District's GSP Chapter. The approval of any GSP covering the Landowner Land will ultimately lie with the Kern GSA and the State of California, which will consider the completeness and effectiveness the GSP to be developed under SGMA. Due to the mandated deadlines of SGMA and its associated regulations, the District will initiate proceedings to amend the area to be covered by District's GSP Chapter to include Landowner Land, but must also concurrently begin preparation of the the District's GSP Chapter, and thus, the Landowners consent to and authorize the District to hire the necessary consultants on behalf of the Landowners, and any such associated fees or costs of such consultants (i.e. engineers, attorneys, accountants, etc.) shall be borne solely by the Landowners and paid promptly upon being invoiced by either the District or by such consultants directly. The GSP, after being approved and agreed to by the Kern GSA and ultimately the State of California, shall be managed by the Kern GSA, with input and coordination with the District as a member of the Kern GSA.

WHEREAS, the Landowners desire that the Landowner Land be included within the District's GSP Chapter, so as to provide a process for the Landowners to be subject to a GSP and allow the Landowners to be represented by consultants and other necessary individuals to assist in the completion of the Kern GSA's GSP. The Landowners shall be independently responsible to provide information and funding at the request of the District to maintain and support the efforts to include the Landowner Land within the District's

GSP Chapter so as to comport with SGMA and any future statutory laws and regulations that may be adopted to amend SGMA, supplement SGMA, replace SGMA or other laws or regulations adopted to engage in the sustainable management of groundwater in relation to the Landowner Land.

WHEREAS, the Parties do not intend that the inclusion of the Landowner Land within the District's GSP Chapter, or that this Agreement in any way provides Landowners with a right to any portion of the water supplies of the District to which the owners of the land located within the District have a right.

NOW, THEREFORE, in consideration of the foregoing Recitals and the following terms and conditions, it is agreed by and between the Parties as follows:

I. PURPOSE OF AGREEMENT

The Parties enter into this Agreement solely for the purpose of providing the Landowners a process to attempt to comply with SGMA through the inclusion of the Landowner Lands within the District's GSP Chapter. Neither the District nor any landowners within the District's current boundaries are committing anything to the Landowner Land except for the inclusion of the Landowner Land within the District's GSP Chapter, provided that all Landowners comply with the terms of this Agreement. This Agreement is intended to form the basis of the Parties' understanding regarding the terms and conditions of including the Landowner Land within the District's GSP Chapter, and their individual rights and responsibilities subsequent to such inclusion.

II. TERMS AND CONDITIONS OF INCLUDING LANDOWNER LAND WITHIN THE DISTRICT'S GSP CHAPTER

1. Commitment to Include Landowner Land in District's GSP Chapter. The District hereby agrees to make reasonable efforts to include the Landowner Land within the District's GSP Chapter, and the Landowners hereby agree for the Landowner Land to be included within the District's GSP Chapter, provided that such inclusion is approved by all necessary governmental bodies and the Parties have complied with all provisions of this Agreement.

2. Regulation Contingent on Funding. The District and Landowners acknowledge that funding for the District's efforts hereunder shall be provided on a long-term basis, if possible, through the development and subsequent payment by the Landowners of a land-based assessment or water charge as authorized by SGMA or other legally authorized fee or funding mechanism. Prior to the establishment of said land-based assessment or water charge for the Landowner Land, the Landowners acknowledge and agree that the District's inclusion of the Landowner Land within the District's GSP Chapter, and District's efforts to include the Landowner Lands with the District's GSP Chapter pursuant to this Agreement, are contingent upon Landowners' regular and timely payment of (1) the general administrative expenses of the District that are attributable to the District's efforts hereunder, (2) the Landowners' pro-rata share of costs for consultants retained by the District for the purposes of developing or implementing the District's GSP

Chapter, and (3) any administrative or other costs the District incurs in implementing SGMA and coordinating with KGA for SGMA purposes concerning the Landowner Land.

Upon final execution of this Agreement, District shall bill and Landowners shall pay the District \$10.00 per acre of Landowner Land as an initial payment to fund the District's (and necessary consultants') efforts made pursuant to this Agreement, any proposition 218 or other land-based fee/funding proceedings, and any other activities related to the GSP processes.

3. Determination of Funding Obligation; Landowner Advisory Committee.

The amount of any additional payments required for services rendered by the District or others for the purposes of fulfilling the obligations set forth herein, or the formula for the calculation of such payments, and the method of such payments, shall be determined by the District, in consultation with Landowners, as soon as reasonably practicable. District shall create a Landowner Advisory Committee, comprised of not less than three (3) and not more than five (5) Landowners to provide the District input and guidance on Landowner issues relating to the development and implementation of the District's GSP Chapter.

4. Failure to Satisfy Funding Obligation & GSP Requirements.

Landowners acknowledge and agree that if, for any reason, any Landowner refuses or otherwise fails to remit any payment required hereunder, in the amount and using the method determined and requested by the District, or fails to comply with the requirements of the GSP and its management and regulation, ("Defaulted Landowner") the District:

(a) shall be relieved of any and all obligation to proceed with including the Defaulted Landowner's Land within the District's GSP Chapter;

(b) shall be relieved of any and all obligation to provide the services and obligations enumerated in this Agreement to a Defaulted Landowner; and

(c) may, in its sole and absolute discretion, seek to remove the Defaulted Landowner's Land from the District's GSP Chapter, at Defaulted Landowner's expense, and in such event the Defaulted Landowner agrees to obtain regulation under SGMA by some other method separate and apart from the District pursuant to the terms for a withdrawing Landowner set forth in Paragraph 8 of this Agreement.

5. No Protest in Case of Removal of Defaulted Landowner Land; Duty to Cooperate.

Landowners hereby agree that, if any Landowner breaches the terms of this Agreement, including but not limited to the refusal or failure to remit any payment required herein, following reasonable notice of alleged breach and opportunity to cure, the District, may in its sole and absolute discretion, seek to remove the Defaulted Landowner's Land from the District's GSP Chapter, and if the District does so, the Landowners shall not lodge any protest, participate in any protest hearing, or act in any way to influence the outcome of the District's decision. Landowners further agree to work in good faith with the District to provide the District any non-privileged materials or information in Landowners' possession or control that may, in the District's sole determination, be necessary or

appropriate to effectuate the District's decision to remove the Defaulted Landowner Land from the District's GSP Chapter, including, but not limited to, providing timely responses to requests for non-privileged information and meeting with District representatives to establish terms of removal.

6. Disclaim Water Rights. Landowners expressly disclaim any right to any District water supplies other than through any negotiated purchase, transfer, or exchange any Landowner has obtained or may obtain wholly outside of this Agreement and not related to this Agreement. Landowners understand and agree that as a result of the foregoing disclaimer, among other things, inclusion of the Landowner Lands within the District's GSP Chapter will not entitle them to receive any portion of the District's water supply. Landowners further understand and agree the sole purpose of this Agreement is to provide the Landowners a process for them obtain coverage by the Kern GSA's GSP, and thus, SGMA compliance for the Landowners' by affording Landowners the benefit of inclusion within the District's GSP Chapter. Any GSP must ultimately be approved and agreed to by the District and thereafter by the Kern GSA's GSP and such GSP shall be solely managed and regulated by the Kern GSA in coordination with the District, supported in part by information and funds provided by Landowners. Landowners further understand and agree that any other benefits accruing to the Landowner Land and/or to Landowners as a result of this Agreement are purely incidental and shall not give rise to any expectation, entitlement, or right to District water supplies of any kind, including, but not limited to, Kern River water, Stater Water Project water, Central Valley Project water, carryover supplies, supplies from any lake, river, stream, manmade conveyance, or aquifer that the District purchases, acquires, transfers, exchanges, takes receipt of or otherwise controls, including groundwater supplies or any return flows that may enter the underground aquifer as a result of delivery within District of any of the foregoing water supplies, or any other designation or classification of District water whatsoever, whether in existence at the time of this Agreement is executed or created at some future time. Other than the reservations noted above, nothing in this Agreement is intended to limit current or future groundwater rights of the Landowners beyond that imposed by operation of law.

7. No Voluntary Consent. Once the Landowner Land is included within the District's GSP Chapter and the GSP is adopted by the Kern GSA and approved by DWR, Landowners hereby agree not to consent to the inclusion of the Landowner Lands within another chapter of the Kern GSA's GSP developed by any entity other than the District without the District's express prior written consent.

8. Withdrawal of Landowner. Until the GSP is adopted by the Kern GSA and approved by DWR, any Landowner may elect to withdraw from this Agreement and be excluded from the District's GSP Chapter, and instead be included within another chapter of the Kern GSA's GSP developed by another member of the Kern GSA or otherwise seek alternative lawful SGMA compliance, by providing written notice to the District and all other Landowners. Any Landowner which elects to withdraw shall be responsible for all costs and obligations associated with the withdrawal, including but not limited to any amendments or revisions of the District's GSP Chapter or the Kern GSA's GSP required to maintain compliance with SGMA in the event of their withdrawal. The District may

impose additional requirements upon any withdrawing Landowner, to ensure compliance with SGMA, the GSP Chapter or the Kern GSA's GSP, and any financial obligations resulting from the withdrawal of such Landowner. Upon any withdrawal, the withdrawing Landowner shall arrange for the withdrawn lands to be covered by another chapter of the Kern GSA's GSP developed by another member of the Kern GSA or otherwise seek alternative lawful SGMA compliance, so that such lands of the withdrawing Landowner would continue to be compliant with SGMA. Any withdrawal from the District's GSP Chapter shall not be effective unless and until the withdrawing landowner has made such arrangements and the alternative means of SGMA compliance is effective for the such lands of the withdrawing Landowner.

9. Notice of Agreement. Landowners agree to provide a copy of this Agreement to each and every person who receives any interest in any portion of the Landowner Lands.

10. Runs with the Land. The benefits and burdens of this Agreement are intended to attach to and run with the land generally identified in Exhibit A to this Agreement, are related to the direct benefit, use, maintenance and improvement of the Landowner Land, and shall be binding on and inure to the benefit of the Parties and their respective legal representatives, successors, heirs and assigns. It is the intent of the Landowners from the date of this Agreement, that the equitable servitudes, covenants, conditions, restrictions, assessments and other duties and obligations herein or in the District's GSP Chapter (so long as such lands have not been withdrawn pursuant to Section 8 hereof) run with the land and shall be binding on any successors or assigns. All persons or entities claiming under the Parties, or who accept deeds, leases, easements or other grants of conveyances to any portion of the Landowner Land agree that they shall be personally bound by all of the provisions of this Agreement, and shall conform to and observe the provisions of this Agreement and the District's GSP Chapter and the Kern GSA's GSP. The Parties agree that a covenant evidencing this Agreement and its nature as attaching to and running with the land shall be executed by each Landowner and recorded with the Clerk/Recorder of the County of Kern as a condition to the the inclusion of the Landowner Lands within the District's GSP Chapter and the Kern GSA's GSP.

11. Entire Agreement; Amendments or Modifications. The Parties agree that this Agreement contains the entire Agreement and understanding concerning the subject matter among the Parties and supersedes and replaces all prior negotiations of proposed agreements, written or oral, if any. This Agreement shall not be amended or modified except in writing, executed and agreed to by all of the Parties to this Agreement.

12. Effective Illegality. If any paragraph, sentence, clause, or phrase becomes illegal, null, or void for any reason or is held by any court of competent jurisdiction to be illegal, null, void, or against public policy, the remaining paragraphs, sentences, clauses, or phrases are not affected, and the Parties must negotiate an equitable adjustment of the affected provision with a view toward effecting the purpose of this Agreement.

13. Construction. Headings are used for convenience only and have no force or effect in the construction or interpretation of this Agreement. As used in this Agreement, the singular includes the plural and the masculine includes the feminine and neuter. This Agreement is a joint product of all Parties and is to be interpreted as such. This Agreement: (1) shall not be construed against the Party preparing it; (2) shall be construed as if the Parties had jointly prepared this Agreement; and (3) shall be deemed their joint work product. Each and every provision of this Agreement shall be construed as through the Parties participated equally in the drafting hereof, and, therefore, any uncertainty or ambiguity shall not be interpreted against any one Party. As a result of the foregoing, any rule of construction that a document is to be construed against the drafter shall not be applicable.

14. No Third-Party Rights. Nothing in this Agreement, whether expressed or implied, either is intended, or is to be construed, or otherwise interpreted as, conferring any rights or remedies on any third parties. Also, nothing in this Agreement gives any third parties any rights of subrogation against any Party.

15. Governing Law and Venue. This Agreement is entered into and performed in the State of California and is to be interpreted pursuant to the internal substantive law, and not the law of conflicts, of the State of California. Venue in any action brought under this Agreement shall be in the Superior Court of the County of Kern, State of California.

16. Indemnification. Landowners (“Indemnifying Party”) shall protect, defend, indemnify and hold harmless the District and its directors, officials, officers, managers, employees, contractors and agents (“Indemnified Party”) from and against all liabilities, obligations, claims, damages, penalties, causes of action, costs and expenses (including, without limitation, attorneys’ fees and expenses) imposed upon, incurred by, or asserted against an Indemnified Party arising out of, resulting from, or in connection with any action taken or omitted to be taken by the Indemnifying Party under this Agreement, including but not limited to the following: (i) the actions or omissions by Landowners or Landowners’ affiliates, members, managers, employees, contractors and agents related to this Agreement and the GSP; (ii) Landowners or Landowners’ affiliates, members, managers, employees, contractors and agents’ violation of any applicable laws or regulations; or (iii) the failure on the part of Landowners or Landowners’ affiliates to perform or comply with any of the terms of this Agreement, provided, however, that such indemnity shall not extend to any such suit, claim, or damage to the extent caused solely by the negligent or wrongful acts or omissions of any Indemnified Party. The indemnification provisions in this section shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by the District or its directors, officials, officers, managers, employees, contractors and agents.

17. Effective Date And Term Of Agreement. The effective date of this Agreement shall be the date last signed below. This Agreement shall remain in effect with respect to each particular Landowner unless and until such Landowner fails to perform according to the terms of this Agreement or such Landowner withdraws from the Agreement pursuant to Section 8 hereof. This Agreement shall have no force or effect upon

a determination that the performance of any provision of this Agreement will result or has resulted in the violation of state or federal law.

"District"

**ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT**

By:  Eric L. Averett

Title: General Manager

Date: Sept. 13, 2018

[landowner signatures and property APN's on following pages]

Landowner

AFFENTRANGER & SONS DAIRY

Fritz Affentranger
Signature

Fritz Affentranger / Partner owner
Printed Name/Title

463-030-15-00-8
APN(s)

463-030-12-00-9, 463-030-13-00-2

5-31-2018
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HEIN, MARTIN & KATHRYN FAMILY TRUST

Signature

Printed Name/Title

104-012-12-5 & 408-210-14-4
APN(s)

Date

Landowner

HEIN, MARTIN H

Signature

Printed Name/Title

104-011-15-0 & 104-012-24-0
APN(s)

Date

Landowner

AFFENTRANGER & SONS DAIRY

Signature

Printed Name/Title

463-030-15-00-8
APN(s)

463-030-12-00-9, 463-030-13-00-2

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HEIN, MARTIN & KATHRYN FAMILY TRUST

Martin Hein
Signature

MARTIN HEIN / TRUSTEE
Printed Name/Title

104-012-12-5 & 408-210-14-4
APN(s)

Date

5-31-2018

Landowner

HEIN, MARTIN H

John Zimmerer
Signature

John Zimmerer / PARTNER
Printed Name/Title

104-012-24-0
APN(s)

Date

5-31-2018

Landowner

HOPKINS FAMILY L P

Michael D. Hopkins
Signature

MICHAEL D. HOPKINS CEO
Printed Name/Title

104-030-01-01-8
APN(s)

5-22-18
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006 FAMILY TRUST

Signature

Printed Name/Title

159-010-07-00-1
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

HOPKINS FAMILY L P

Signature

Printed Name/Title

104-030-01-01-8
APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006
FAMILY TRUST

Signature

Printed Name/Title

159-010-07-00-1
APN(s)

Date

Landowner

LAYSHOT FAMILY TRUST

Alan D Layshot
Signature

Alan D Layshot, Trustee
Printed Name/Title

159-010-06-00-8
APN(s)

5-31-2018
Date

Landowner

LAYSHOT FAMILY TRUST

Irina H. Layshot - Trustee
Signature

Irina H. Layshot / Trustee
Printed Name/Title

159-010-06-00-8
APN(s)

5-31-2018
Date

Landowner

HOPKINS FAMILY L P

Signature

Printed Name/Title

104-030-01-01-8
APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

LEE, ROBERT & STEPHANIE 2006 FAMILY TRUST

Signature

Robert Lee / Trustee
Printed Name/Title

159-010-07-00-1
APN(s)

Date

5/15/18

Landowner

Signature

Stephanie Lee / Trustee
Printed Name/Title

159-010-07-00-1
APN(s)

Date

5/15/18

Landowner

MC CARTHY, MICHAEL & LINDA FAMILY TRUST OF 2006

Michael McCarthy

Signature

MICHAEL MCCARTHY/TRUSTEE

Printed Name/Title

159-020-04-005
APN(s)

5/31/2018
Date

Landowner

LOUISE F. MC CARTHY FAMILY TRUST DATED DECEMBER 6, 2000

Louise F. McCarthy

Signature

LOUISE F. MCCARTHY/TRUSTEE

Printed Name/Title

159-020-04-005
APN(s)

5/31/2018
Date

Landowner

OCAFRAIN, MARCEL & JOSEPHINE REV TRUST

Josephine Ocafrain

Signature

Josephine OCAFRAIN TRUSTEE

Printed Name/Title

104-040-01-00-2
APN(s)

5-31-2018
Date

Landowner

OCAFRAIN, MARCEL & JOSEPHINE REV TRUST

Marcel Ocafrain

Signature

MARCEL OCAFRAIN TRUSTEE

Printed Name/Title

APN(s)

5-31-2018
Date

Landowner

MARVIN WEIDENBACH FARMS

Ruth A. Weidenbach, Partner

Signature

Ruth A. Weidenbach, Partner

Printed Name/Title

463-020-24-8, 463-020-08-1, 463-020-10-7,

APN(s)

463-030-15-1, & 463-020-17-2,

463-020-12-3, 463-020-13-1

May 30, 2018

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

WONDERFUL NUT ORCHARDS LLC

Signature

Printed Name/Title

160-130-36

APN(s)

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

DIAMOND FARMING CO

Jeff Huchaby
Signature

Jeff Huchaby, President
Printed Name/Title

524-020-15, 524-020-16 &
APN(s)

524-020-20

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

BOLTHOUSE LAND CO LLC

Signature

Printed Name/Title

104-012-03, 104-012-06,
APN(s)

104-012-20, & 104-012-19

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

DIAMOND FARMING CO

Signature

Printed Name/Title

524-020-15, 524-020-16 &
APN(s)

524-020-20

Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

Landowner

BOLTHOUSE LAND CO LLC

Anthony L. Leggio

Signature

Anthony L. Leggio, Manager

Printed Name/Title

104-012-03, 104-012-06,
APN(s)

104-012-20, & 104-012-19

05/22/2018
Date

Landowner

Signature

Printed Name/Title

APN(s)

Date

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached and not the truthfulness accuracy or validity of that document.

State of California)
County of Kern)

On September 13, 2018, before me, Guadalupe Gonzalez,
Notary Public, personally appeared Eric L. Averett,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed
the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s); or the entity upon behalf of which the person(s) acted, executed
the instrument.

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

WITNESS my hand and official seal.



Signature  (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern)

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(insert name and title of the officer)

personally appeared Franz Affentranger
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature  (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(Insert name and title of the officer)

personally appeared John Zimmerman and Martin Hein
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) ~~is~~/are subscribed to the within instrument and acknowledged to me that ~~he~~/~~she~~/they executed the same in ~~his~~/~~her~~/their authorized capacity(ies), and that by ~~his~~/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature

Guadalupe Gonzalez

(Seal)



ACKNOWLEDGMENT

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State of California
County of Kern

Notary Public

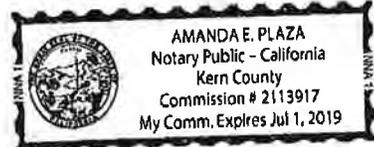
On May 22, 2018 before me, Amanda E. Plaza
(insert name and title of the officer)

personally appeared Michael D. Hopkins
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature [Handwritten Signature] (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(Insert name and title of the officer)

personally appeared Irma H. Layshot and Alan D. Layshot
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature



(Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

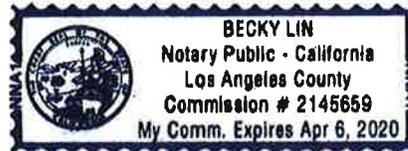
State of California
County of Los Angeles

On May 15, 2018 before me, - Becky Lin, notary public -
(insert name and title of the officer)

personally appeared - Robert Lee and Stephanie Lee -
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.



Signature Becky Lin (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Kern

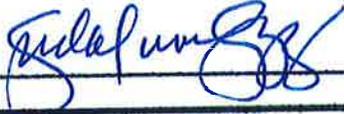
On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(insert name and title of the officer)

personally appeared Louise F. McCarthy and Michael McCarthy
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.



Signature  (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

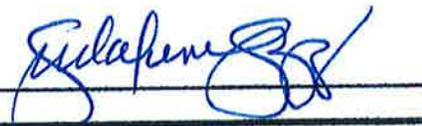
State of California
County of Kern

On May 31, 2018 before me, Guadalupe Gonzalez, Notary Public
(insert name and title of the officer)

personally appeared Josephine Ocafrain and Marcel Ocafrain
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature  (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 30, 2018 before me, Sandra L. Woodruff, Notary Public
(insert name and title of the officer)

personally appeared Ruth A. Weidenbach
who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~
subscribed to the within instrument and acknowledged to me that he/~~she~~/~~they~~ executed the same in
his/~~her~~/~~their~~ authorized capacity~~(ies)~~, and that by his/~~her~~/~~their~~ signature~~(s)~~ on the instrument the
person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature *Sandra L. Woodruff* (Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 21, 2018 before me, Katrina Miller, Notary Public
(insert name and title of the officer)

personally appeared Cheryl Puskarich
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature Katrina Miller



(Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On 6/21/18 before me, Mandy Harris, Notary Public
(insert name and title of the officer)

personally appeared Jeff Huchaby
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature Mandy

(Seal)



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Kern

On May 23, 2018 before me, Nancy E. Vogel, Notary Public
(insert name and title of the officer)

personally appeared Anthony L. Leggio
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is are subscribed to the within instrument and acknowledged to me that he she they executed the same in his her their authorized capacity(ies), and that by his her their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature Nancy E Vogel (Seal)

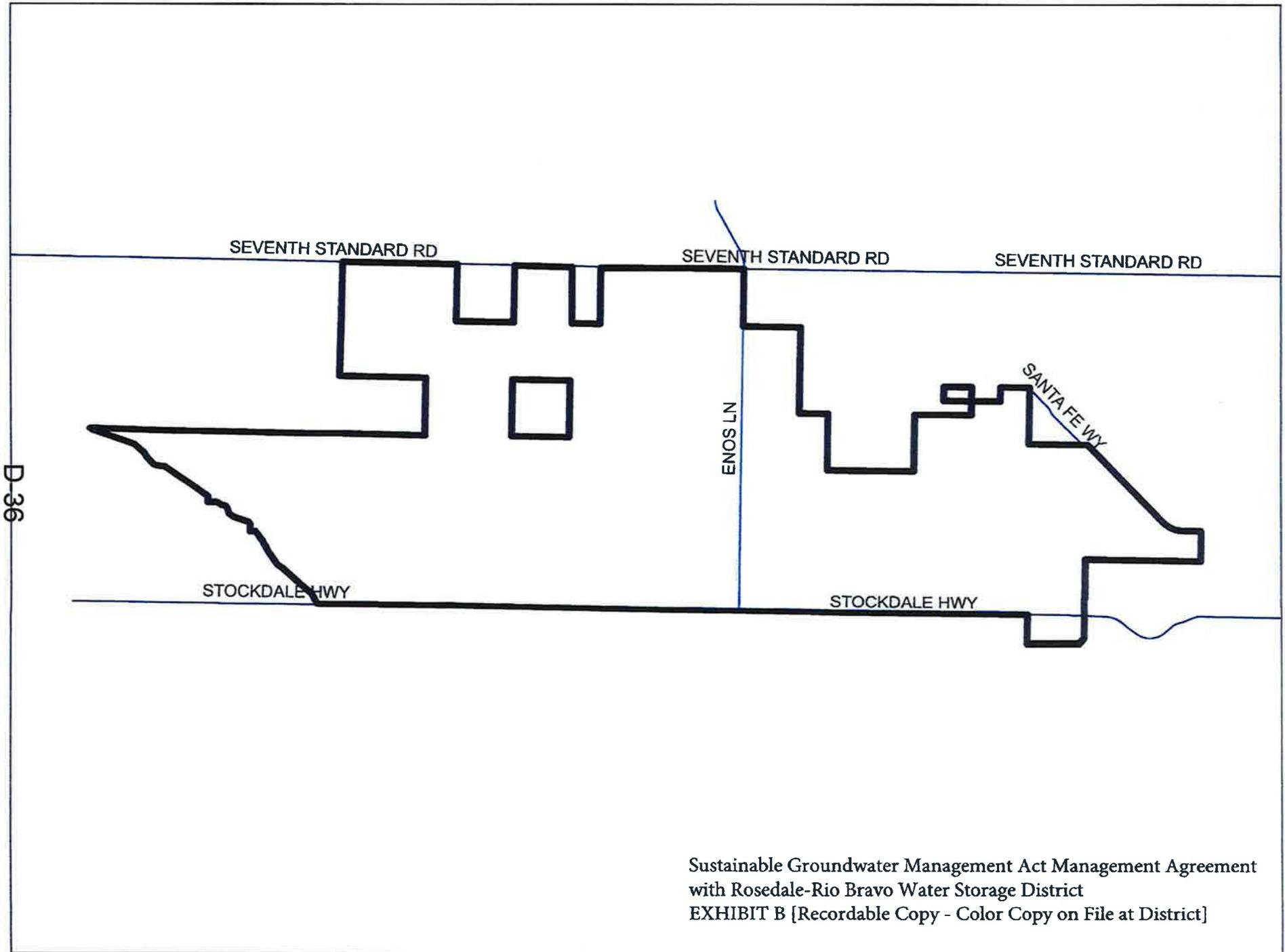


EXHIBIT A

1	AFFENTRANGER & SONS DAIRY	463-030-12-00-9 463-030-13-00-2 463-030-15-00-8
2	HEIN MARTIN & KATHRYN FAMILY TR	104-012-12-5 408-210-14-4
	HEIN MARTIN H	104-012-24-0
3	HOPKINS FAMILY L P	104-030-01-01-8
4	LAYSHOT FAMILY TRUST	159-010-06-00-8
5	LEE ROBERT & STEPHANIE 2006 FAMILY TRUST	159-010-07-00-1
6	MC CARTHY MICHAEL & LINDA FAMILY TRUST OF 2006	159-020-04-005
	LOUISE F. MC CARTHY FAMILY TRUST DATED DECEMBER 6, 2000	
7	OCAFRAIN MARCEL & JOSEPHINE REV TRUST	104-040-01-00-2
8	MARVIN WEIDENBACH FARMS	463-020-08-1 463-020-10-7 463-020-12-3 463-020-13-1 463-020-15-1 463-020-17-2 463-020-24-8
9	WONDERFUL NUT ORCHARDS LLC	160-130-36
10	DIAMOND FARMING CO	524-020-15
		524-020-16
		524-020-20
11	BOLTHOUSE LAND CO LLC	104-012-03
		104-012-06
		104-012-20
		104-012-19

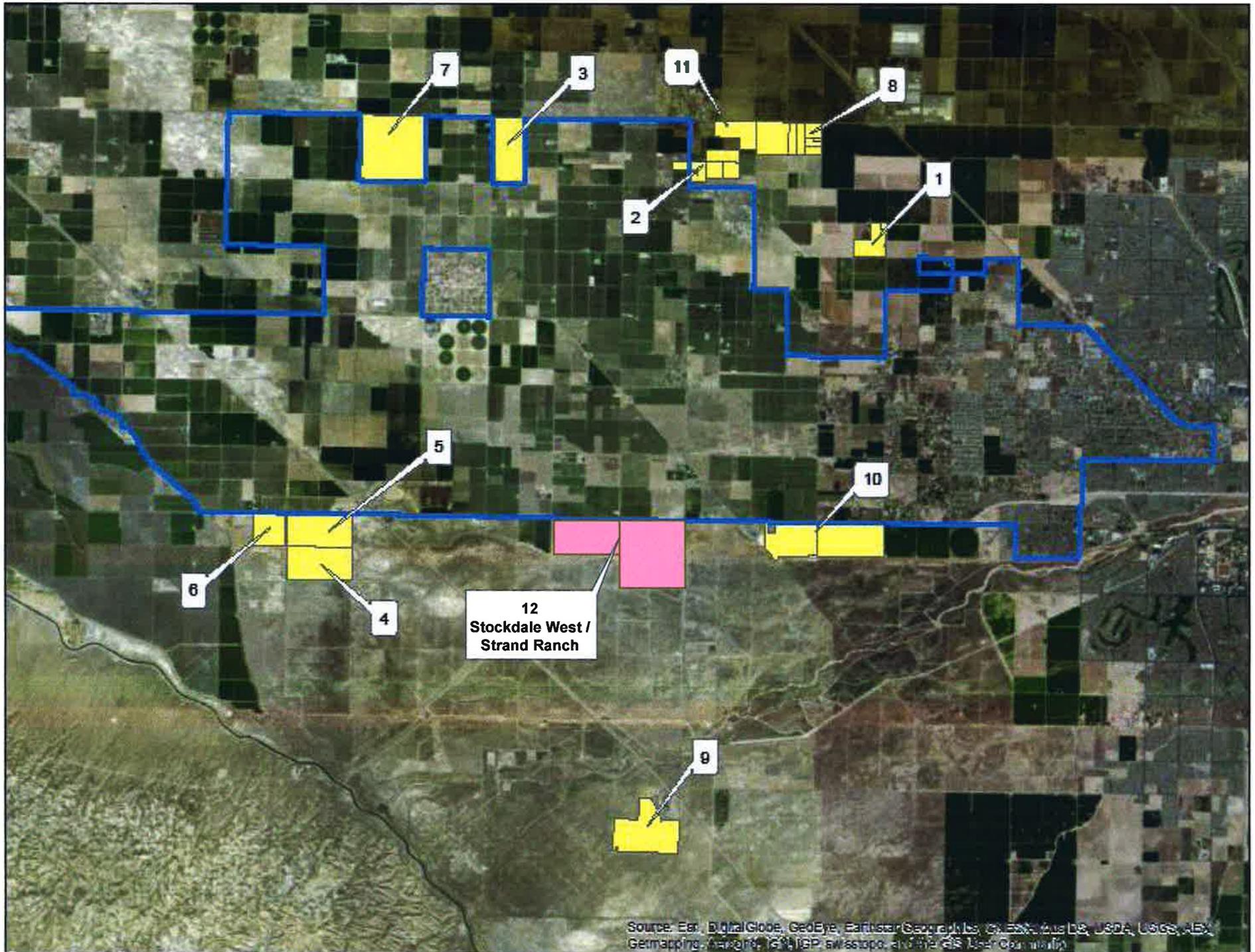
EXHIBIT B

[District Boundary Map]



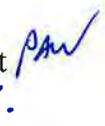
Sustainable Groundwater Management Act Management Agreement
with Rosedale-Rio Bravo Water Storage District
EXHIBIT B [Recordable Copy - Color Copy on File at District]

Exhibit B



March 11, 2019

Prepared by: K. Welch

Submitted by: F. Sanchez / P. Weghorst 

Approved by: Paul A. Cook 

ACTION CALENDAR

DRAFT TERMS FOR ONE-YEAR RECHARGE PROGRAM WITH BUENA VISTA WATER STORAGE DISTRICT

SUMMARY:

Staff expects that current wet-year conditions will result in water supplies being made available for recharge at the Strand and Stockdale Integrated Banking Projects. In 2017, the Board approved an agreement for a one-year recharge program that allowed Buena Vista Water Storage District (BVWSD) to augment recharge on the Strand Ranch by utilizing IRWD's Stockdale West basins to recharge high-flow Kern River water. IRWD was able to realize an increase of over 6,800 acre-feet (AF) of water in 2017 as a result of the execution of the agreement. In the event that high-flow Kern River water may be available this year, staff recommends that the Board authorize the General Manager to execute a letter agreement with BVWSD with similar terms as the 2017 agreement, subject to substantive changes approved by the Supply Reliability Programs Committee.

BACKGROUND:

In 2010, IRWD and BVWSD entered into a long-term *Agreement for Water Acquisition by Irvine Ranch Water District from Buena Vista Water Management Program* (Exchange Agreement), which established an exchange program at the Strand Ranch Integrated Banking Project. The Exchange Agreement allows BVWSD to recharge up to 17,500 AF of high-flow Kern River water per year at the Strand Ranch on an unbalanced exchange basis, with IRWD receiving 50% of the water, less a proportional share of losses. BVWSD's allocated annual rate of recovery under the long-term program is 6,667 AF.

2011 Stockdale West Recharge Program:

After purchasing the Stockdale West property in December 2010, IRWD implemented a Pilot Project for recharge on the property by constructing recharge basins. In August 2011, IRWD and BVWSD entered into an agreement allowing BVWSD to use the Stockdale West Pilot Project recharge basins for one year to capture up to 10,000 AF of high-flow Kern River water on an unbalanced exchange basis. BVWSD recharged 3,268 AF of high flow Kern River water under the Pilot Project in addition to 17,500 AF at the Strand Ranch.

2017 Stockdale West Recharge Program:

In 2017, the Board approved an agreement with BVWSD for a one-year program to augment recharge using Stockdale West recharge facilities for up to an additional 12,500 AF. Based on a request from BVWSD, the Board approved several modifications from the terms of the Exchange Program, which only applied to water recharged in 2017 under the one-year program. These changes included providing BVWSD with an additional 833 AF per year of first priority recovery capacity to use in recovering water that was recharged in 2017. BVWSD was also allowed additional time to request return deliveries before having to transfer additional water to

IRWD. All other terms for the one-year program were consistent with the Exchange Agreement. In 2017, BVWSD recharged 13,654 AF utilizing the Strand and Stockdale West recharge basins with IRWD receiving 6,827 AF.

Proposed 2019 Stockdale West Recharge Program:

As a result of current wet year conditions, it is expected that the Kern River Watermaster may schedule an increase in outflows from Lake Isabella that could create high-flow conditions on the Kern River. In the event of the availability of high-flow Kern River water, staff has prepared draft terms for a one-year recharge program for 2019 that is similar to the program implemented in 2017. This proposed program would facilitate the maximum use of IRWD's recharge facilities on Strand and Stockdale West. The draft terms would allow BVWSD to recharge up to 12,500 AF of additional Kern River water supplies utilizing the Stockdale West recharge facilities in second priority to any deliveries of water made consistent with IRWD's exchange program with Antelope Valley-East Kern Water Agency (AVEK). The draft term sheet for the proposed 2019 recharge program with BVWSD is attached as Exhibit "A". These terms would also provide BVWSD an additional 833 AF per year of recovery capacity in second priority to the AVEK program to recover the water recharged in 2019.

FISCAL IMPACTS:

The total cost of the IRWD share of water under the proposed recharge program is estimated to range from \$55 AF to \$85 per AF, depending upon recovery costs. Pursuant to the terms, if after year seven BVWSD has not recovered its water, IRWD shall compensate BVWSD for additional water transferred from BVWSD to IRWD in excess of 50% at BVWSD's then current State Water Project Table A Variable Operations, Maintenance, Power and Replacement unit cost rate for water. The current estimated cost of the additional water is approximately \$27 per AF.

ENVIRONMENTAL COMPLIANCE:

In compliance with the California Environmental Quality Act (CEQA), the California Public Resources Code Section 21000 et. seq., and per the California CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3, Rosedale as lead agency filed a Notice of Determination for the Stockdale Integrated Banking Project Final Environmental Impact Report (EIR) with the County of Kern on December 8, 2015, and with the State Clearinghouse on December 9, 2015. IRWD, as a responsible agency, filed a Notice of Determination with the County of Orange on December 14, 2015, with the California State Clearinghouse on December 15, 2015, and with the County of Kern on December 21, 2015. The banking of BVWSD high flow Kern River water available from BVWSD pre-1914 water rights is consistent with the sources evaluated in the Stockdale Final EIR as well as the Final EIR for the Strand Ranch Integrated Banking Project. A Final EIR for the Buena Vista Water Management Project was prepared, certified and the project approved by BVWSD. The Buena Vista Water Management Project Final EIR covers the delivery of BVWSD high flow Kern River water to water banking facilities such as the Strand and Stockdale Integrated Banking Projects and including Rosedale facilities.

Action Calendar: Draft Terms for One-Year Recharge Program with Buena Vista Water Storage District
March 11, 2019
Page 3

COMMITTEE STATUS:

This item was reviewed by the Supply Reliability Programs Committee on March 5, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A LETTER AGREEMENT WITH BUENA VISTA WATER STORAGE DISTRICT BASED ON THE PROPOSED DRAFT TERMS FOR A ONE-YEAR RECHARGE PROGRAM FOR 2019 TO AUGMENT RECHARGE ON THE STRAND RANCH BY UTILIZING THE STOCKDALE WEST RECHARGE BASINS, SUBJECT TO SUBSTANTIVE CHANGES APPROVED BY THE SUPPLY RELIABILITY PROGRAMS COMMITTEE.

LIST OF EXHIBITS:

Exhibit "A" – Draft Term Sheet for a One-Year Recharge Program for 2019 Using Stockdale West Recharge Facilities

EXHIBIT "A"

Summary of Terms | 1
March 5, 2019

DRAFT

Terms for a One-Year Recharge Program to Augment Recharge Under the Agreement Between Irvine Ranch Water District and Buena Vista Water Storage District Using Stockdale West Recharge Facilities

GENERAL TERMS

- Entities:** Irvine Ranch Water District (“IRWD”); Buena Vista Water Storage District (“BV”)
- Description:** IRWD and BV seek to carry out a one-year recharge program (“Recharge Program”) to augment the recharge capacities under the IRWD Water Exchange Program established in the long-term Agreement for Water Acquisition by IRWD from BV Water Management Program that was executed on December 22, 2010 (“IRWD/BV Exchange Agreement”). Recharge would be augmented through the delivery of BV Exchange Water to IRWD’s Stockdale West property on a 2-for-1 basis consistent with the IRWD/BV Exchange Agreement as described in this term sheet (“Term Sheet”). Capitalized terms used herein and not otherwise defined shall have the same meanings as are given to such terms in the IRWD/BV Exchange Agreement.
- Effective Date:** April 1, 2019 (the “Effective Date”).
- Term:** One year from the Effective Date, terminating on March 30, 2020.
- Stockdale West:** IRWD has constructed recharge facilities at its Stockdale West property in Kern County, California. These facilities consist of approximately 259 acres of recharge basins and appurtenant facilities to convey water to the Stockdale West property from the Strand Ranch Integrated Banking Project and a turnout from the Cross Valley Canal. By augmenting recharge abilities under the IRWD/BV Exchange Agreement, the Recharge Program will provide improved water management and reliability. The Recharge Program may include use of recovery wells on Stockdale West which have been constructed and are operational.
- Exchange Program:** The IRWD/BV Exchange Agreement provides for storage of BV Exchange Water on a 2-for-1 basis consistent with the BV Water Management Program, which includes a Water Exchange Program that allows BV to more effectively and beneficially manage BV’s water resources. The IRWD/BV Exchange Agreement allows BV to supply up to 17,500 acre-feet (AF) of BV Exchange Water in any given year for recharge at the Strand Ranch Integrated Banking Project and provides for IRWD to return fifty percent (50%) of the water less losses at a rate of no

more than 6,667 AF in any given year. As consideration, the remainder of the water is deemed transferred to IRWD with provisions for additional transfers that are dependent on time length of storage. The IRWD/BV Exchange Agreement has a term through January 13, 2039, extendable by its parties.

Non-Binding Effect: This Term Sheet is intended to be a statement of the terms of the proposed transaction. It is subject to the execution of a letter agreement (“Letter Agreement”) by IRWD and BV inclusive of the terms and conditions set forth herein.

General Expenses: Each party shall be responsible for its own fees and expenses arising out of the negotiation and execution of agreements related to this transaction, obtaining necessary approvals, and the like.

CEQA Compliance: Both parties shall comply with CEQA and cooperate with one another with respect to CEQA compliance for the proposed Recharge Program. BV was the lead agency with respect to CEQA compliance for its BV Water Management Program, which included the Water Exchange Program, and adopted a Final Environmental Impact Report (EIR) on January 12, 2010. IRWD was a responsible agency with respect to CEQA compliance for the Stockdale Integrated Banking Project, including the delivery of BV Exchange Water to the Stockdale West, and adopted a Final EIR on December 14, 2015. IRWD was a responsible agency with respect to CEQA compliance for the Strand Ranch Integrated Banking Project, and adopted a Final EIR on May 27, 2008. BV and IRWD shall each be responsible for its own fees and costs associated with future or additional CEQA compliance regarding its participation in the Recharge Program, including litigation expenses if any.

Permit Costs: As provided in the IRWD/BV Exchange Agreement (Section 1(F)), however, no permit costs are expected for the Recharge Program.

Water Rights: As provided in the IRWD/BV Exchange Agreement (Section 1(G); Section 3(B) (ii) (4)).

RECHARGE AUGMENTATION TERMS

Source of Water: As provided in the IRWD/BV Exchange Agreement (Section 2(A)(i)).

Quantity: On a second priority basis, BV may deliver up to 12,500 additional acre-foot (AF) of water during the one year term hereof (“Augmentation Water”), to augment the 17,500 AF of BV Exchange Water that BV is allowed to supply to the Strand Ranch Integrated Banking Project as specified in the IRWD/BV Exchange Agreement, resulting in a total of 30,000 AF of BV Exchange Water to be recharged during the Recharge Program. The Augmentation Water is to be stored in an account within

the Stockdale Integrated Banking Project within the estimated storage capacity of 26,000. The use of this storage capacity in the Stockdale Integrated Banking Project will not increase the dedicated storage capacity amount as specified in the IRWD/BV Exchange Agreement. The Recharge Program shall augment or increase the existing annual recovery capacity of 6,667 AF as provided in the IRWD/BV Exchange Agreement for delivery of IRWD Return Water to BV by an annual amount of 833 AF. The 833 AF would be provided on a second priority basis. The resulting 7,500 AF augmented recovery capacity will be used to make IRWD Return Water deliveries to BV associated with this Recharge Program and shall not augment or increase future IRWD Return Water deliveries not associated with this Recharge Program.

Quality: As provided in the IRWD/BV Exchange Agreement (Section 2(A)(iii)).

Availability: As provided in the IRWD/BV Exchange Agreement (Section 2(A)(IV)).

Delivery Points: As provided in the IRWD/BV Exchange Agreement (Section 2(A) (v)). Notwithstanding that recharge of the Augmentation Water will occur on the Stockdale West property, the location of storage, recovery, return and delivery points shall be the same as for water other than Augmentation Water.

Consideration: The provisions governing the Additional Transferred Water specified in the IRWD/BV Exchange Agreement (Section 2(A) (vii)) shall apply but shall be modified with respect to the 30,000 AF of BV Exchange Water recharged through this Recharge Program as shown in the following table and shall not affect the future consideration provided to IRWD as a result of future BV Exchange Water deliveries in accordance with Section 2(A) (vii) of the IRWD/BV Exchange Agreement:

Modified Consideration for Recharge Program Only

Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV if Returned During or Before the Indicated Year
1	50	50
2	50	50
3	50	50
4	50	50
5	60 * 50	40 50
6	70 * 50	30 50
7	80 75*	20 25
8	90 100*	10 0
9	100*	0

* Additional Transferred Water is the amount of water over 50%

Other Terms:

Except where otherwise specified above or the context requires otherwise, all terms and conditions of the IRWD/BV Exchange Agreement are incorporated and will apply to this Term Sheet, the Letter Agreement and disposition of the Augmentation Water including without limitation the return of water to BV, construction of facilities, indemnifications and duties related to the operation, maintenance, power and repairs. For the purpose of this Term Sheet and the Letter Agreement, such terms and conditions of the IRWD/BV Exchange Agreement shall be read and construed as though references therein to the Agreement or the words "herein," "hereof," and the like were to this Term Sheet and the Letter Agreement, and references to water included the Augmentation Water.

March 11, 2019

Prepared by: K. Welch

Submitted by: F. Sanchez / P. Weghorst *FW*

Approved by: Paul A. Cook *PAC*

ACTION CALENDAR

TERMS FOR A 4-FOR-1 PILOT EXCHANGE PROGRAM WITH MOJAVE WATER AGENCY

SUMMARY:

In January 2019, staff reviewed with the Supply Reliability Programs Committee draft terms for a short-term unbalanced exchange program with Mojave Water Agency. Mojave considered the terms and indicated its preference for a revenue component to be part of any established program. Based on this, staff has prepared terms for a 4-for-1 pilot exchange program with Mojave that would result in IRWD receiving three acre-feet for every four acre-feet of State Water Project (SWP) water that Mojave delivers into storage at the Strand and Stockdale Integrated Banking Projects (IRWD Water Bank). The terms provide for Mojave receiving compensation for the water through a separate agreement. The expedited execution of an agreement, based on the proposed pilot program terms, would allow IRWD to secure wet-year water supplies expected to be available this year to Mojave should recharge capacity be available after IRWD receives water from its existing exchange programs with Buena Vista Water Storage District (BVWSD), Dudley Ridge Water District (DRWD) and Antelope Valley-East Kern Water Agency (AVEK). Staff recommends that the Board authorize the General Manager to execute a 4-for-1 pilot exchange letter agreement as well as a side agreement to compensate Mojave for the water delivered into storage, that incorporate the proposed exchange and compensation terms, both subject to substantive changes approved by the Supply Reliability Programs Committee.

BACKGROUND:

Mojave Water Agency is an SWP Contractor that currently has Table A water supplies in excess of demands. These supplies also exceed the storage capacity of Mojave's water banking capacities that were developed through its Mojave Basin Conjunctive Use Program. On November 28, 2018, IRWD staff met with the General Manager and staff from Mojave to discuss implementing a mutually beneficial short-term unbalanced exchange program that would allow Mojave to deliver SWP water into storage at the IRWD Water Bank. Subsequent to the meeting, staff prepared draft terms for a 2-for-1 exchange program with Mojave that were approved by the Supply Reliability Programs Committee on January 17, 2019. Mojave reviewed the draft terms and communicated its preference that a revenue component be incorporated into terms for any exchange program with IRWD.

Terms for 4-for-1 Exchange:

As a result of further discussions with Mojave, staff has prepared terms for a pilot 4-for-1 exchange agreement with Mojave that are attached as Exhibit "A". The terms shown in Exhibit "A" reflect input that was received from the Supply Reliability Programs Committee on March 5, 2019, as well as non-substantive changes recommended by Mojave Water Agency following the Committee meeting. The bold text shown on Exhibit "A" reflect revisions to the terms

recommended by the Committee. The revisions shown in Exhibit “B” are the non-substantive revisions requested by Mojave.

Through the proposed pilot program, IRWD would receive three acre-feet for every four acre-feet of SWP water that Mojave delivers into storage at the IRWD Water Bank, with Mojave receiving compensation for the water through a separate agreement. The terms would allow Mojave to deliver up to 20,000 acre-feet of SWP Table A water to the IRWD Water Bank should the California Department of Water Resources (DWR) increase the SWP allocation for the year to 65% or greater. Mojave would have the discretion to deliver water to the IRWD Water Bank should the SWP allocation be less than 65%.

Mojave would be able to deliver water to the IRWD Water Bank only if recharge capacity is available after IRWD completes the recharge of water available from its existing exchange programs with BVWSD, DRWD and AVEK. Within 10 years, IRWD would return 25% of the water to Mojave through the use of the IRWD Water Bank wells. The water would be returned when DWR declares an SWP allocation of 25% or below and on second priority basis to the use of the IRWD Water Bank wells to meet the needs of IRWD. The effective cost of the water to IRWD that is secured through the pilot program would be equivalent to IRWD’s cost of water from its programs with DRWD.

Need for Expedited Action:

Staff expects there is high probability that DWR will soon increase the SWP allocation to at least 65%. Accordingly, there is a need to expedite execution of an agreement for the proposed 4-for-1 pilot program between IRWD and Mojave to allow adequate time for Metropolitan Water District of Southern California to provide its consent to the program and to work with DWR to prepare the exchange and point of delivery agreements that are needed to complete the delivery of water by Mojave before the end of calendar year 2020.

FISCAL IMPACTS:

IRWD proposes to compensate Mojave in the amount of \$177 per acre-foot for the SWP water it delivers into storage at the IRWD Water Bank. In addition, IRWD proposes to pay the costs associated with recharging the water and the costs of recovering Mojave’s share of the water through the use of the IRWD Water Bank wells. Mojave would pay for all costs associated with the use of its capacities in the SWP to deliver water for recharge and to convey recovered return water to Mojave’s service area. The effective cost of the water to IRWD would be consistent with the cost of water from IRWD’s programs in DRWD. Source of funds for providing the \$177 per acre-foot compensation would be IRWD’s over allocation revenue.

ENVIRONMENTAL COMPLIANCE:

Final Environmental Impact Reports for the Strand Ranch and Stockdale Integrated Banking Project were prepared, certified and approved in compliance with the California Environmental Quality Act (CEQA) of 1970 as amended, codified at California Public Resources Code Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. Rosedale, as lead agency, filed Notice of Determinations for both the Strand Ranch

and Stockdale Integrated Banking Projects with the County of Kern. IRWD, as a responsible agency, filed Notice of Determinations with the County of Orange and with the County of Kern.

COMMITTEE STATUS:

This item was reviewed by the Supply Reliability Programs Committee on March 5, 2019.

RECOMMENDATION:

THAT THE BOARD AUTHORIZE THE GENERAL MANAGER TO EXECUTE A 4-FOR-1 PILOT EXCHANGE LETTER AGREEMENT AS WELL AS A SIDE AGREEMENT TO COMPENSATE MOJAVE WATER AGENCY FOR THE WATER DELIVERED INTO STORAGE THAT INCORPORATE THE PROPOSED EXCHANGE AND COMPENSATION TERMS, BOTH SUBJECT TO SUBSTANTIVE CHANGES APPROVED BY THE SUPPLY RELIABILITY PROGRAMS COMMITTEE.

LIST OF EXHIBITS:

- Exhibit "A" – Proposed Terms for a 4-for-1 Pilot Exchange Program between Irvine Ranch Water District and Mojave Water Agency
- Exhibit "B" – Proposed Terms for a 4-for-1 Pilot Exchange Program between Irvine Ranch Water District and Mojave Water Agency with highlighted non-substantive changes recommended by Mojave Water Agency.

EXHIBIT "A"

Terms for a 4-For-1 **Pilot** Exchange Program
 Between Irvine Ranch Water District and Mojave Water Agency
 March 5, 2019

Parties	The Irvine Ranch Water District (IRWD) and the Mojave Water Agency (Mojave)
Description	IRWD and Mojave would implement a Pilot Exchange Program (Exchange Program) that would allow Mojave to schedule and deliver excess State Water Project (SWP) water into storage at IRWD's Strand and Stockdale Integrated Banking Projects (IRWD Water Bank) on a 4-to-1 exchange ratio basis. SWP water is available to Mojave through its existing SWP Contract with the Department of Water Resources (DWR). Recharge and recovery facilities at both the Strand Ranch and Stockdale Integrated Banking Projects could be used to deliver water in and out of storage at the IRWD Water Bank.
Term	Ten years from the date that Mojave's water is delivered into storage in the IRWD Water Bank under the Exchange Program. Delivery of the water into storage would be accomplished prior to the end of calendar year 2020 . Upon mutual agreement the term may be extended as described under Return Water below.
IRWD's Water Bank	IRWD Water Bank, located in Kern County, is owned by IRWD and operated by Rosedale-Rio Bravo Water Storage District (Rosedale). IRWD holds first priority rights to the use of the recharge and recovery facilities except for when the Kern River Watermaster offers water to all takers willing to sign a notice/order or the Kern River Watermaster offers Kern River water to the California Aqueduct/Kern River Intertie. Under such conditions, Rosedale has first priority right to the use of the recharge facilities.
Quantity	Up to 20,000 acre-feet (AF) of Mojave's SWP water supplies may be delivered to the IRWD Water Bank for storage. The storage account balance to be allocated to Mojave would be equal to twenty-five percent (25%) of the amount of water delivered into storage (i.e., if 20,000 AF is delivered, 5,000 AF will be owed to Mojave Water Agency in return). Seventy-five percent (75%) of the water delivered into storage would be deemed transferred to IRWD at the time the water has been recharged at the IRWD Water Bank.
Exchange Water	When the SWP allocation is equal to or greater than 65% (or less at Mojave's discretion), Mojave will notify IRWD of its intent to schedule and deliver up to 20,000 AF of SWP water (Exchange Water) to the IRWD Water Bank. Mojave shall schedule delivery of Exchange Water for recharge at the IRWD Water Bank during times when IRWD determines that recharge capacity is available. Within 30 days of DWR's approval of Mojave's delivery schedule, Mojave shall prepare an invoice for compensation by IRWD in an amount per AF as defined under separate agreement between the Parties.

Return Water	When the first year occurs with a final SWP allocation equal to or less than 25%, Mojave will notify IRWD of its request to take delivery of all or a portion of its share of the Exchange Water (Return Water). Return Water will occur by recovery of water from the IRWD Water Bank with subsequent delivery through the Cross Valley Canal (CVC) and California Aqueduct. IRWD shall use its first priority recovery well capacity in the IRWD Water Bank to recover Return Water for Mojave after meeting IRWD's own water supply needs. Mojave's Return Water may not remain in storage beyond the end of the tenth calendar year after the delivery of water into storage in the IRWD Water Bank. Upon mutual agreement, the Term of this Exchange Program may be extended for an additional 10 years or up to the current term of Mojave's contract with DWR, whichever is shorter, should the return water not be returned for reasons such as hydrologic conditions, allocation percentages, capacity/conveyance limitations, economic hardships, health and safety issues, etc.
Quality	The quality of Exchange Water and Return Water will be limited as follows: If and to the extent that either party delivers water to and into the California Aqueduct, the quality of water shall meet the water quality standards established by DWR for pump-in to the California Aqueduct.
Delivery Points	Mojave will deliver Exchange Water to the IRWD point of delivery (IRWD POD) which will be the Strand Ranch and/or Stockdale West Turnouts on the CVC, other Rosedale diversion locations as specified by Rosedale, or as directed by Metropolitan Water District of Southern California (Metropolitan). IRWD will use IRWD Water Bank wells to extract Return Water for deliver to the pump-in location at Reach 12E of the California Aqueduct. Mojave shall coordinate with DWR for delivery to the Mojave point of delivery (Mojave POD) which will be Check 22B of the California Aqueduct or to another delivery point as determined by Mojave.
Losses	IRWD will assume all water banking losses.
Recharge Costs	IRWD will pay all costs assessed to IRWD by Rosedale for recharging water at the IRWD Water Bank. These costs may include Rosedale's administrative charge, charges assessed by the Kern County Water Agency (KCWA), CVC Standby, applicable CVC pumping and O&M costs, and applicable fixed and variable O&M Water Bank costs.
Recovery Costs	IRWD will pay actual costs to recover Return Water from the IRWD Water Bank through pumping of IRWD Water Bank wells. These costs may include Rosedale's administrative charge, pumping costs, charges assessed by the KCWA, CVC Standby, O&M, and applicable CVC pumping costs, and applicable fixed and variable O&M Water Bank costs. IRWD will also pay any costs assessed by Rosedale under its Long Term Operations Plan for implementing provisions of the MOUs to prevent impacts from operations.
SWP Costs	Metropolitan will pay all DWR Variable OMP&R charges associated with the delivery of Exchange Water to IRWD POD consistent with the Coordinated Operating, Water Storage, Exchange and Delivery Agreement dated April 21, 2011. For delivery of Return Water to Mojave POD, Mojave will pay all DWR Variable OMP&R charges from the pump-in location at Reach 12E to Mojave Water Agency's turnout at Reach 22B.

Agency Coordination	IRWD and Mojave would cooperate with DWR, KCWA and Metropolitan in preparing all necessary agreements to facilitate the Exchange Program. IRWD and Mojave shall each be responsible for their own costs associated with such coordination.
Environmental Compliance	Both parties shall comply with California Environmental Quality Act (CEQA) and cooperate with one another with respect to CEQA compliance that may be required by the DWR for the proposed Exchange Program. IRWD has already conducted environmental review under CEQA for the Strand and Stockdale Integrated Banking Projects that takes into consideration the delivery, storage and recovery of SWP water. Rosedale certified and IRWD and approved the CEQA documents for the Strand and Stockdale Integrated Banking Projects. Corresponding Notices of Determinations were filed by both Rosedale and IRWD. IRWD and Mojave will share equally any additional costs associated with environmental review or permitting deemed necessary for delivering Mojave water into storage (however, none are expected). Both IRWD and Mojave shall each be responsible for any other environmental review or permitting necessary to implement the Exchange Program within their own respective service areas.
Water Rights	It is expressly agreed, understood, and acknowledged by IRWD and Mojave that any existing or future delivery of Exchange Water to the IRWD Water Bank by Mojave will not result in or be considered a sale or transfer of Mojave's contractual rights to SWP water or a sale or transfer of IRWD's ownership in the IRWD Water Bank.
General Expenses	Each Party would be responsible for its own fees and expenses arising out of the negotiation and execution of the Exchange Program Agreement, obtaining necessary approvals, and the like.

EXHIBIT "B"

Terms for a 4-For-1 Pilot Exchange Program
Between Irvine Ranch Water District and Mojave Water Agency
March 5, 2019

Parties	The Irvine Ranch Water District (IRWD) and the Mojave Water Agency (Mojave)
Description	IRWD and Mojave would implement a Pilot Exchange Program (Exchange Program) that would allow Mojave to schedule and deliver excess State Water Project (SWP) water into storage at IRWD's Strand and Stockdale Integrated Banking Projects (IRWD Water Bank) on a 4-to-1 exchange ratio basis. SWP water is available to Mojave through its existing SWP Contract with the Department of Water Resources (DWR). Recharge and recovery facilities at both the Strand Ranch and Stockdale Integrated Banking Projects could be used to deliver water in and out of storage at the IRWD Water Bank.
Term	Ten years from the date that Mojave's water is delivered into storage in the IRWD Water Bank under the Exchange Program. Delivery of the water into storage would be accomplished prior to the end of calendar year 2020. <u>Upon mutual agreement the term may be extended as described under Return Water below.</u>
IRWD's Water Bank	IRWD Water Bank, located in Kern County, is owned by IRWD and operated by Rosedale-Rio Bravo Water Storage District (Rosedale). IRWD holds first priority rights to the use of the recharge and recovery facilities except for when the Kern River Watermaster offers water to all takers willing to sign a notice/order or the Kern River Watermaster offers Kern River water to the California Aqueduct/Kern River Intertie. Under such conditions, Rosedale has first priority right to the use of the recharge facilities.
Quantity	Up to 20,000 acre-feet (AF) of Mojave's SWP water supplies may be delivered to the IRWD Water Bank for storage. The storage account balance to be allocated to Mojave would be equal to twenty-five percent (25%) of the amount of water delivered into storage <u>(i.e., if 20,000 AF is delivered, 5,000 AF will be owed to Mojave Water Agency in return).</u> Seventy-five percent (75%) of the water delivered into storage would be deemed transferred to IRWD at the time the water has been recharged at the IRWD Water Bank.
Exchange Water	When the SWP allocation is equal to or greater than 65% (or less at Mojave's discretion), Mojave will notify IRWD of its intent to schedule and deliver up to 20,000 AF of SWP water (Exchange Water) to the IRWD Water Bank. Mojave shall schedule delivery of Exchange Water for recharge at the IRWD Water Bank during times when IRWD determines that recharge capacity is available. Within 30 days of DWR's approval of Mojave's delivery schedule, Mojave shall prepare an invoice for compensation by IRWD in an amount per AF as defined under separate agreement between the Parties.

Return Water	<p>When the first year occurs with a final SWP allocation equal to or less than 25%, Mojave will notify IRWD of its request to take delivery of <u>all or a portion of</u> its share of the Exchange Water (Return Water). Return Water will occur by recovery of water from the IRWD Water Bank with subsequent delivery through the Cross Valley Canal (CVC) and California Aqueduct. IRWD shall use its first priority recovery well capacity in the IRWD Water Bank to recover Return Water for Mojave after meeting IRWD's own water supply needs. At IRWD's discretion, Mojave could be allowed to delay its request to take delivery of Return Water to a later year with a final SWP allocation equal to or less than 25%. Mojave's Return Water may not remain in storage beyond the end of the tenth calendar year after the delivery of water into storage in the IRWD Water Bank. <u>Upon mutual agreement, the Term of this Exchange Program may be extended for an additional 10 years or up to the current term of Mojave's contract with DWR, whichever is shorter, should the return water not be returned for reasons such as hydrologic conditions, allocation percentages, capacity/conveyance limitations, economic hardships, health and safety issues, etc.</u></p>
Quality	<p>The quality of Exchange Water and Return Water will be limited as follows: If and to the extent that either party delivers water to and into the California Aqueduct, the quality of water shall meet the water quality standards established by DWR for pump-in to the California Aqueduct.</p>
Delivery Points	<p>Mojave will deliver Exchange Water to the IRWD point of delivery (IRWD POD) which will be the Strand Ranch and/or Stockdale West Turnouts on the CVC, other Rosedale diversion locations as specified by Rosedale, or as directed by Metropolitan Water District of Southern California (Metropolitan). IRWD will deliver<u>use IRWD Water Bank wells to extract</u> Return Water <u>for deliver to the pump-in location at Reach 12E of the California Aqueduct. Mojave shall coordinate with DWR for delivery</u> to the Mojave point of delivery (Mojave POD) which will be Check 22B of the California Aqueduct or to another delivery point as determined by Mojave.</p>
Losses	<p>IRWD will assume all water banking losses.</p>
Recharge Costs	<p>IRWD will pay all costs assessed to IRWD by Rosedale for recharging water at the IRWD Water Bank. These costs may include Rosedale's administrative charge, charges assessed by the <u>Kern County Water Agency (KCWA)</u>, Cross Valley Canal (CVC) Standby, applicable CVC pumping and O&M costs, and applicable fixed and variable O&M Water Bank costs.</p>
Recovery Costs	<p>IRWD will pay actual costs to recover Return Water from the IRWD Water Bank through pumping of IRWD Water Bank wells. These costs may include Rosedale's administrative charge, pumping costs, charges assessed by the KCWA, CVC Standby, O&M, and applicable CVC pumping costs, and applicable fixed and variable O&M Water Bank costs. IRWD will also pay any costs assessed by Rosedale under its Long Term Operations Plan for implementing provisions of the MOUs to prevent impacts from operations.</p>

<p>SWP Costs</p>	<p>For delivery of Exchange Water to IRWD POD, Mojave shall utilize its conveyance capacity in the Aqueduct and pay all DWR costs associated with the use of the capacity. Metropolitan will pay all DWR Variable OMP&R charges associated with the delivery of Exchange Water to IRWD POD consistent with the Coordinated Operating, Water Storage, Exchange and Delivery Agreement dated April 21, 2011.</p> <p>For delivery of Return Water to Mojave POD, Mojave will pay all DWR Variable OMP&R charges and shall utilize its conveyance capacity in the Aqueduct and pay all DWR costs associated with the use of the capacity. <u>from the pump-in location at #Reach 12E to Mojave Water Agency's turnout at #Reach 22B.</u></p>
<p>Agency Coordination</p>	<p>IRWD and Mojave would cooperate with DWR, KCWA and Metropolitan in preparing all necessary agreements to facilitate the Exchange Program. IRWD and Mojave shall each be responsible for their own costs associated with such coordination.</p>
<p>Environmental Compliance</p>	<p>Both parties shall comply with California Environmental Quality Act (CEQA) and cooperate with one another with respect to CEQA compliance that may be required by the DWR for the proposed Exchange Program. IRWD has already conducted environmental review under CEQA for the Strand and Stockdale Integrated Banking Projects that takes into consideration the delivery, storage and recovery of SWP water. Rosedale certified and IRWD and approved the CEQA documents for the Strand and Stockdale Integrated Banking Projects. Corresponding Notices of Determinations were filed by both Rosedale and IRWD. IRWD and Mojave will share equally any additional costs associated with environmental review or permitting deemed necessary for delivering Mojave water into storage (however, none are expected). Both IRWD and Mojave shall each be responsible for any other environmental review or permitting necessary to implement the Exchange Program within their own respective service areas.</p>
<p>Water Rights</p>	<p>It is expressly agreed, understood, and acknowledged by IRWD and Mojave that any existing or future delivery of Exchange Water to the IRWD Water Bank by Mojave will not result in or be considered a sale or transfer of Mojave's contractual rights to SWP water or a sale or transfer of IRWD's ownership in the IRWD Water Bank.</p>
<p>General Expenses</p>	<p>Each Party would be responsible for its own fees and expenses arising out of the negotiation and execution of the Exchange Program Agreement, obtaining necessary approvals, and the like.</p>